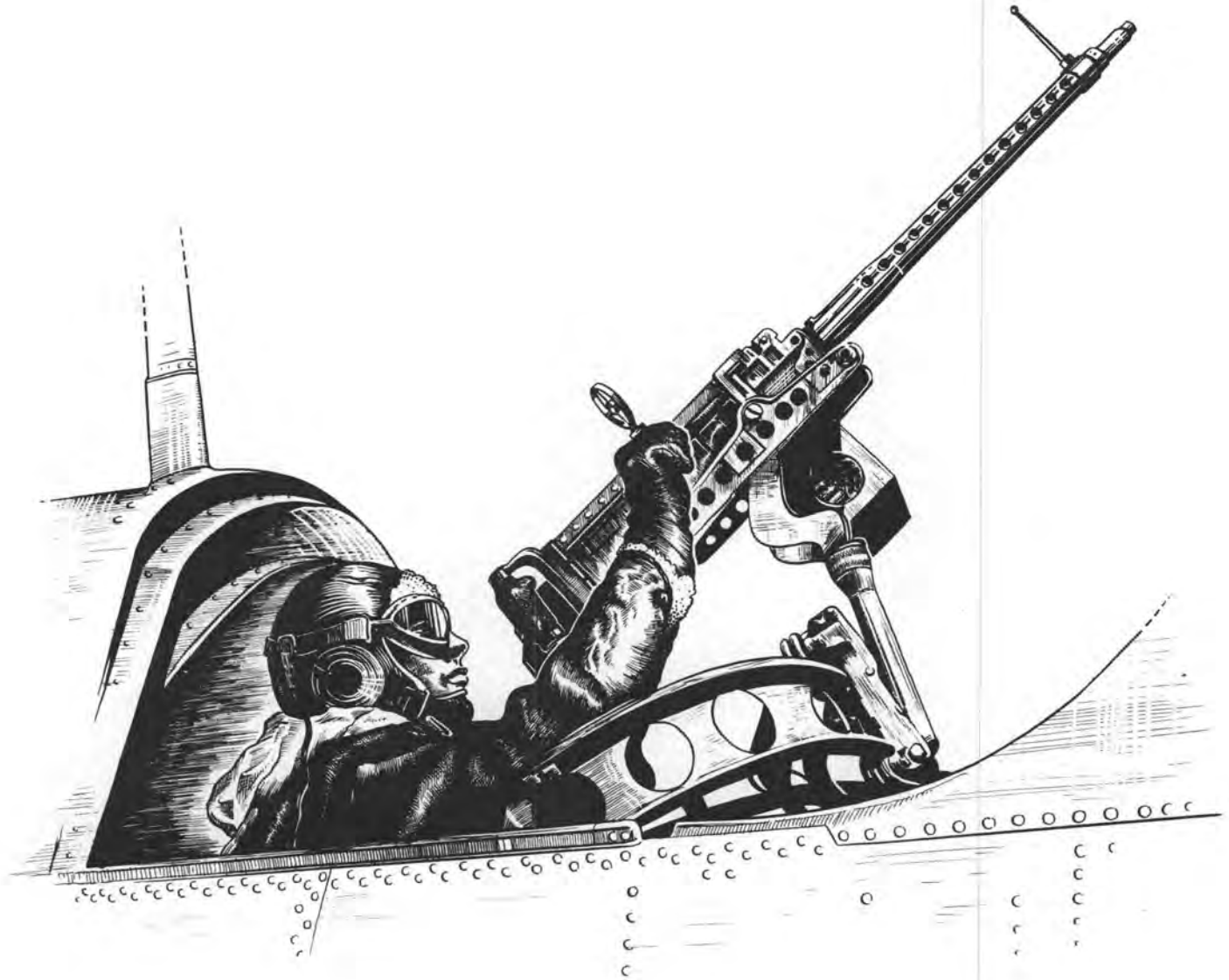




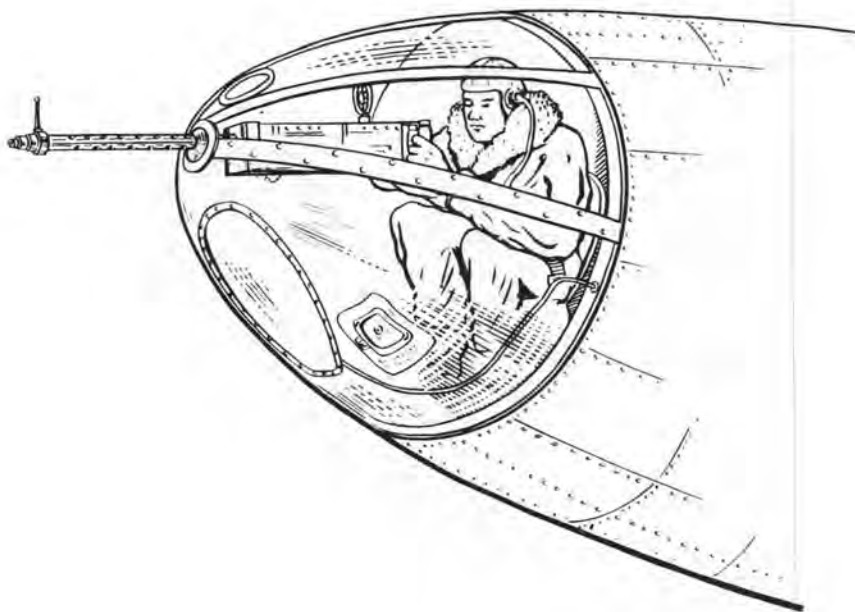
ARMAMENT



GUNNERY EQUIPMENT



ARMAMENT—GUNNERY



GUN MOUNTS AND GUN MOUNT ADAPTERS

A machine gun is attached to an airplane by means of a gun mount and a gun mount adapter. The type of mounting device employed depends on the type of gun and the purpose for which it is intended. Mounts and adapters are classified primarily for use with .30 caliber or .50 caliber machine guns. For each size of gun, the mounts are further classified according to their function, i.e., fixed, flexible, or turret installation.

Fixed gun mounts are used on fighter aircraft. Since these airplanes are highly maneuverable, the guns may be aimed by pointing the airplane at the target. Fixed guns are installed in the wings or in the fuselage nose. If installed in the fuselage of a single engine airplane the gun fire must be synchronized with the engine to prevent the bullets from striking the propeller.

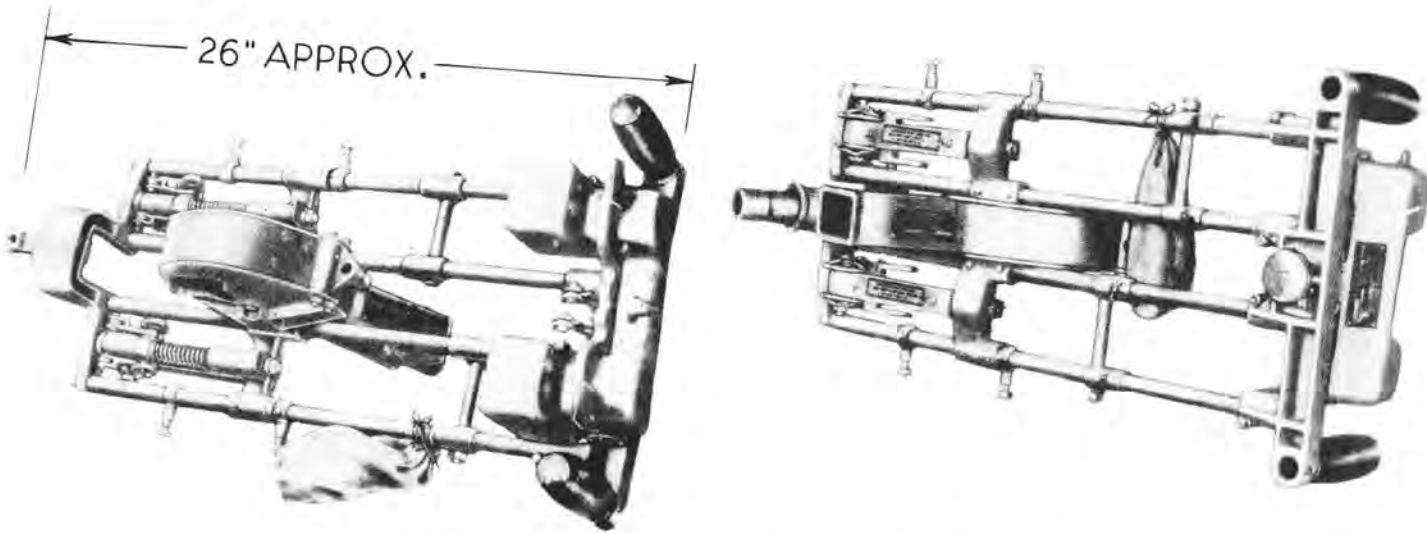
Flexible gun installations are employed on attack or bombardment airplanes as a defense against enemy attack from any direction. The flexible gun mount and adapter allows movement of the gun in any position, independent of the line of flight of the airplane.

Gun turrets, installed on bombardment airplanes, perform a function similar to flexible gun mounts and adapters. The turrets, however, have a much larger fire coverage, range of vision, and better stability, thereby increasing the efficiency of the gunner.

The forces involved in the rapid firing of .30 and .50 caliber guns must be reduced to a minimum for efficient use on airplanes, this is the primary purpose of gun mount adapters. Most gun mount adapters are provided with mechanical, pneumatic, or hydraulic means for absorbing the recoil force of the gun. However, many .30 caliber adapters and a few .50 caliber types are not equipped in this manner and recoil force must be dissipated through the mount to the airplane structure.

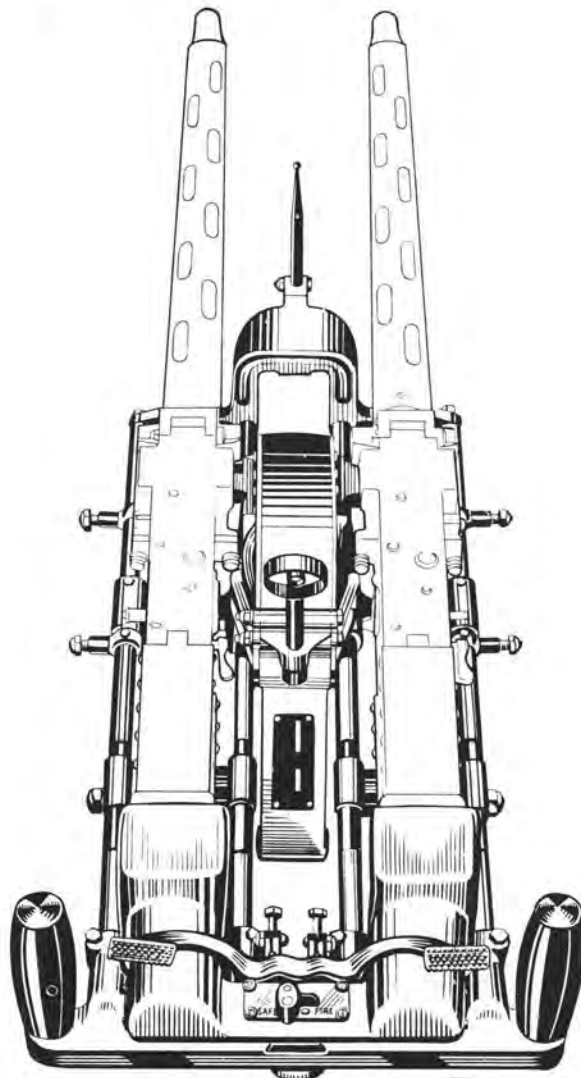


GUN MOUNT ADAPTERS ARMAMENT—GUNNERY



ADAPTER—GUN MOUNT BELL AIRCRAFT MODEL 19G

NAMES: Gun mount adapter
 Adapter—gun mount BAM—.30 M2, flexible, twin (Navy)
 Adapter—machine gun (British)
 Twin gun mount adapter
 .30 caliber twin adapter



(Continued on page 5)



ADAPTER—GUN MOUNT

(Continued from page 4)

DESCRIPTION: This gun mount adapter absorbs the recoil shock of twin, right and left hand, .30 caliber, M2 machine guns. It consists of a frame made of four parallel bars attached to front and rear supports, and a centrally-located ejection chute, which serves both guns. Pneumatic shock absorbers are fastened to the front support and suspended from the bars. The rear support carries the hand grips and mounts the removable backplate which contains the trigger and trigger safety mechanism. The guns are fired, and the safety control operated, by the thumb of either hand.

This adapter is furnished with ring and bead sight. Ammunition box holders were also supplied with adapters of early manufacture.

CHARACTERISTICS:

Dimensions.....approximately 11 by 5½ by 2¾ inches
Weight.....approximately 17 pounds

RELATIONSHIP OF PARTS: Used with:

Twin .30 caliber M2 machine guns.....A. E. Reference Number 93-1440

ARMY

A. E. REFERENCE NUMBER: 52-400
TYPE DESIGNATION: None. Procured as manufacturer's model 19-G.
A. S. C. STOCK NUMBER: Refer to chart.
TECHNICAL ORDER NUMBER: Refer to chart.
PRODUCTION STATUS: Under procurement.
SHIPPING DATA: Shipped as a complete unit.

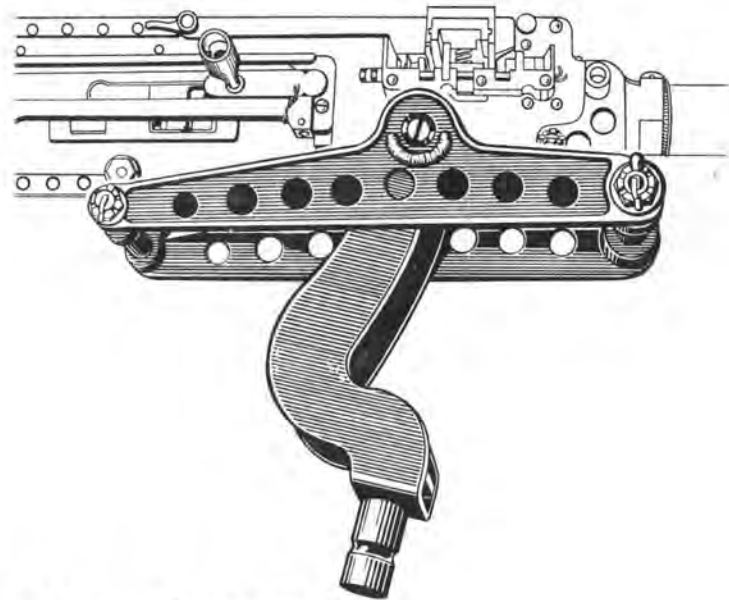
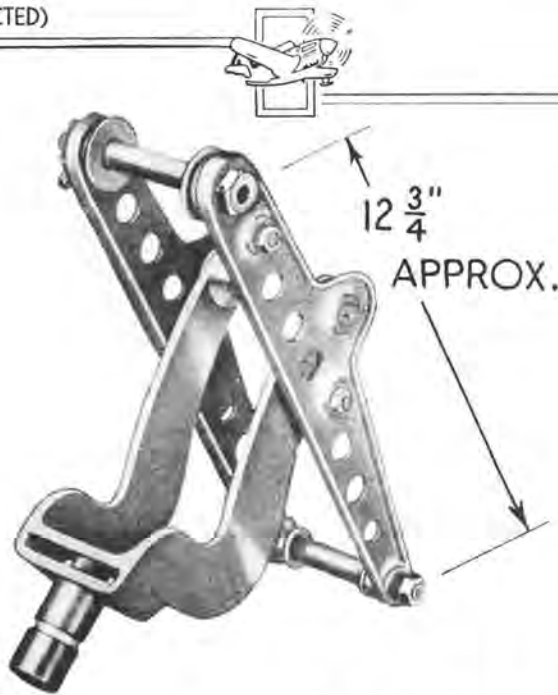
NAVY

Information listed below pertains only to Navy adapter Mark 11, Modification 2, which is the Navy equivalent and is interchangeable with Bell Aircraft Corporation model 19-G, with modifications as noted on interchangeability chart.
BU. ORD. DRAWING NUMBER: Installation 329516, Assembly 329925
AVIATION ORDNANCE STOCK LIST NUMBER: 1-A-67-75
ORDNANCE PAMPHLET NUMBER: 865
PROCUREMENT STATUS: Under procurement.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number	Remarks
Bell Aircraft Corporation	19-G	GM-749-615	A-B	5200002365	11-10-10	150J/6	
	GM-59	03-059-001	N				Navy Mark 11 modification 2. May be made interchangeable by modifying armor plate brackets, sight mount, and yoke.

GUN MOUNT ADAPTERS ARMAMENT—GUNNERY



ADAPTER—GUN MOUNT

ARMY TYPE C-12 NAVY—SEE BELOW

NAMES: Gun mount adapter Adapter—machine gun (British) Single gun mount adapter
Adapter—gun mount, BAM—.30 M2, flexible, single (Navy)

DESCRIPTION: The Army type C-12 gun mount adapter accommodates a single .30 caliber M2 machine gun. It consists of two side plates, bolted to the gun at the front trunnion and rear mounting attachments. These plates bolt to a curved yoke, the lower end of which is grooved to engage the locking balls of standard gun mount sockets.

This adapter, which is not recoil absorbing, has an Army type H-1 ammunition box holder attached to studs on the left side plate.

CHARACTERISTICS:

Dimensions approximately 12 3/4 by 10 1/8 by 4 3/8 inches
Weight approximately 5 1/2 pounds

RELATIONSHIP OF PARTS: Used with:

A single .30 caliber M2 machine gun A. E. Reference Number 93-1520

ARMY

A. E. REFERENCE NUMBER: 52-500

SPECIFICATIONS:

Detail 93-24643
Superseded 24643

A. A. F. DRAWING NUMBER: 37G4926

TYPE DESIGNATION: C-12

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Not under procurement for initial installation.

Superseded by Army type C-16 gun mount adapter, A. E. Reference Number 52-600.

SHIPPING DATA: Shipped as a complete unit.

NAVY

Information listed below pertains only to Navy Mark 1 adapter, which is the Navy equivalent. It is interchangeable with the Army type C-12, with the modifications noted on the chart.

BU. ORD. DRAWING NUMBER: 178468

AVIATION ORDNANCE STOCK LIST NUMBER: 1-A-65

ORDNANCE PAMPHLET NUMBER: 865

PROCUREMENT STATUS: Not under procurement for initial installation.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number	Remarks
Ohmer Fare Register Company	*C-12	**37G4926	A-B	5200004500	11-10-9	150J/16	
Groetchen Tool and Manufacturing Company	*C-12 †Mark 1	**37G4926 ††178468	A-B N	5200004500	11-10-9	150J/16	The Navy Mark 1 may be made interchangeable by substitution of yoke, Army part number 37D4929.

Note: *AAF type; **AAF drawing; †Navy type; ††Navy drawing.



ADAPTER—GUN MOUNT
ARMY TYPE C-16 NAVY—SEE BELOW

NAMES: Gun mount adapter .30 caliber adapter
Adapter—gun mount, BAM—.30 M2, flexible, single (Navy)
Adapter—machine gun (British) Single gun mount adapter

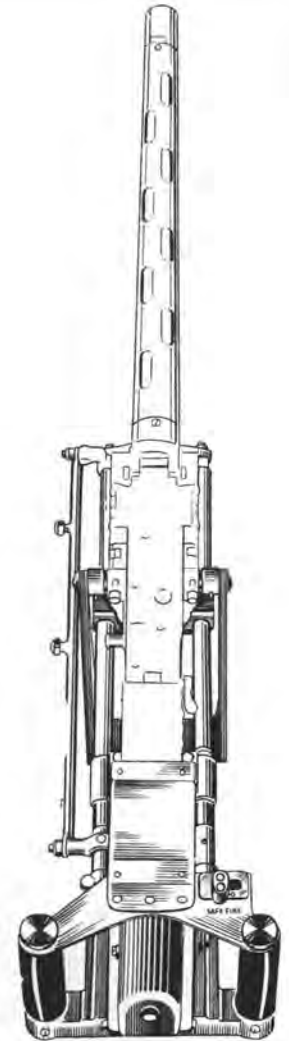
DESCRIPTION: The Army type C-16 gun mount adapter absorbs recoil shock for a single .30 caliber M2 machine gun. It consists of a frame, which includes a single pneumatic shock absorber, slide blocks for the rear mount of the gun, and a removable backplate containing the trigger and trigger safety mechanism. The single trigger is operated by the forefinger, and the safety control by the thumb. This safety control is located near the top of the right hand-grip support. When in a forward position, the yoke of the mount allows an upward swing of 90 degrees and a downward swing of 35 degrees. By reversing the yoke, upward swing is 35 degrees and downward swing is 90 degrees.

CHARACTERISTICS:

Dimensions approximately 22 1/4 by 11 by 7 1/4 inches
Weight approximately 8 pounds 10 ounces

RELATIONSHIP OF PARTS: Used with:

A single .30 caliber M2 machine gun A. E. Reference Number 93-1440



ARMY

A. E. REFERENCE NUMBER: 52-600

SPECIFICATIONS:

Detail 93-24639
Superseded 24639

A. A. F. DRAWING NUMBER: 40K3852 (Superseded by manufacturer's drawing number GM-749-658)

TYPE DESIGNATION: C-16

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION DATA: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

NAVY

Information listed below pertains only to Navy Mark 12 adapter, which is the Navy equivalent. It is interchangeable with the Army type C-16, with the modifications noted on the chart.

BU. ORD. DRAWING NUMBER: Assembly 320160, Installation 328551

AVIATION ORDNANCE STOCK LIST NUMBER: 1-A-67-15

ORDNANCE PAMPHLET NUMBER: 865

PROCUREMENT STATUS: Under procurement.

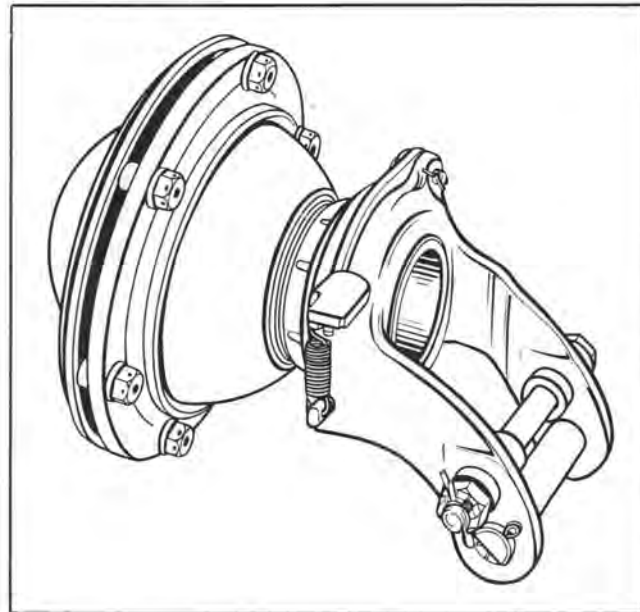
MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number	Type	Remarks
Bell Aircraft Corporation	GM-11G	GM-749-658	A-B	5200004850	11-10-14	150J/30	Army C-16	
	GM-11G	GM-749-658	N				Navy Mark 12	*

*The Navy Mark 12 includes a telescopic sight bracket and ammunition box holder. It may be made interchangeable with Army type C-16 by substitution of yoke, Bell part number GM-749-692, and removal of the telescopic sight bracket and ammunition box holder.



GUN MOUNT ADAPTERS ARMAMENT—GUNNERY



ADAPTER—GUN MOUNT ARMY TYPE C-17

NAMES: Gun mount adapter

Adapter—machine gun (British)

DESCRIPTION: The Army type C-17 gun mount adapter attaches a single .30 caliber, M2 machine gun to a ball and socket type mount, and has provisions for a gun camera. The adapter consists of a frame with a pair of lugs and a circular spring latch. The lugs are attached to the gun by a bolt, and the latch locks the gun to the mount.

The adapter, which is not recoil absorbing, is quickly detachable from the ball and socket mount.

CHARACTERISTICS:

Dimensions..... approximately 4 3/8 by 4 5/16 by 3 3/8 inches
Weight..... approximately 2 pounds

RELATIONSHIP OF PARTS: Used with:

A single .30 caliber M2 machine gun, A. E. Reference Number 93-1520, and Army types K-2, K-2A, or K-3 ball and socket gun mounts, A. E. Reference Number 52-3850, 52-3900, and 52-3950.

ARMY

A. E. REFERENCE NUMBER: 52-700

SPECIFICATIONS:

Detail..... 93-24696
Superseded..... 24696

A. A. F. DRAWING NUMBER: 41D5642 (Supersedes Army drawing number 40G6567)

TYPE DESIGNATION: C-17

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

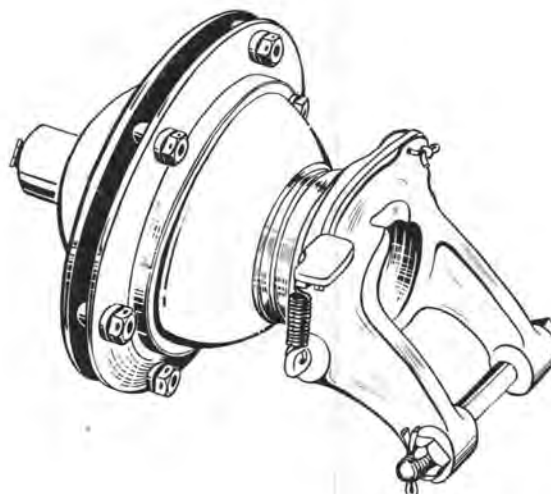
NAVY

There is no Navy equivalent for the Army item.

MODELS BELOW ARE INTERCHANGEABLE Models are used in services as noted in column 4 A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number	Remarks
Iron Fireman Manufacturing Company	*C-17	**41D5642	A-B	5200004870	11-10-9	150J/17	
Warner Industries	*C-18	**41D11020	A-B	5200004900	11-10-9	150J/28	The Army type C-18 does not contain a mounting bolt for gun camera installation.
Crosley Corporation	*C-18	**41D11020	A-B	5200004900	11-10-9	150J/28	

Note: *AAF type; **AAF drawing.



ADAPTER—GUN MOUNT
ARMY TYPE C-18

NAMES: Gun mount adapter
Adapter—machine gun (British)

DESCRIPTION: The Army type C-18 gun mount adapter attaches a single .30 caliber, M2 machine gun to a ball and socket type mount. The adapter consists of a frame with a pair of lugs, and a circular spring latch. The lugs are attached to the gun by a bolt, and the latch locks the gun to the mount. The adapter, which is not recoil absorbing, is quickly detachable from the ball and socket mount.

CHARACTERISTICS:
Dimensions approximately 4 by 3³/₈ by 3 inches
Weight approximately 1 pound 13 ounces

RELATIONSHIP OF PARTS: Used with:
A single .30 caliber M2 machine gun, A. E. Reference Number 93-1520, and Army types K-2, K-2A, or K-3 ball and socket gun mounts, A. E. Reference Number 52-3850, 52-3900, and 52-3950.

ARMY

A. E. REFERENCE NUMBER: 52-800
SPECIFICATIONS:
Detail 93-24720
Superseded 24720
A. A. F. DRAWING NUMBER: 41D11020
TYPE DESIGNATION: C-18
A. S. C. STOCK NUMBER: Refer to chart
TECHNICAL ORDER NUMBER: Refer to chart
PRODUCTION STATUS: Under procurement.
SHIPPING DATA: Shipped as a complete unit.

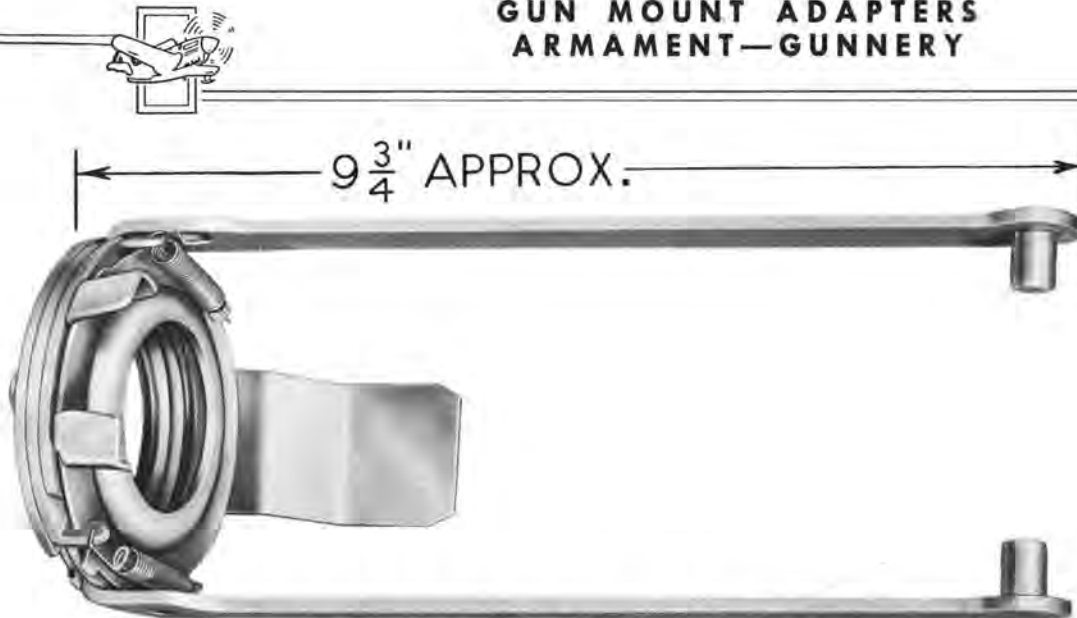
NAVY

There is no Navy equivalent for the Army item.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number	Remarks
Warner Industries	*C-18	**41D11020	A-B	5200004900	11-10-9	150J/28	
Crosley Corporation	*C-18	**41D11020	A-B	5200004900	11-10-9	150J/28	
Iron Fireman Manufacturing Company	*C-17	**41D5642	A-B	5200004870	11-10-9	150J/17	The Army type C-17 contains an extra mounting bolt for a gun camera.

Note: *AAF type; **AAF drawing.



ADAPTER—GUN MOUNT
ARMY TYPE C-19

NAMES: Gun mount adapter
Adapter—machine gun (British)

DESCRIPTION: The Army type C-19 gun mount adapter is used to attach a single .50 caliber, M2, machine gun to a ball and socket mount. This mount is supported by a metal spider since plexiglass alone is not strong enough to absorb recoil shock. A recoil-absorbing Army type E-11 adapter must be used in addition.
The type C-19 adapter locks the machine gun to an Army type K-4 ball and socket mount by means of a ring latch.

CHARACTERISTICS:
Dimensions approximately 9⁵/₈ by 4⁵/₈ by 4¹/₄ inches
Weight approximately 2 pounds

RELATIONSHIP OF PARTS: Used with:
A single .50 caliber M2 machine gun, A. E. Reference Number 93-1560, and an Army type E-11 gun mount adapter, A. E. Reference Number 52-1300, mounted in an Army type K-4 ball and socket gun mount, A. E. Reference Number 52-3960.

ARMY

A. E. REFERENCE NUMBER: 52-850

SPECIFICATIONS:
Detail 24815

MANUFACTURER: Ainsworth Manufacturing Corporation.
MANUFACTURER'S DRAWING NUMBER: AG-400

A. A. F. DRAWING NUMBER: 42D19090
TYPE DESIGNATION: C-19
A. S. C. STOCK NUMBER: 5200004950
PRODUCTION STATUS: Under procurement.

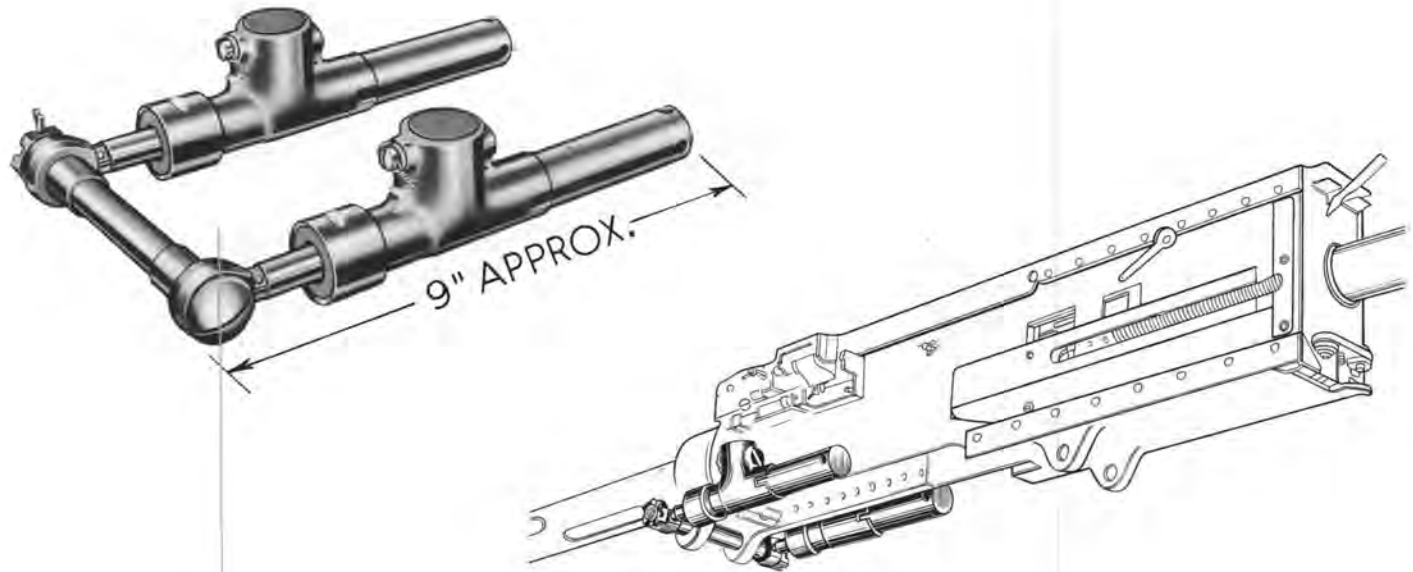
SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.

BRITISH

REFERENCE NUMBER: 150J/47



ADAPTER—GUN MOUNT
ARMY TYPE E-5A NAVY—SEE BELOW

NAMES: Gun mount adapter
 Adapter—gun mount BAM—.50, M2, turret type (Navy)
 Adapter—machine gun (British)
 .50 caliber M2 machine gun adapter

DESCRIPTION: The Army type E-5A gun mount adapter absorbs the recoil shock of twin .50 caliber M2 machine guns. It consists of two separate units, each containing two hydraulic shock absorbers, trunnion bolts, and spacers. The absorbers dampen recoil shock by the action of a piston and a recoil spring.

This adapter is designed for gun turret installation, or for mounting fixed guns. The guns are fired electrically by remote control.

CHARACTERISTICS:

Dimensions approximately 3 $\frac{3}{8}$ by 8 $\frac{3}{4}$ by 1 $\frac{7}{8}$ inches
 Weight approximately 3 pounds 3 ounces

RELATIONSHIP OF PARTS: Used with:

Twin .50 caliber M2 machine guns A. E. Reference Number 93-1560

ARMY

A. E. REFERENCE NUMBER: 52-1000

SPECIFICATIONS:

Detail 93-24763
 Superseded 24763

MANUFACTURER: Bell Aircraft Corporation
MANUFACTURER'S DRAWING NUMBER: GM-749-782
MANUFACTURER'S MODEL: GM-41
TYPE DESIGNATION: E-5A

A. S. C. STOCK NUMBER: 5200005460
TECHNICAL ORDER NUMBER: 11-10-6

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as two completely identical units, packed in a single container.

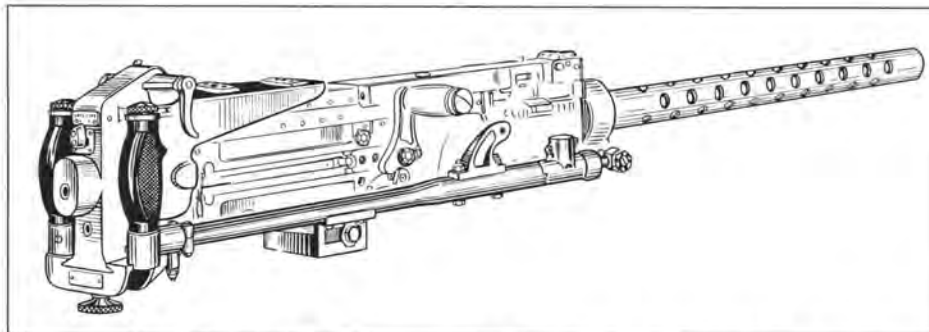
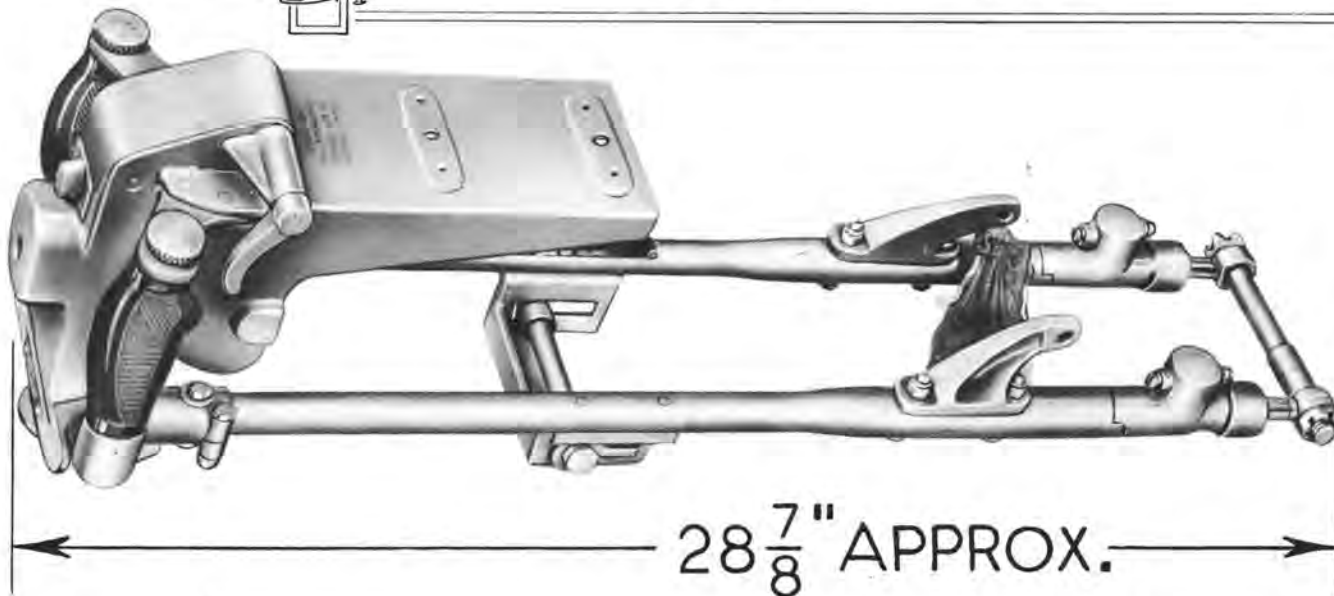
NAVY

TYPE DESIGNATION: Army type E-5A
BU. ORD. DRAWING NUMBER: Assembly 372704; Installation 375033
AVIATION ORDNANCE STOCK LIST NUMBER: 1-A-68-95
PROCUREMENT STATUS: Under procurement.

BRITISH

REFERENCE NUMBER: 150J/559

GUN MOUNT ADAPTERS ARMAMENT—GUNNERY



ADAPTER—GUN MOUNT ARMY TYPE E-5 NAVY MARK 6 MODIFICATION 3

NAMES: Gun mount adapter .50 caliber M2 machine gun adapter
Adapter—.50 caliber machine gun—spade grip
Adapter—gun mount, BAM—.50, M2, flexible, single (Navy)
Adapter—machine gun (British)

DESCRIPTION: The Army type E-5 gun mount adapter absorbs the recoil shock of a single .50 caliber, M2 machine gun. It consists of a frame, which includes two hydraulic shock absorbers, slide blocks for the rear mount of the gun, a hand-grip assembly, and a removable backplate, which contains the trigger and trigger safety mechanism. The single trigger is operated by the forefinger, and the safety control by the thumb. This safety control is located between the hand-grip supports. Provisions are made for the use of telescopic sights.

CHARACTERISTICS:

Dimensions.....approximately 28⁷/₈ by 5³/₄ by 7¹/₁₆ inches
Weight.....approximately 11 pounds 10 ounces

RELATIONSHIP OF PARTS: Used with:

A single .50 caliber M2 machine gun.....A. E. Reference Number 93-1560

ARMY

A. E. REFERENCE NUMBER: 52-875

SPECIFICATIONS:

Detail.....93-24638
Superseded.....24638

A. A. F. DRAWING NUMBER: 39G5016

TYPE DESIGNATION: E-5

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Not under procurement for initial installation. Superseded by Army type E-11 adapter, A. E. Reference Number 52-1300.

SHIPPING DATA: Shipped as a complete unit.

(Continued on page 13)



ADAPTER—GUN MOUNT

(Continued from page 12)

NAVY

TYPE DESIGNATION: Mark 6 Modification 3
 BU. ORD. DRAWING NUMBER: 278926
 AVIATION ORDNANCE STOCK LIST NUMBER: 1-A-68-13
 PUBLICATIONS: O. P. 865; O. H. I. V5-43
 PROCUREMENT STATUS: Under procurement.

MODELS BELOW ARE INTERCHANGEABLE

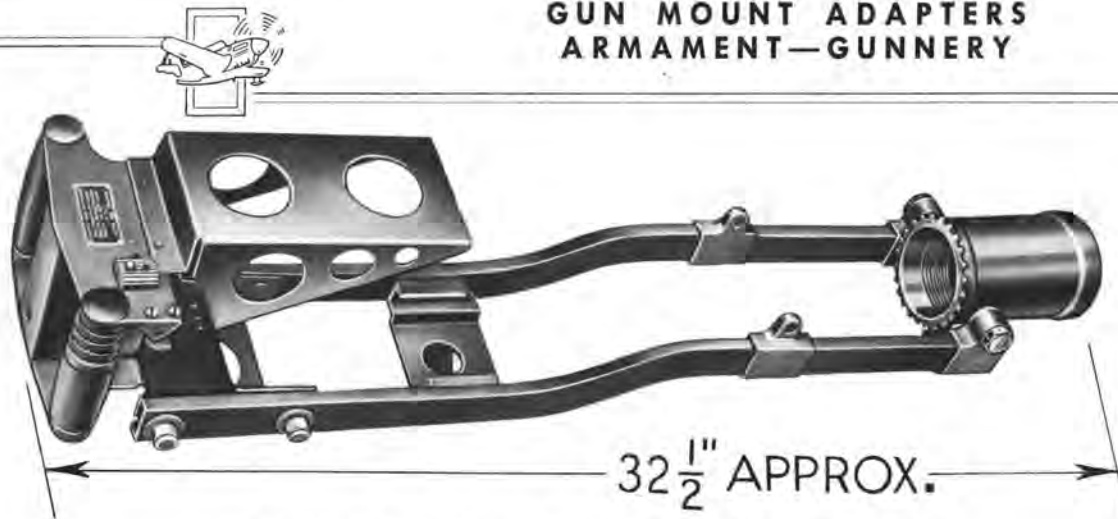
Models are used in services as noted in column 4

A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number	Type	Remarks
Bell Aircraft Corporation	GM-32	GM-749-601	A-B	5200005450	11-10-7	150J/11	Army E-5	
	GM-43	GM-749-602	N		11-10-8		Navy Mark 6 Modification 3	The Navy Mark 6 Modification 3 includes a telescopic sight bracket and ammunition box holder.
The John C. Turner Corporation	GM-32A	03-043-012	A-B	5200005560	11-10-7	150J/26	Army E-11	Has two firing triggers.
	*E-11	03-043-012	A-B	5200005560	11-10-7	150J/26	Army E-11	Has two firing triggers.
Edgewater Steel Company	*E-8	DS-6300	A-B	5200005525	11-10-9	150J/21	Army E-8	Interchangeable with Army type E-5 in all applications except ball and socket gun mounts.
	*E-12	DS-6670	A-B	5200005575	11-10-9	150J/24	Army E-12	Has two triggers. Interchangeable with Army type E-5 in all applications except ball and socket gun mounts.
Brunhoff Manufacturing Company	*E-8	DS-6300	A-B	5200005525	11-10-9	150J/21	Army E-8	Interchangeable with Army type E-5 in all applications except ball and socket gun mounts.
	*E-12	DS-6670	A-B	5200005575	11-10-9	150J/24	Army E-12	Has two triggers. Interchangeable with Army type E-5 in all applications except ball and socket gun mounts.

Note: *AAF type.

GUN MOUNT ADAPTERS ARMAMENT—GUNNERY



ADAPTER—GUN MOUNT

ARMY TYPE E-8

NAMES: Gun mount adapter
.50 caliber M2 machine gun adapter
Adapter—machine gun (British)

DESCRIPTION: The Army type E-8 gun mount adapter absorbs the recoil shock of a single .50 caliber, M2 machine gun. It consists of two rectangular tubes bolted to the sides of a type E-10 recoil absorbing gun mount adapter. This adapter eliminates the need for a front trunnion block. The rear support of the gun fastens to a member attached near the rear of the side tubes. The gun and adapter are supported from the airplane structure by a yoke, which is not furnished with the adapter. Above the gun, and fixed to the rear of the tubes, is a gun sight platform, upon which a type C-4 gun sight mount may be installed. The base of the platform carries dual hand grips, a single trigger, and the safety mechanism. A type C-3 ammunition box mount supports a type C-1 ammunition box at the side of the adapter.

CHARACTERISTICS:

Dimensions approximately 33 by 7 by 6 3/4 inches
Weight approximately 16 pounds

RELATIONSHIP OF PARTS: Used with:

A single .50 caliber M2 machine gun A. E. Reference Number 93-1560

ARMY

A. E. REFERENCE NUMBER: 52-1100

SPECIFICATIONS:

Detail 93-24689
Superseded 24689

A. A. F. DRAWING NUMBER: 41K3650

TYPE DESIGNATION: E-8

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Not under procurement for initial installation. Superseded by Army type E-12, A. E. Reference Number 52-1325.

SHIPPING DATA: Shipped as a complete unit, including the Army type E-10 gun mount adapter.

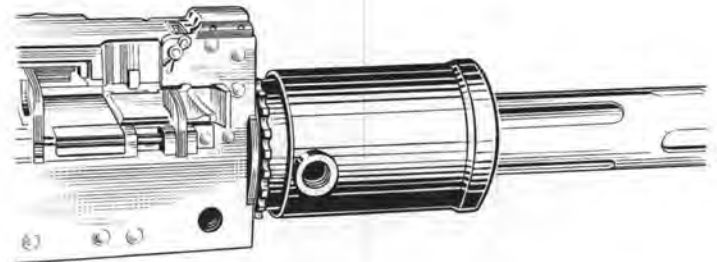
NAVY

There is no Navy equivalent for the Army item.

MODELS BELOW ARE INTERCHANGEABLE Models are used in services as noted in column 4 A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number	Type	Remarks
Brunhoff Manufacturing Company	*E-8	DS-6300	A-B	5200005525	11-10-9	150J/21		
	*E-12	DS-6670	A-B	5200005575	11-10-9	150J/24	Army type E-12	Has two firing triggers.
Edgewater Steel Company	*E-8	DS-6300	A-B	5200005525	11-10-9	150J/21		
	*E-12	DS 6670	A-B	5200005575	11-10-9	150J/24	Army type E-12	Has two firing triggers.
Bell Aircraft Corporation	GM-32	GM749-601	A-B	5200005450	11-10-7	150J/11	Army type E-5	
	GM-43	GM749-602	N		11-10-8		Navy Mark 6	Has telescopic sight bracket and ammunition box holder.
	GM-32A	03-043-012	A-B	5200005560	11-10-7	150J/26	Army type E-11	Has two firing triggers.
The John C. Turner Corporation	*E-11	03-043-012	A-B	5200005560	11-10-7	150J/26	Army type E-11	Has two firing triggers.

Note: *AAF type.



ADAPTER—GUN MOUNT
ARMY TYPE E-10 NAVY MARK 15

NAMES: Gun mount adapter
Adapter—gun mount, BAM—.50 M2, turret type (Navy)
Adapter—machine gun (British)

DESCRIPTION: This gun mount adapter absorbs the recoil shock of a single .50 caliber M2 machine gun. It consists of a housing inclosing a series of ring springs that fit concentrically around an inner sliding shell. This shell is fastened to, and moves with, the gun barrel. After each shot the gun recoil causes the rings to telescope into each other, thus absorbing the energy of recoil and preventing transmission of shocks to the airplane structure. Two threaded holes on opposite sides of the housing permit attachment of the adapter to a mount or turret gun carriage.

CHARACTERISTICS:
Dimensions.....approximately 5 3/8 by 3 1/2 by 3 1/2 inches
Weight.....approximately 5 1/2 pounds

RELATIONSHIP OF PARTS: Used with:
A single .50 caliber M2 machine gun, A. E. Reference Number 93-1560. It is also used as a part of the Army types E-8 and E-12 gun mount adapters, A. E. Reference Numbers 52-1100 and 52-1325.

ARMY

A. E. REFERENCE NUMBER: 52-1200
SPECIFICATIONS:
Detail.....93-24703
Superseded.....24703
A. A. F. DRAWING NUMBER: 41B2679
TYPE DESIGNATION: E-10
A. S. C. STOCK NUMBER: Refer to chart.
TECHNICAL ORDER NUMBER: Refer to chart.
PRODUCTION STATUS: Under procurement.
SHIPPING DATA: Shipped as a complete unit.

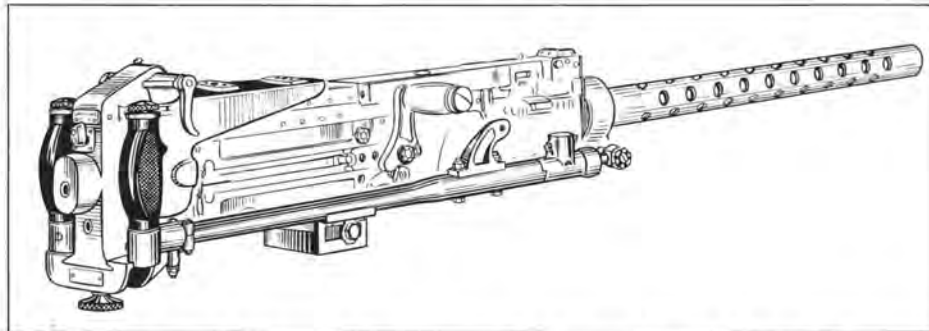
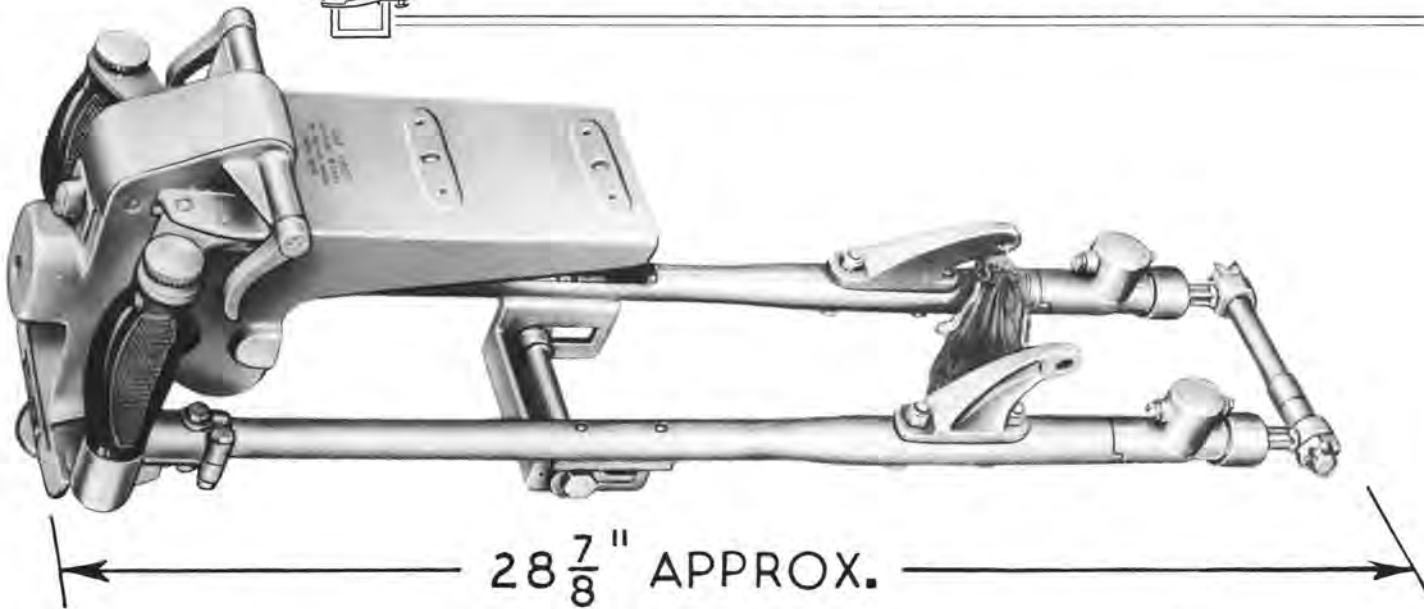
NAVY

TYPE DESIGNATION: E-10 (Also known as Mark 15)
BU. ORD. DRAWING NUMBER: Assembly 300200, Installation 328862.
AVIATION ORDNANCE STOCK LIST NUMBER: 1-A-69-35
PUBLICATIONS: O. P. 865; O. T. I. V18-43.
PROCUREMENT STATUS: Under procurement.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number
Crosley Corporation	*E-10	**41B2679	A-N-B	5200005545	11-10-5	150J/22
Edgewater Steel Company	*E-10	DS-6382	A-N-B	5200005545	11-10-5	150J/22
Metal Specialties Manufacturing Company	*E-10	DS-6382	A-N-B	5200005545	11-10-5	150J/22

Note: *AAF type; **AAF drawing.



ADAPTER—GUN MOUNT
ARMY TYPE E-11 NAVY MARK 6 MODIFICATION 3

NAMES: Gun mount adapter .50 caliber M2 machine gun adapter
Adapter—gun mount, BAM—.50, M2, flexible, single (Navy)
Adapter—gun mount trigger backplate
Adapter—machine gun (British)

DESCRIPTION: This gun mount adapter absorbs the recoil shock of a single .50 caliber, M2 machine gun. It consists of a frame, which includes two hydraulic shock absorbers, slide blocks for the rear mount of the gun, a hand-grip assembly, and a removable backplate. The backplate contains two triggers and the trigger safety mechanism. The triggers are operated by the forefingers of both hands, or of either hand. The safety control is located between the hand-grip supports, and can be actuated by either thumb.

CHARACTERISTICS:
Dimensions approximately 28 1/8 by 6 7/8 by 6 3/8 inches
Weight approximately 11 pounds 10 ounces

RELATIONSHIP OF PARTS: Used with:
A single .50 caliber M2 machine gun A. E. Reference Number 93-1560

ARMY

A. E. REFERENCE NUMBER: 52-1300

SPECIFICATIONS:

Detail 93-24730
Superseded 24730

A. A. F. DRAWING NUMBER: S42D5223

TYPE DESIGNATION: E-11

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

(Continued on page 17)



ADAPTER—GUN MOUNT

(Continued from page 16)

NAVY

TYPE DESIGNATION: Mark 6 Modification 3
 BU. ORD. DRAWING NUMBER: 278292
 AVIATION ORDNANCE STOCK LIST NUMBER: 1-A-68-13
 PUBLICATIONS: O. P. 865; O. H. I. V5-43.
 PROCUREMENT STATUS: Under procurement.

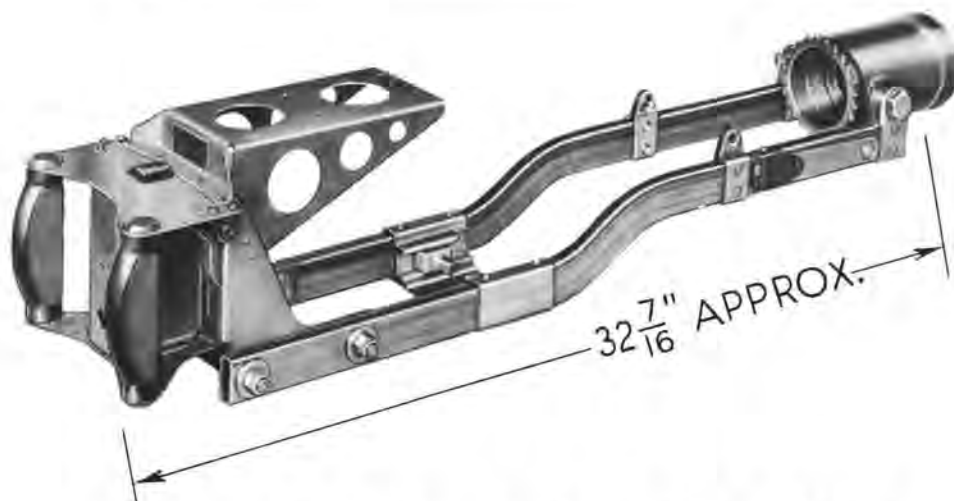
MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number	Type	Remarks
Bell Aircraft Corporation	GM-32A	03-043-012	A-B	5200005560	11-10-7	150J/26	Army E-11	
	GM-43	GM749-602	N		11-10-8		Navy Mark 6 Modification 3	Has a telescopic sight bracket and ammunition box holder.
	GM-32	GM749-601	A-B	5200005450	11-10-7	150J/11	Army E-5	Has one firing trigger.
The John C. Turner Corporation	*E-11	03-043-012	A-B	5200005560	11-10-7	150J/26	Army E-11	
Brunhoff Manufacturing Company	*E-8	DS-6300	A-B	5200005525	11-10-9	150J/21	Army E-8	Has one firing trigger.
	*E-12	DS-6670	A-B	5200005575	11-10-9	150J/24	Army E-12	
Edgewater Steel Company	*E-8	DS-6300	A-B	5200005525	11-10-9	150J/21	Army E-8	Has one firing trigger.
	*E-12	DS-6670	A-B	5200005575	11-10-9	150J/24	Army E-12	

Note: *AAF type.



GUN MOUNT ADAPTERS ARMAMENT—GUNNERY



ADAPTER—GUN MOUNT ARMY TYPE E-12

NAMES: Gun mount adapter
Adapter—machine gun (British)

DESCRIPTION: The Army type E-12 gun mount adapter absorbs the recoil shock of a single .50 caliber, M2 machine gun. It consists of two rectangular tubes bolted to the sides of a type E-10 recoil absorbing gun mount adapter. This adapter eliminates the need for a front trunnion block. The rear support of the gun fastens to a member attached near the rear of the side tubes. The gun and adapter are supported from the airplane structure by a yoke, which is not furnished with the adapter. Above the gun, and fixed to the rear of the tubes, is a gun sight platform, upon which a type C-4 gun sight mount may be installed. The base of the platform carries dual hand grips, dual triggers, and the safety mechanism. A type C-3 ammunition box mount supports a type C-1 ammunition box at the side of the adapter.

CHARACTERISTICS:

Dimensions.....approximately 33 by 7 by 6³/₄ inches
Weight.....approximately 16 pounds

RELATIONSHIP OF PARTS: Used with:

A single .50 caliber M2 machine gun.....A. E. Reference Number 93-1560

ARMY

A. E. REFERENCE NUMBER: 52-1325

SPECIFICATIONS:

Detail.....93-24752
Superseded.....24752

A. A. F. DRAWING NUMBER: 42K6978.

TYPE DESIGNATION: E-12

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit, including the Army type E-10 gun mount adapter.

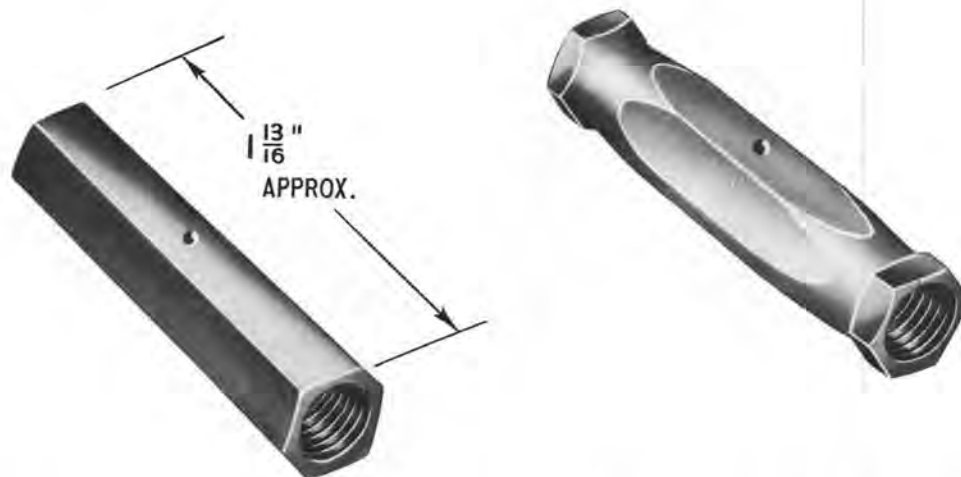
NAVY

There is no Navy equivalent for the Army item.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number	Type	Remarks
Edgewater Steel Company	*E-12	DS-6670	A-B	5200005575	11-10-9	150J/24		
	*E-8	DS-6300	A-B	5200005525	11-10-9	150J/21	Army type E-8	Has one firing trigger.
Brunhoff Manufacturing Company	*E-12	DS-6670	A-B	5200005575	11-10-9	150J/24		
	*E-8	DS-6300	A-B	5200005525	11-10-9	150J/21	Army type E-8	Has one firing trigger.
Bell Aircraft Corporation	GM-32	GM749-601	A-B	5200005450	11-10-7	150J/11	Army type E-5	Has one firing trigger.
	GM-32A	03-043-012	A-B	5200005560	11-10-7	150J/26	Army type E-11	
	GM-43	GM749-602	N-B		11-10-8	150J/11	Navy Mark 6, Modification 3	Has a telescopic sight bracket and ammunition box holder.
The John C. Turner Corporation	E-11	03-043-012	A-B	5200005560	11-10-7	150J/26		

Note: *AAF type.



BARREL—GUN CHARGING TURNBUCKLE

NAMES: Gun charging turnbuckle barrel
Barrel—gun charging control turnbuckle
Turnbuckle barrel

DESCRIPTION: This steel turnbuckle barrel is used to adjust the tension of the charging cable for a remotely placed .30 caliber M2 machine gun. It has a right and a left hand thread in opposite ends of the barrel. The rod that fits into the charging slide of a type B-5 charging handle is screwed into the right hand thread, and a clevis, carrying the charging cable, screws into the other end.

CHARACTERISTICS:

Dimensions	approximately $1\frac{13}{16}$ by $\frac{7}{16}$ by $\frac{7}{16}$ inches
Weight	approximately 3 ounces
Right hand thread	$\frac{5}{16}$ —24 NF—3
Left hand thread	$\frac{1}{4}$ —28 NF—3

RELATIONSHIP OF PARTS: Used with:
Army type B-5 gun charging handle.

ARMY

A. E. REFERENCE NUMBER: 52-1400
MANUFACTURER: Gray Laboratory Manufacturing Company.
A. A. F. DRAWING NUMBER: 31-808
A. S. C. STOCK NUMBER: 5200043000
PRODUCTION STATUS: Not under procurement for initial installation.
SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.



BOLT AND BRACKET—GUN TRUNNION
ARMY TYPE A-3 NAVY—SEE BELOW

NAMES: Gun trunnion bolt and bracket
Bolt and bracket assembly—gun trunnion
Bolt, trunnion, BAM—.30 and .50 caliber M2 (Navy)

DESCRIPTION: The Army type A-3 gun trunnion bolt and bracket is used with either a .30 or .50 caliber M2 machine gun. It consists of a U-shaped bracket and bolt for connecting the forward mounting trunnion of the gun to the mounting post in the airplane. The entire unit can be removed from the mounting post by turning a knurled collar on the bracket.

CHARACTERISTICS:

Dimensions.....approximately 4 by 2½ by 2½ inches
Weight.....approximately 1 pound 3 ounces

RELATIONSHIP OF PARTS: Used with:

Single .30 or .50 caliber M2 machine gun.....A. E. Reference Numbers 93-1420 or 93-1560

ARMY

A. E. REFERENCE NUMBER: 52-1450

SPECIFICATIONS:

Detail.....93-24596

A. A. F. DRAWING NUMBER: 32B1644 (Supersedes Army drawing number H32D3819)

TYPE DESIGNATION: A-3

A. S. C. STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

NAVY

TYPE DESIGNATION: A-3

BU. ORD. DRAWING NUMBER: 167348

AVIATION ORDNANCE STOCK LIST NUMBER: 1-B-4536

ORDNANCE PAMPHLET: 865

PROCUREMENT STATUS: Under procurement.

ALL MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number
Crosley Corporation	*A-3	**32B1644	A-N-B	5200075000	150J/596
Aerial Machine and Tool Company	*A-3	**32B1644	A-N-B	5200075000	150J/596
Taco Heater Corporation	Mark 1		N		
Appliance Manufacturing Company	Mark 1		N		

Note: *AAF type; **AAF drawing.



BOX—AMMUNITION

ARMY TYPE L-4 NAVY TYPE L-4

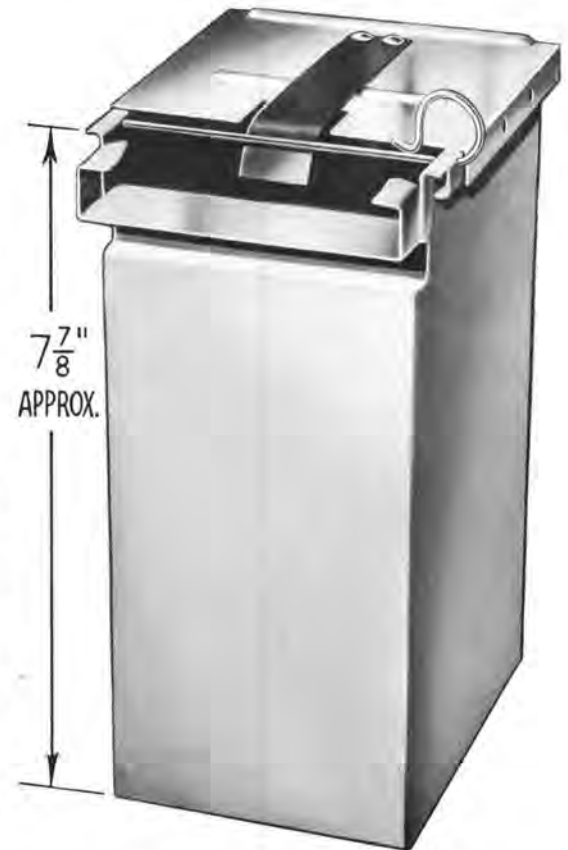
NAMES: Ammunition box
Magazine (Navy)
.30 caliber ammunition box

DESCRIPTION: The type L-4 ammunition box is a rectangular metal box, with a capacity of 100 rounds of .30 caliber ammunition in a metallic link belt. It is secured to the gun mount adapter by a type A-1 ammunition box holder. The edge of the box has a curved lip, which prevents the ammunition belt from catching during firing.

Initial feeding of the ammunition belt into the gun is accomplished by sliding the box cover toward the gun.

CHARACTERISTICS:
Dimensions approximately 8½ by 4½ by 5 inches
Weight approximately 1½ pounds

RELATIONSHIP OF PARTS: Used with: A. E. Reference Number 52-2800
Army type A-1 ammunition box holder



ARMY

A. E. REFERENCE NUMBER: 52-1500

SPECIFICATIONS:

Detail 93-24653
Superseded 24653

A. A. F. DRAWING NUMBER: 30-616

TYPE DESIGNATION: L-4

A. S. C. STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Not under procurement for initial installation. Superseded by Army type L-7, ammunition box, A. E. Reference Number 52-1550.

SHIPPING DATA: Shipped as a complete unit.

NAVY

TYPE DESIGNATION:	Mark 1	Mark 7	L-4
BU. ORD. DRAWING NUMBERS:	Assembly 178456	Installation 300526	Assembly 294272
AVIATION ORDNANCE STOCK LIST NUMBER:	1-M-176	865	1-M-176-20
ORDNANCE PAMPHLET NUMBER:	None	None	None
PROCUREMENT STATUS:	Not Under Procurement	Under Procurement	Not Under Procurement
NOTE:	Navy Mark 1 and L-4 are Identical.		

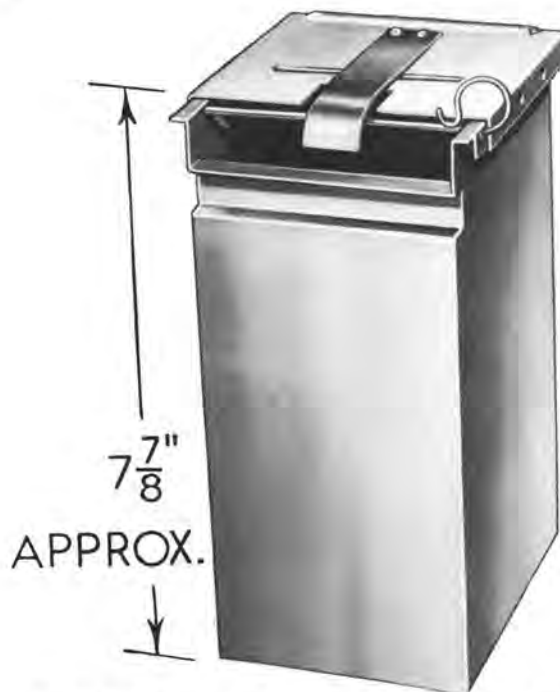
ALL MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number	Remarks
Geuder, Paeschke and Frey, Company	*L-4	**36-6108	A-N-B	5200090300	150J/575	Has 5/8 inch feed lip.
Pittsburgh-Dubois Company	*L-4	**30-616	A-N-B	5200090300	150J/575	Has 5/8 inch feed lip.
	‡Mark 1	‡‡178456	N			Has 5/8 inch feed lip.
	‡Mark 7	‡‡294272	N			*
Brunhoff Manufacturing Company	*L-7	**42D6859	A-B	5200090500	150J/597	

Note: *AAF type; **AAF drawing; ‡Bu. Ord. type; ‡‡Bu. Ord. drawing.



AMMUNITION BOXES ARMAMENT—GUNNERY



BOX—AMMUNITION ARMY TYPE L-7

NAMES: Ammunition box
.30 caliber ammunition box
Magazine

DESCRIPTION: The Army type L-7 ammunition box is a rectangular metal box, with a capacity of 100 rounds of .30 caliber ammunition in a metallic link belt. It is identical with the type L-4 ammunition box, except that the type L-7 has a rolled edge instead of a bent lip. The top of the box is removable for loading the ammunition.

This box fits into an ammunition box holder secured to the gun mount adapter.

CHARACTERISTICS:

Dimensions.....approximately 8³/₈ by 4¹/₂ by 4³/₈ inches

Weight.....approximately 1¹/₂ pounds

RELATIONSHIP OF PARTS: Used with:

Army type A-1 ammunition box holder.....A. E. Reference Number 52-2800

ARMY

A. E. REFERENCE NUMBER: 52-1550

SPECIFICATIONS:

Detail.....93-24750

Superseded.....24750

A. A. F. DRAWING NUMBER: 42D6859

TYPE DESIGNATION: L-7

A. S. C. STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.

ALL MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number	Remarks
Brunhoff Manufacturing Company	*L-7	**42D6859	A-B	5200090500	150J/597	
Geuder, Paeschke, and Frey, Inc.	*L-4	**36-6108	A-B	5200090300	150J/575	Has 5/8 inch feed lip
Pittsburgh-Dubois Company	*L-4	**30-616	A-B	5200090300	150J/575	Has 5/8 inch feed lip
	*L-4	‡‡155316	N			Has 5/8 inch feed lip
	‡Mark 1	‡‡178456	N			Has 5/8 inch feed lip
	‡Mark 7	‡‡294272	N			

Note: *AAF type; **AAF drawing; ‡Bu. Ord. type; ‡‡Bu. Ord. drawing.



BOX—AMMUNITION ARMY TYPE O-1

NAMES: Ammunition box
Box—ammunition .50 caliber

DESCRIPTION: The Army type O-1 ammunition box is a rectangular metal box, with a capacity of 30 rounds of .50 caliber ammunition in a metallic link belt. It is secured to the gun mount adapter by an ammunition box mount. The edge of the box has a curved lip, to insure smooth feed and to prevent the ammunition belt from catching during firing. The top is removable for loading. While the gun is firing, a flat spring on one side of the box engages the rear of each shell before it enters the gun. This prevents the ammunition from getting out of line, due to vibration, and from slipping back into the box. A tubular grip attached to the cover assists in handling the box during initial feeding of the belt into the gun.



CHARACTERISTICS:

Dimensions approximately 10 by 6 by 4⁵/₈ inches
Weight approximately 2¹/₂ pounds

RELATIONSHIP OF PARTS: Used with:

Army type C-3 ammunition box mount, A. E. Reference Numbers 52-3350 or 52-3360. When installed on Army type E-8 gun mount adapter, A. E. Reference Number 52-1100.
Army type C-2 ammunition box mount, A. E. Reference Numbers 52-3200 or 52-3300. When installed on Army type E-11 gun mount adapter, A. E. Reference Number 52-1300.

ARMY

A. E. REFERENCE NUMBER: 52-1600

SPECIFICATIONS:

Detail 93-24673
Superseded 24673

MANUFACTURER: Brunhoff Manufacturing Company.

A. A. F. DRAWING NUMBER: 35D3891

TYPE DESIGNATION: O-1

A. S. C. STOCK NUMBER: 5200090900

PRODUCTION STATUS: Under procurement.

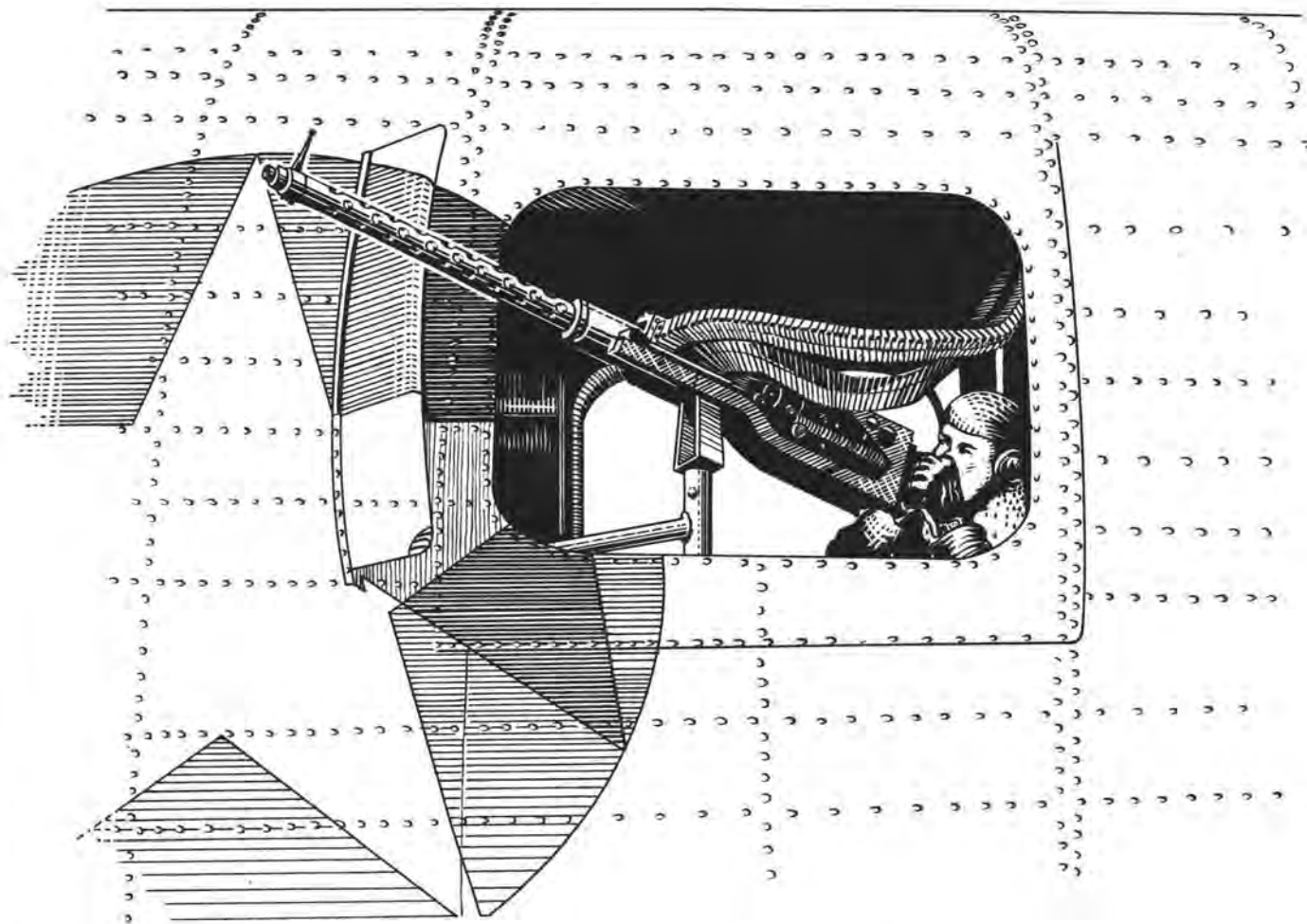
SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.

BRITISH

REFERENCE NUMBER: 150J/578



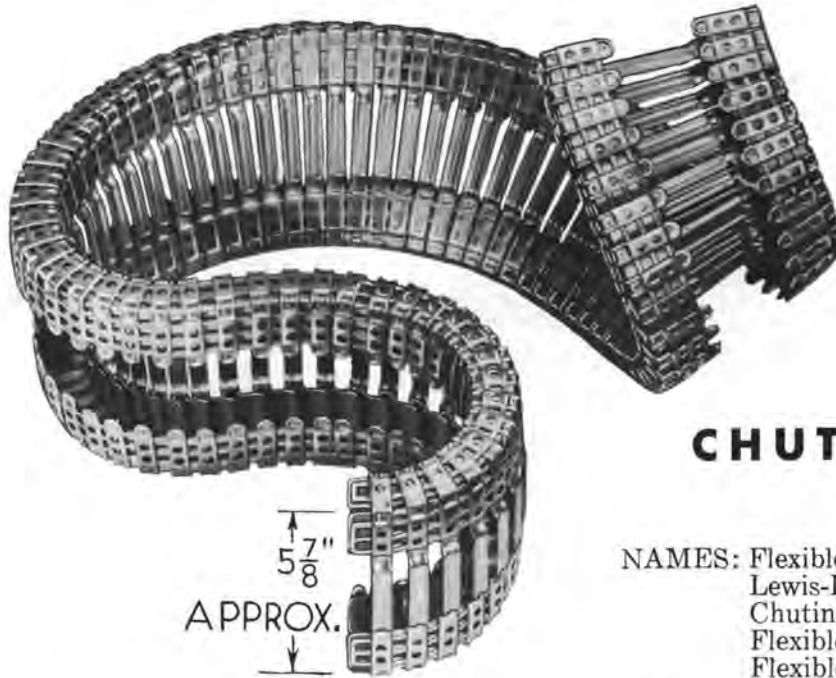
FLEXIBLE FEED CHUTES

Flexible feed chutes are used to keep the cartridge belt from catching as it travels from the ammunition box to the gun, and to prevent cartridges from twisting and causing a jam. Chutes enable ammunition boxes of large carrying capacity to be located at some distance from the machine guns. This allows placement of guns in positions on the airplane where limited space prevents normal installation.

Interlocked metal stampings, shaped to support and direct the cartridge belt, comprise the chute. At both ends of the chute are adapters, one for the gun, the other for the ammunition box.

The length of flexible chuting, when compressed, is about forty per cent less than when extended; length of chuting is measured when extended.

Flexible feed chutes have been supplied in two general types, separable and permanent. The permanent type chute is composed of a series of links which are spot-welded together to form a permanent flexible chute. The separable type chute is composed of links which are held together by spring action and may be separated by a special tool which releases the spring tension. The separable type chute has superseded the permanent type chute for all initial installations.



CHUTE—FLEXIBLE FEED
LEWIS-LARSON TYPE B

NAMES: Flexible feed chute
Lewis-Larson flexible chuting
Chuting assembly—flexible ammunition .50 cal.
Flexible ammunition chute
Flexible feed chuting

DESCRIPTION: The Lewis-Larson type B flexible feed chute is a separable feed chute, for use with M2 .50 caliber machine guns. This type is supplied in various lengths as ordered, but must be equipped with a box end and gun end adapter before it is ready for use.

CHARACTERISTICS: Dimensions (less adapters):

Width..... approximately 5 7/8 inches
Height..... approximately 1 1/4 inches
Length..... must be specified when ordering
Weight..... approximately 3/4 pound per foot of length

RELATIONSHIP OF PARTS: Used with:

Army type L-1 (Lewis-Larson type G-1) gun end adapter, A. E. Reference Number 52-1723, and
Army type L-2 (Lewis-Larson type M-3) Box end adapter, A. E. Reference Number 52-1724.

ARMY

A. E. REFERENCE NUMBER: 52-1722

SPECIFICATIONS:

Detail..... 24850

A. A. F. DRAWING NUMBER: 43A20364

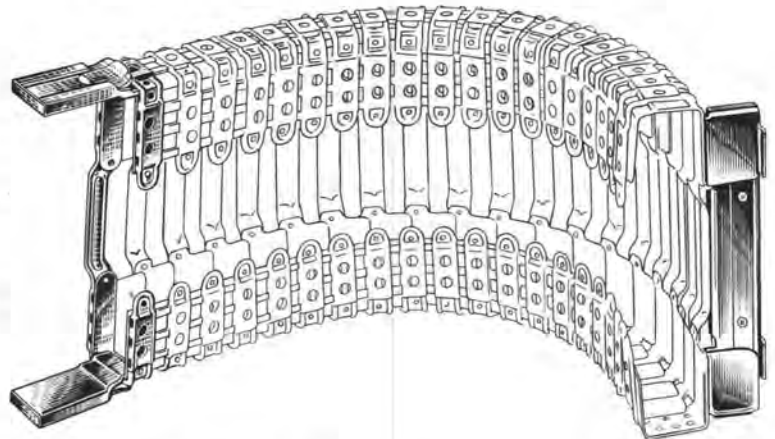
TYPE DESIGNATION: None (Procured as manufacturer's type B).

A. S. C. STOCK NUMBER: Refer to chart.
PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit in 15, 25, or 50 foot lengths as ordered.

NAVY

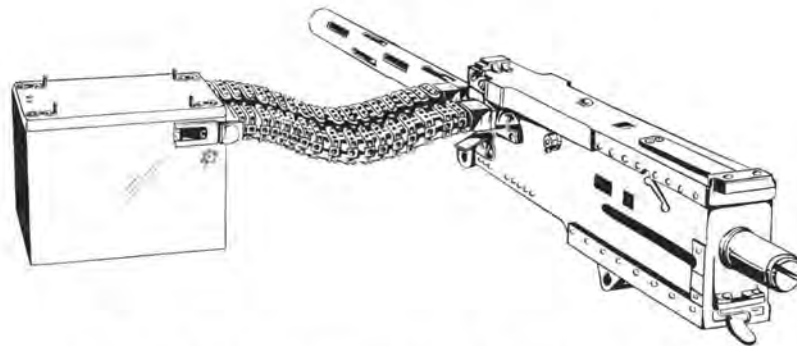
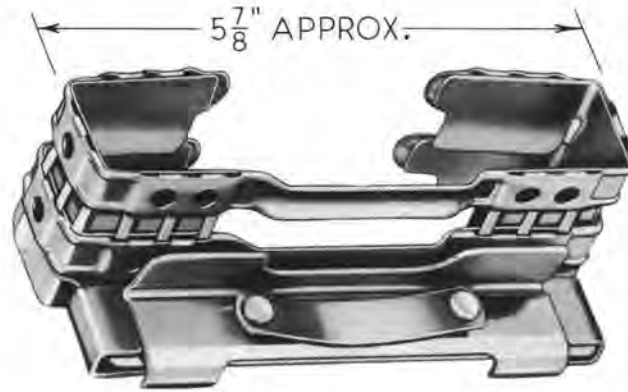
The Navy is presently procuring this item from the Army.



MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number
Brunhoff Manufacturing Company	LLB50	105A40	A-N-B	5200177125	150J/776
Smoot-Holman Company	LLB50	105A40	A-N-B	5200177125	150J/776

NOTE: The Lewis-Larson model LLB50 supersedes, and is interchangeable with, flexible ammunition chuting assemblies A. E. Reference Numbers 52-1730, 52-1750, 52-1760, 52-1770, 52-1790, 52-1800, and 52-1810. When replacing any of these assemblies, one gun end adapter, A. E. Reference Number 52-1723, and one box end adapter, A. E. Reference Number 52-1724, must be supplied for each installation.



ADAPTER—GUN END
ARMY TYPE L-1

NAMES: Gun End Adapter
Gun Feedway Adapter
Flexible Feed Chute Adapter

DESCRIPTION: The Army type L-1 gun end adapter is used to connect the flexible feed chute to the gun in such a manner that the function of the chute is not impaired. It is attached to the M2, .50 caliber machine gun by means of the Army type C-2 or C-3 ammunition box mount, and may be quickly attached or removed from this mount by releasing a spring-held latch which forms a part of the adapter.

CHARACTERISTICS:

Weight..... approximately 1/4 pound.
Dimension..... approximately 2 7/16 by 5 7/8 by 1 1/2 inches.

RELATIONSHIP OF PARTS: Used with:

Army type L-2 box end adapter, A. E. Reference Number 52-1724, and Lewis-Larson type B flexible feed chute, A. E. Reference Number 52-1722.

ARMY

A. E. REFERENCE NUMBER: 52-1723

SPECIFICATIONS:

Detail..... 24875

AN OR A. A. F. DRAWING NUMBER: 43A20362

TYPE DESIGNATION: L-1

A. S. C. STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

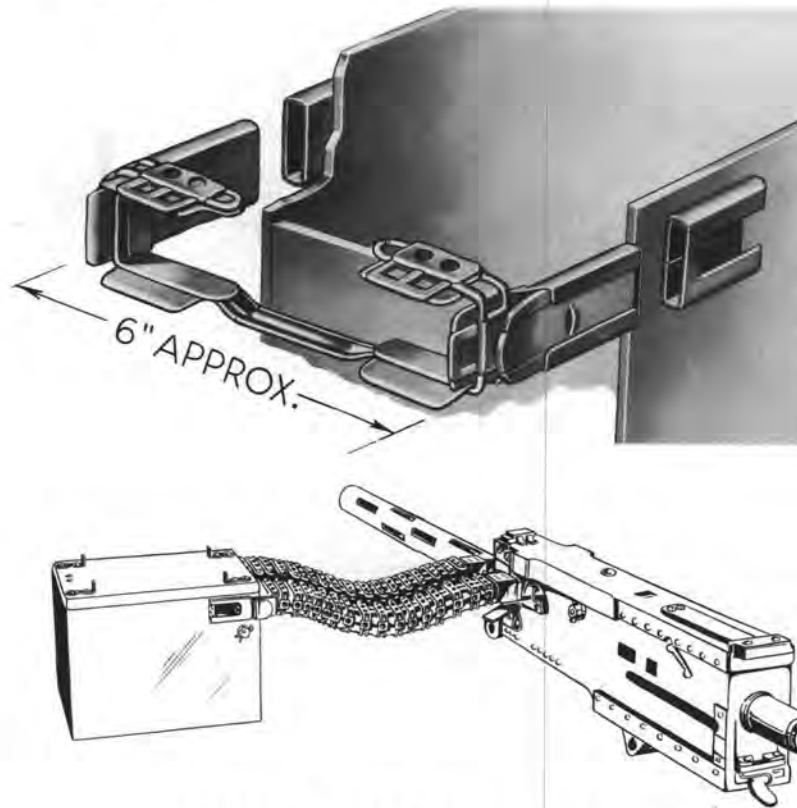
SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number
Smoot-Holman Company	G-1	105A12	A-B	5200001775	150J/782
Brunhoff Mfg. Company	G-1	105A12	A-B	5200001775	150J/782



ADAPTER—BOX END
ARMY TYPE L-2

NAMES: Box end adapter
Box feedway adapter
Flexible feed chute adapter

DESCRIPTION: The Army type L-2 box end adapter is used to provide a quickly detachable means of connecting the flexible feed chute to a .50 caliber ammunition box. This adapter is supplied in three parts: one reinforced chute link with a bayonet connector at each end, and two channel connectors. The chute link is attached to, and becomes a part of, the flexible feed chute, and the two channel connectors are welded to the ammunition box.

CHARACTERISTICS:

Dimensions.....approximately 1¼ by 6 by 3 inches.
Weight.....approximately ¼ pound.

RELATIONSHIP OF PARTS: Used with:

Army type L-1 gun end adapter, A. E. Reference Number 52-1723, and Lewis-Larson type B flexible feed chute, A. E. Reference Number 52-1722.

ARMY

A. E. REFERENCE NUMBER: 52-1724

SPECIFICATIONS:

Detail.....24876

A. A. F. DRAWING NUMBER: 43A20361

TYPE DESIGNATION: L-2

A. S. C. STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

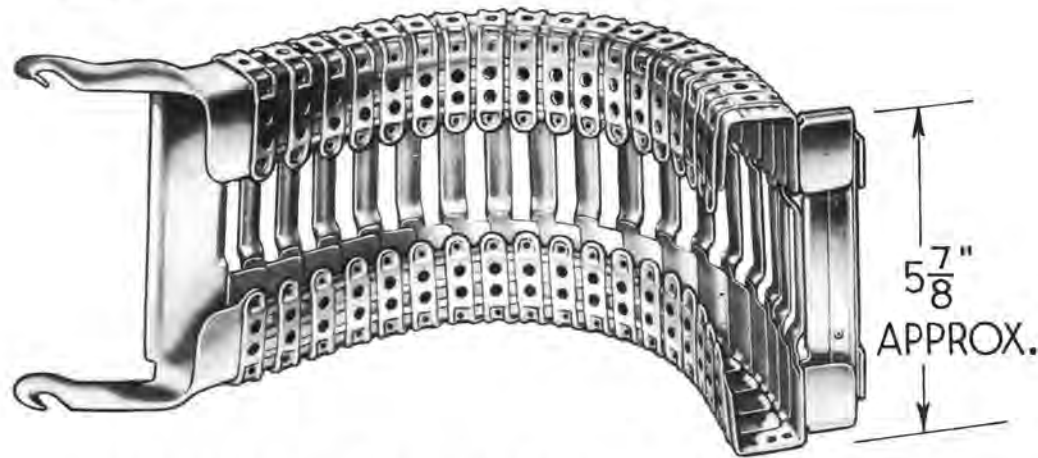
NAVY

There is no Navy equivalent for the Army item.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number
Smoot-Holman Company	M-3	105A24	A-B	5200001785	150J/783
Brunhoff Mfg. Company	M-3	105A24	A-B	5200001785	150J/783

FLEXIBLE FEED CHUTES ARMAMENT—GUNNERY



CHUTE—FLEXIBLE FEED

LEWIS-LARSON TYPE A HUGHES AIRCRAFT PART NO. 32968

NAMES: Flexible feed chute

Chuting assembly—flexible ammunition .50 cal.

Flexible ammunition chute

Flexible feed chuting

DESCRIPTION: This flexible feed chute is a permanent type feed chute for use with .50 caliber M2 machine guns. This type was supplied in definite lengths, and was equipped with a gun end and box end adapter. Chutes of different manufacture are interchangeable for a definite length, provided the adapters are identical.

CHARACTERISTICS:

Height.....approximately $5\frac{7}{8}$ inches.

Width.....approximately $1\frac{1}{2}$ inches.

Weight (less adapters).....approximately $\frac{3}{4}$ pound per foot of length.

Weight of adapters.....approximately $\frac{1}{4}$ pound each.

RELATIONSHIP OF PARTS: Used with:

Army type C-2 ammunition box mount, A. E. Reference Numbers 52-3200 and 52-3300; or Army type C-3 ammunition box mount, A. E. Reference Numbers 52-3350 and 52-3360.

ARMY

A. E. REFERENCE NUMBER: Refer to chart.

A. S. C. STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Not under procurement for initial installation. Superseded by Lewis-Larson type B, A. E. Reference Number 52-1722.

SHIPPING DATA: Shipped as a complete unit, including gun end and box end adapters.

NAVY

The Navy uses this item on airplanes procured from the Army.

The following chart is a list of permanent type flexible feed chutes, formerly procured by the Army. All models listed below have been superseded by separable chute type B, A. E. Reference Number 52-1722, for initial installation.

A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Length In Inches	A. E. Reference Number	British Reference Number
Smoot-Holman Company and Brunhoff Manufacturing Company	LLA50-M1-G1-15	105B1	A-B	5200174506-8	15	52-1730	150J 756
	LLA50-M1-G1-29	105B1	A-B	5200174506-82	29	52-1750	150J 757
	LLA50-M1-G1-36	105B1	A-B	5200174506-84	36	52-1760	150J 758
	LLA50-M1-G1-48	105B1	A-B	5200174506-86	48	52-1770	150J 759
	LLA50-M1-G1-66	105B1	A-B	5200174506-884	66	52-1790	150J 760
	LLA50-M1-G1-85	105B1	A		85	52-1800	None
	LLA50-M1-G1-103	105B1	A-B	5200174506-888	103	52-1810	150J 761
Hughes Aircraft Company	32968-150	32968	A-B	5200174506-5	15	52-1730	150J 756
	32968-360	32968	A-B	5200174506-55	36	52-1760	150J 758
	32968-650	32968	A-B	5200174506-555	65 or 66	52-1790	150J 760

NOTE: Smoot-Holman Company and Brunhoff Manufacturing Company manufacture their chutes in accordance with Lewis-Larson Company drawings and model designation. The model identification serves as a code to the chute required.

EXAMPLE: LLA50-M1-G1-15 specifies Lewis-Larson—type A (permanent)—.50 caliber—M1—box end adapter—G1 gun end adapter—15 inch length.

Hughes Aircraft Company manufacture their chutes in accordance with Hughes drawing number 32968, and their model designation was represented by the drawing number, a dash and the length in inches, with the last digit signifying the fraction of inches in eighths, if any. The adapters for this chute were specified on Army Air Forces Contracts when ordered.

EXAMPLE: 32968-150 signifies drawing number—15 inches, and 0 eights of an inch in length.



CONTAINER—EJECTED CASE
ARMY TYPE A-4

NAMES: Ejected case container
Container, ejected case, BAM—.30, M2
Container—case ejection
Case ejection container

DESCRIPTION: The Army type A-4 ejected case container is used with a single .30 caliber, M2 machine gun installed on an Army type C-12 gun mount adapter. After being fired, the empty cartridge cases are ejected from the gun into the container. The container is of sheet metal, semi-circular in shape, and has a capacity of about 100 ejected cartridge cases. It is removable for emptying.

CHARACTERISTICS:
Dimensions.....approximately 11 5/8 by 5 1/2 by 2 3/8 inches.
Weight.....approximately 1 pound 6 ounces.
Capacity.....approximately one hundred .30 caliber cartridge cases.

RELATIONSHIP OF PARTS: Used with:
A single .30 caliber M2 machine gun A. E. Reference Number 93-1520 mounted on an Army type C-12 adapter, A. E. Reference Number 52-500.

ARMY

A. E. REFERENCE NUMBER: 52-1950

SPECIFICATIONS:

Detail.....93-24604
Superseded.....24604

A. A. F. DRAWING NUMBER: 37D5641 (Supersedes H38D6421)

TYPE DESIGNATION: A-4

A. S. C. STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Not under procurement for initial installation. Superseded by Army type A-5 ejected case container, A. E. Reference Number 52-2000.

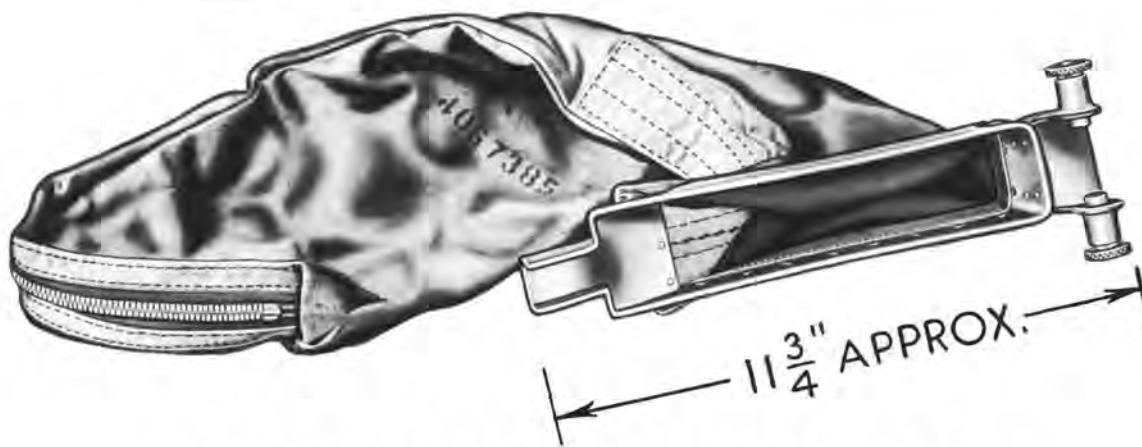
NAVY

There is no Navy equivalent for the Army item.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number	Remarks
Dayton Manufacturing Company	*A-4	**37D5641	A-B	5200211900	150J/579	
	*A-5	**40G7385	A-B	5200211920	150J/751	Has canvas holder for 400 .30 caliber ejected cartridge cases.

Note: *AAF type; **AAF drawing.



CONTAINER—EJECTED CASE
ARMY TYPE A-5

NAMES: Ejected case container
Case ejection container
Container—ejection case

DESCRIPTION: The Army type A-5 ejected case container is used with any single .30 caliber, M2 machine gun. It has a metal top, equipped with ends which are designed for quick attachment to the underside of the gun by means of two studs. After being fired, the empty cartridge cases are ejected from the gun into the container. The actual container is a canvas sack suspended from the metal top, and is emptied by means of a slide fastener at the bottom.

CHARACTERISTICS:

Dimensions approximately 26½ by 11¾ by 3⅝ inches.
Weight approximately 1⅛ pounds.
Capacity approximately four hundred .30 caliber cartridge cases.

RELATIONSHIP OF PARTS: Used with:
Any single .30 caliber M2 machine gun.

ARMY

A. E. REFERENCE NUMBER: 52-2000

SPECIFICATIONS:

Detail 93-24686
Superseded 24686

A. A. F. DRAWING NUMBER: 40G7385

TYPE DESIGNATION: A-5

A. S. C. STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

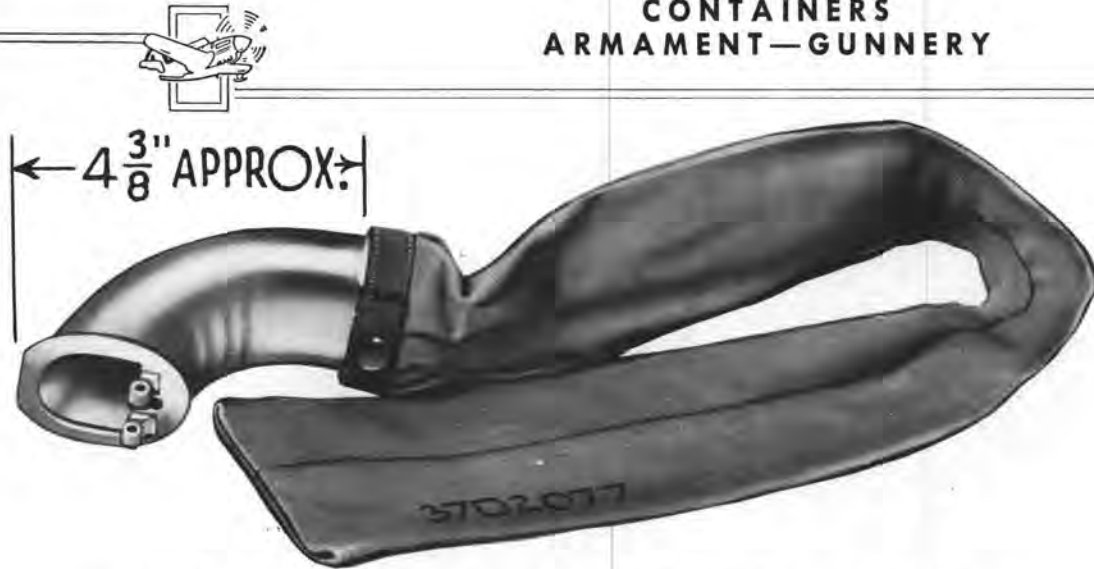
NAVY

There is no Navy equivalent for the Army item.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number	Remarks
Dayton Manufacturing Company	*A-5	**40G7385	A-B	5200211920	150J/751	
	*A-4	**37D5641	A-B	5200211900	150J/579	Capacity limited to 100 cases. Interchangeable when gun is used with type C-12 adapter only.

Note: *AAF type; **AAF drawing.



CONTAINER—EJECTED LINK
ARMY TYPE A-3

NAMES: Ejected link container
Link ejection container
Container—link ejection

DESCRIPTION: The Army type A-3 ejected link container is used with a single .30 caliber M2 machine gun. After being stripped from the cartridges by the gun, the links are ejected from the gun into the container. The container consists of a metal tube, the upper end of which is attached to either the right or left hand side of the gun by means of the belt retaining pawl pin. A canvas container is suspended from the lower end of the tube, where it is held by means of a snap fastener. This container may be emptied quickly by unsnapping the fastener.

CHARACTERISTICS:

Dimensions approximately 28³/₈ by 3³/₄ by 3⁵/₈ inches.
Weight approximately ³/₄ pound.
Capacity approximately two hundred .30 caliber am-
munition belt links.

RELATIONSHIP OF PARTS: Used with:
Any .30 caliber M2 machine gun.

ARMY

A. E. REFERENCE NUMBER: 52-2100

SPECIFICATIONS:

Detail 93-24674
Superseded 24674

A. A. F. DRAWING NUMBER: 37D2077

TYPE DESIGNATION: A-3

A. S. C. STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Not under procurement for initial installation. Superseded by Army type A-5 ejected link container, A. E. Reference Number 52-2200.

SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.

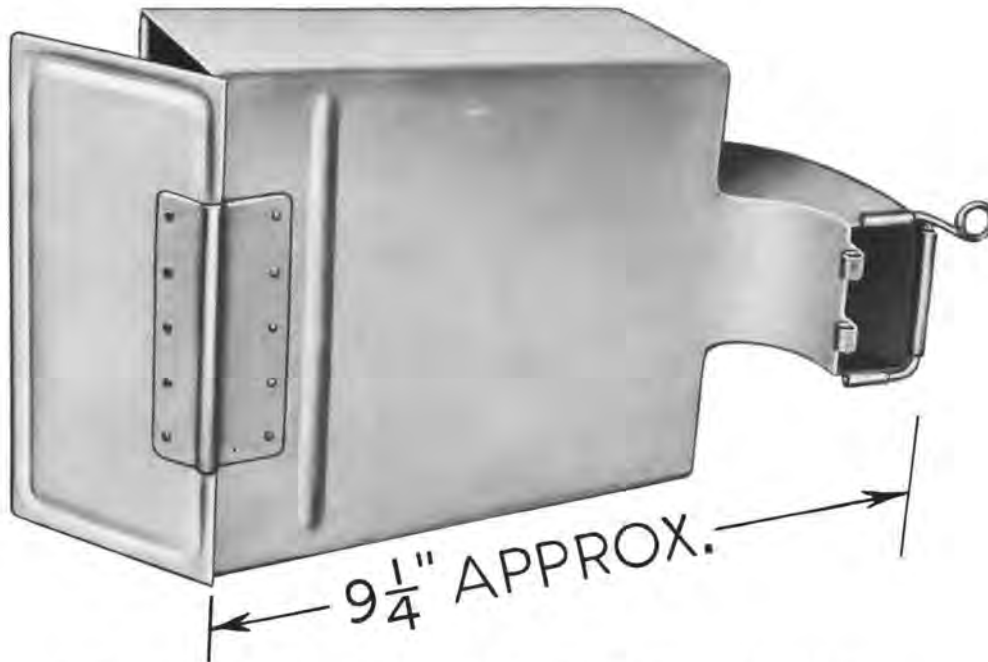
MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number	Remarks
Dayton Manufacturing Company	*A-3	**37D2077	A-B	5200213400	150J/752	
	*A-4	**37D5642	A-B	5200213700	150J/763	Metallic box.
	*A-5	**41D11038	A-B	5200213740	150J/580	Metallic box.

Note: *AAF type; **AAF drawing.



CONTAINERS ARMAMENT—GUNNERY



CONTAINER—EJECTED LINK ARMY TYPE A-4

NAMES: Ejected link container
Link ejection container
Container—link ejection

DESCRIPTION: The Army type A-4 ejected link container is used with a .30 caliber, M2 machine gun. After being stripped from the cartridges by the gun, the links are ejected from the gun into the container. The container consists of a rectangular metal box with a tapering elbow neck which can be attached to the right or left side of the gun. At the bottom of the box is a metal flap which is kept closed with a snap latch. Links are emptied from the container by opening the flap.

CHARACTERISTICS:
Dimensions approximately 9 7/8 by 5 3/4 by 3 7/8 inches.
Weight approximately 1 1/4 pounds.
Capacity approximately two hundred .30 caliber links.

RELATIONSHIP OF PARTS: Used with:
Any .30 caliber M2 machine gun.

ARMY

A. E. REFERENCE NUMBER: 52-2150

SPECIFICATIONS:

Detail 93-24605
Superseded 24605

A. A. F. DRAWING NUMBER: 37D5642 (supersedes Army drawing number H39D5353)

TYPE DESIGNATION: A-4

A. S. C. STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Not under procurement for initial installation. Superseded by Army type A-5, ejected link container, A. E. Reference Number 52-2200.

SHIPPING DATA: Shipped as a complete unit.

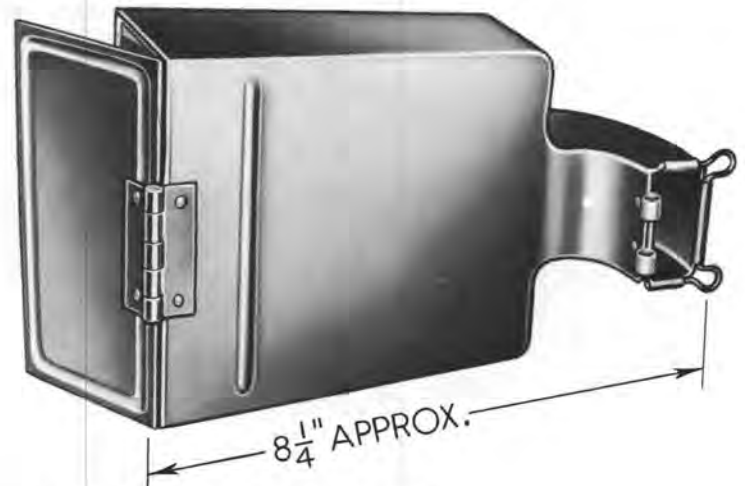
NAVY

There is no Navy equivalent for the Army item.

MODELS BELOW ARE INTERCHANGEABLE Models are used in services as noted in column 4 A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number	Remarks
Dayton Manufacturing Company	*A-4	**37D5642	A-B	5200213700	150J/763	
	*A-3	**37D2077	A-B	5200213400	150J/752	Has canvas holder.
	*A-5	**41D11038	A-B	5200213740	150J/580	

Note: *AAF type; **AAF drawing.



CONTAINER—EJECTED LINK
ARMY TYPE A-5

NAMES: Ejected link container
Link ejection container

DESCRIPTION: The Army type A-5 link ejection container is used with a single .30 caliber, M2 machine gun. After being stripped from the cartridges by the gun, the links are ejected from the gun into the container. The container consists of a rectangular metal box with a tapering elbow neck, which can be attached to either the right or left side of the gun by means of the belt holding pawl pin. At the bottom of the box is a metal flap, which is kept closed with a snap latch. Links are emptied from the container by opening the flap.

CHARACTERISTICS:

Dimensions..... approximately 8 1/4 by 5 5/8 by 3 1/2 inches.
Weight..... approximately 1 1/4 pounds.
Capacity..... approximately two hundred .30 caliber ejected links.

RELATIONSHIP OF PARTS: Used with:
Any .30 caliber M2 machine gun.

ARMY

A. E. REFERENCE NUMBER: 52-2200

SPECIFICATIONS:

Detail..... 93-24721
Superseded..... 24721

A. A. F. DRAWING NUMBER: 41D11038

TYPE DESIGNATION: A-5

A. S. C. STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

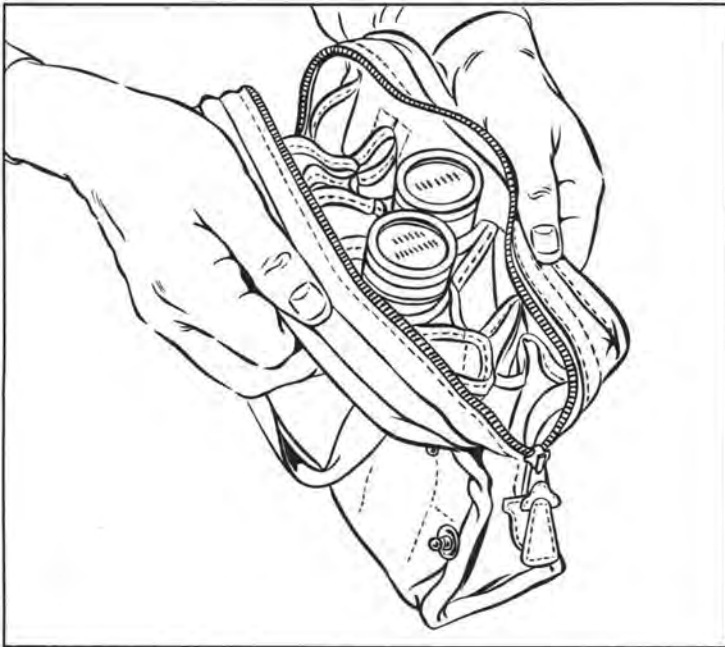
NAVY

There is no Navy equivalent for the Army item.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number	Remarks
Dayton Manufacturing Company	*A-5	**41D11038	A-B	5200213740	150J/580	
	*A-3	**37D2077	A-B	5200213400	150J/752	Has canvas holder.
	*A-4	**37D5642	A-B	5200213700	150J/763	

Note: *AAF type; **AAF drawing.



CONTAINER—SIGNAL FLARE
ARMY TYPE A-1

NAME: Signal flare container

DESCRIPTION: The Army type A-1 signal flare container is a portable carrier for aircraft signal flares. It is made of canvas, has a plywood bottom support, and cotton webbing strap handles for carrying. A full length zipper enables the entire top to be opened.

The container is divided into two parallel compartments, one able to hold four and the other five M-10, M-11, M-14, M-15, or M-16 signal flares. Snap fasteners attach the container to the pistol holder inside the airplane.

CHARACTERISTICS:

Dimensions.....	approximately 8½ by 9¼ by 3⅛ inches.
Weight.....	approximately ¾ pound.
Capacity.....	9 flares.

ARMY

A. E. REFERENCE NUMBER: 52-2250

SPECIFICATIONS:

Detail.....	93-24713
Superseded.....	24713

MANUFACTURER: Troy Sunshade Company.

A. A. F. DRAWING NUMBER: 41G9233

TYPE DESIGNATION: A-1

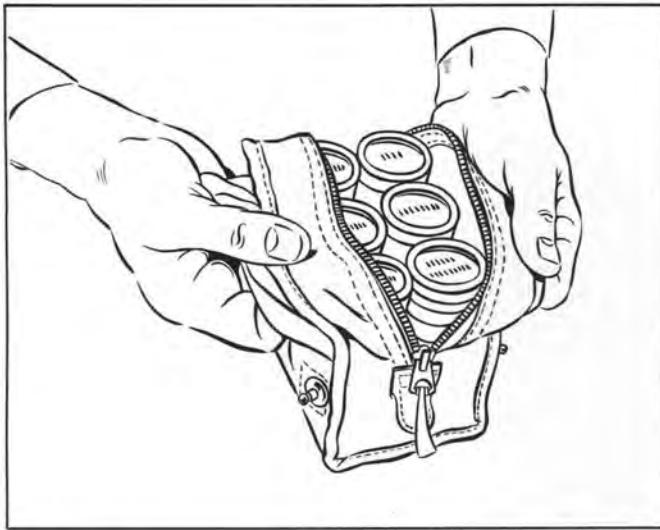
A. S. C. STOCK NUMBER: 4500216600

PRODUCTION STATUS: Not under procurement for initial installation. Superseded by Army type A-7 signal flare container A. E. Reference Number 52-2256.

SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.



CONTAINER—SIGNAL FLARE
ARMY TYPE A-5

NAME: Signal flare container

DESCRIPTION: The Army type A-5 signal flare container is a carrier for aircraft signal flares. It is made of canvas, with a plywood bottom and cotton webbing strap handles for carrying.

The container has two parallel compartments, each able to hold three flares of types AN-M37 to AN-M45 inclusive. A full length zipper enables the entire top to be opened. Snap fasteners attach the container to the pistol holder inside the airplane.

CHARACTERISTICS:

- Dimensions.....approximately 4³/₄ by 5³/₄ by 4¹/₂ inches.
- Weight.....approximately 1/2 pound.
- Capacity.....6 flares.

RELATIONSHIP OF PARTS: Used with:

Army type A-2 pyrotechnic pistol holder, A. E. Reference Number 52-2826.

ARMY

A. E. REFERENCE NUMBER: 52-2254

SPECIFICATIONS:

- Detail.....93-24771
- Superseded.....24771

MANUFACTURER: Troy Sunshade Company.

A. A. F. DRAWING NUMBER: 42G11966

TYPE DESIGNATION: A-5

A. S. C. STOCK NUMBER: 4500230375

TECHNICAL ORDER NUMBER: 11-15-8

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.



CONTAINERS ARMAMENT—GUNNERY



CONTAINER—SIGNAL FLARE ARMY TYPE A-6

NAME: Signal flare container

DESCRIPTION: The Army type A-6 signal flare container is a carrier for aircraft signal flares. It is made of canvas with a plywood bottom, and cotton webbing strap handles for carrying. The container has two parallel compartments, each able to hold six flares of types AN-M37 to AN-M45 inclusive. A full length zipper enables the entire top to be opened. Snap fasteners attach the container to the pistol holder inside the airplane.

CHARACTERISTICS:

Dimensions.....	approximately 4¾ by 11¼ by 4½ inches.
Weight.....	approximately ½ pound.
Capacity.....	12 flares.

RELATIONSHIP OF PARTS: Used with:
Army type A-2 pyrotechnic pistol holder, A. E. Reference Number 52-2826.

ARMY

A. E. REFERENCE NUMBER: 52-2255

SPECIFICATIONS:

Detail.....	93-24772
Superseded.....	24772

MANUFACTURER: Troy Sunshade Company.
 A. A. F. DRAWING NUMBER: 42G11967
 TYPE DESIGNATION: A-6
 A. S. C. STOCK NUMBER: 4500230400
 TECHNICAL ORDER NUMBER: 11-15-8
 PRODUCTION STATUS: Under procurement.
 SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.



CONTAINER—SIGNAL FLARE
ARMY TYPE A-7

NAME: Signal flare container

DESCRIPTION: The Army type A-7 signal flare container is a carrier for aircraft signal flares. It is made of canvas with a plywood bottom, and cotton webbing strap handles for carrying.

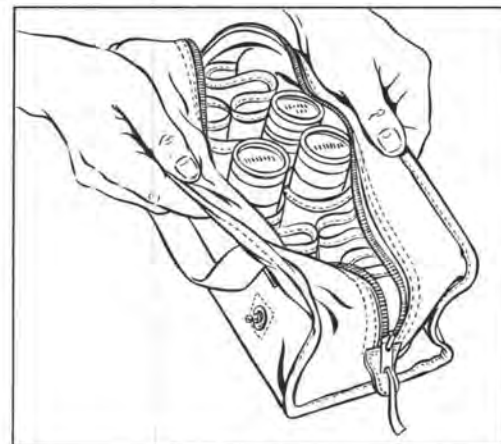
The container has three parallel compartments, each able to hold six flares of types AN-M37 to AN-M45 inclusive. A full length zipper enables the entire top to be opened. Snap fasteners attach the container to the pistol holder inside the airplane.

CHARACTERISTICS:

Dimensions . . . approximately 4 3/4 by 12 3/8 by 5 3/4 inches.
Weight approximately 1/2 pound.
Capacity 18 flares.

RELATIONSHIP OF PARTS: Used with:

Army type A-2 pyrotechnic pistol holder, A. E. Reference Number 52-2826.



ARMY

A. E. REFERENCE NUMBER: 52-2256

SPECIFICATIONS:

Detail 93-24773

Superseded 24773

MANUFACTURER: Troy Sunshade Company.

A. A. F. DRAWING NUMBER: 42H11968

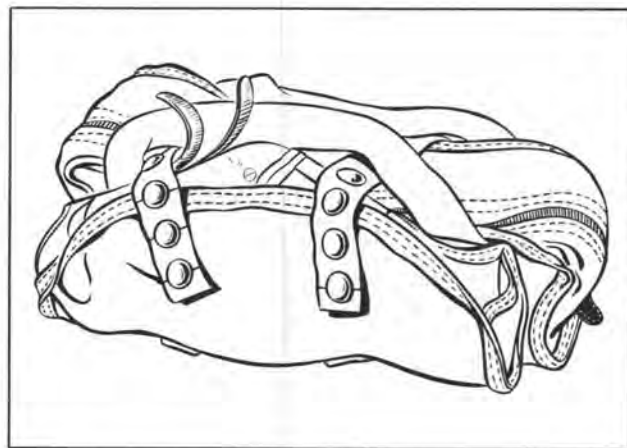
TYPE DESIGNATION: A-7

A. S. C. STOCK NUMBER: 4500230450

TECHNICAL ORDER NUMBER: 11-15-8

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.



NAVY

There is no Navy equivalent for the Army item.



GUN CHARGERS ARMAMENT—GUNNERY



CHARGER, MANUAL, M2 FORMER ARMY TYPE B-6

NAMES: Manual charger
Gun charger control
Manual charger 20-mm cannon
Control—gun charger

DESCRIPTION: The M2 manual gun charger is the internal mechanism for manually charging a 20-mm automatic gun. It consists of a cable which passes through a spring and fastens to a piston backed against the spring.

The entire unit is inserted into a cylinder which is mounted on the side, and is a part of the gun. The cable passes around a pulley on the outside of the cylinder, and is attached to a handle accessible to the pilot. When the cable is pulled, the piston, which is secured to the gun bolt, moves backward, compressing the spring against the rear of the cylinder and charging the gun. When the cable is released, the spring restores the piston to its original position and allows the gun bolt to operate independently of the charger.

This unit was formerly known as the AAF type B-6 gun charger control assembly. It is now supplied by Ordnance Office, War Department.

CHARACTERISTICS:

Dimensions..... approximately 25⁵/₈ by 2¹/₈ by 1³/₄ inches.
Weight..... approximately 1³/₄ pounds.

RELATIONSHIP OF PARTS: Used with:

M1 or AN-M2, 20-mm automatic guns.

ARMY

A. E. REFERENCE NUMBER: 52-2275

SPECIFICATIONS:

Detail..... 93-24778
Superseded..... 24778

ORDNANCE DRAWING NUMBER: D69343

FORMER A. A. F. DRAWING NUMBER: 42C10439 and H43D6383

TYPE DESIGNATION: M2

FORMER TYPE DESIGNATION: B-6

PRODUCTION STATUS: Under procurement. Now supplied by Ordnance Office, War Department.

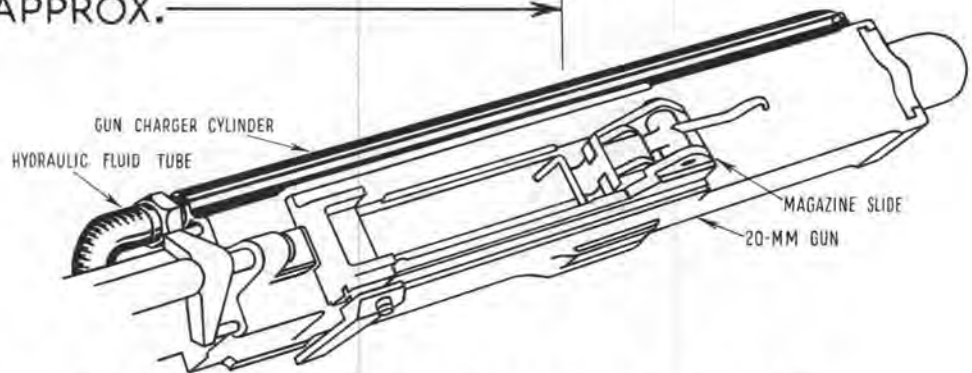
SHIPPING DATA: This item is usually supplied as a component part of the 20-mm gun.

NAVY

The Navy does not use this item, generally, since their equivalent would be the hydraulic 20-mm gun charger, which is procured as a component part of the AN-M2, 20-mm gun, type E, Aviation Ordnance Stock List Number 1-G-5599.

BRITISH

REFERENCE NUMBER: 108A/159



CHARGER—20mm HYDRAULIC GUN ARMY TYPE D-3 NAVY—SEE BELOW

NAMES: 20-mm Hydraulic Gun charger
Hydraulic gun charger cylinder

Cylinder—hydraulic gun charger—20-mm cannon
Charger—gun, hydraulic BAM .50, M2 (Navy)

DESCRIPTION: This hydraulic gun charger, Army type D-3, provides a means for charging a 20-mm aircraft cannon located in a position remote from the gunner. The charger consists of a piston in a hydraulic cylinder, and is operated by a remote control valve. The charging cylinder is mounted in a tubular housing on the right hand side of the gun. The piston is forced against the gun bolt stud under hydraulic pressure and carries the bolt back to the recoil position. The gun control valve can be set either to hold the bolt in the safety position or to complete the charging cycle and prepare the gun for firing.

Hydraulic pressure to operate the charger is supplied by the airplane's hydraulic system.

CHARACTERISTICS:

Dimensions.....	approximately 11 by 1¼ by 1¼ inches.
Weight.....	approximately 2 pounds 4 ounces.
Piston diameter.....	7/8 inch.
Charging stroke.....	10 inches.
Minimum hydraulic pressure.....	800 pounds per square inch.
Maximum hydraulic pressure.....	1500 pounds per square inch.

RELATIONSHIP OF PARTS: Used with:

Army type A-1 hydraulic gun charging valve, A. E. Reference Number 52-8450.

ARMY

A. E. REFERENCE NUMBER: 52-2300

MANUFACTURER: Bendix Products Division of Bendix Aviation Corporation.

MANUFACTURER'S DRAWING NUMBER: 78003

MANUFACTURER'S MODEL: F

A. A. F. DRAWING NUMBER: H41G5289

TYPE DESIGNATION: D-3

A. S. C. STOCK NUMBER: 5400239000

TECHNICAL ORDER NUMBER: 11-1-21

PRODUCTION STATUS: Not under procurement for initial installation. Superseded by Army type B-6 gun charger, A. E. Reference Number 52-2275.

SHIPPING DATA: This item shipped as a component part of AN-M2, 20-mm gun, Type E, A. E. Reference Number 93-1355.

NAVY

BUORD. DRAWING NUMBER: 332358

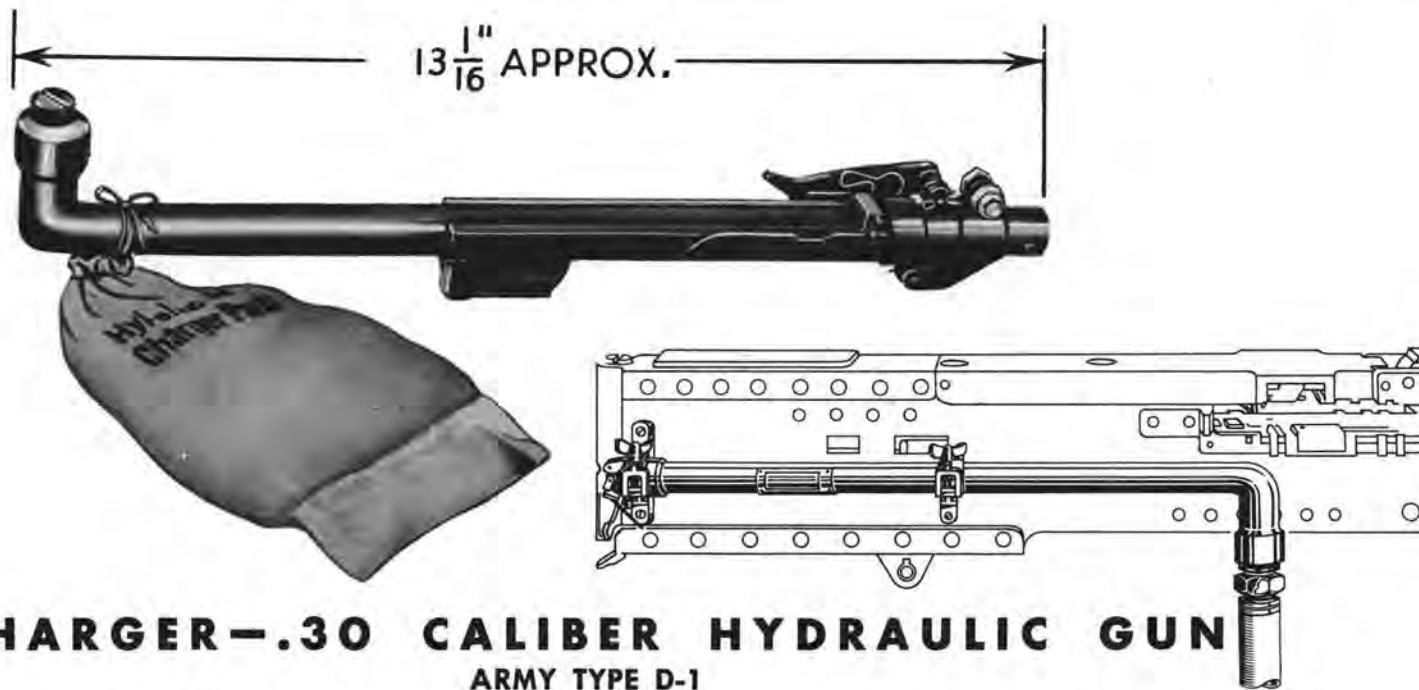
AVIATION ORDNANCE STOCK LIST NUMBER: 1-C-3412-50 (supersedes 1-C-7680).

ORDNANCE PAMPHLET NUMBER: 865

PROCUREMENT STATUS: Under procurement. Supplied with AN-M2, 20-mm gun, Type E, Aviation Ordnance Stock List Number 1-G-5599.

BRITISH

REFERENCE NUMBER: 108A/21



CHARGER—.30 CALIBER HYDRAULIC GUN
ARMY TYPE D-1

NAMES: .30 caliber hydraulic gun charger
Hydraulic gun charger cylinder
.30 caliber hydraulic charger
Cylinder—hydraulic gun charger .30 caliber

DESCRIPTION: This Army type D-1 hydraulic gun charger provides a means of charging a .30 caliber M2 machine gun located in a position remote from the gunner. The charger, which consists of a piston in a hydraulic cylinder, can be mounted on either side of the gun and operated by a remote control valve.

Hydraulic pressure, from the airplane's hydraulic system, is applied through the control valve to the cylinder, forcing the piston against the gun bolt stud. This action carries the bolt back to the recoil position. A latch mechanism holds the bolt in this position until the pressure is released from the cylinder, permitting the bolt to return. The control valve can be set either to hold the bolt in the safety position or to complete the charging cycle and prepare the gun for firing.

CHARACTERISTICS:

Dimensions.....	approximately 17 $\frac{7}{8}$ by $\frac{7}{8}$ by $\frac{7}{8}$ inches.
Weight.....	approximately 2 $\frac{1}{4}$ pounds.
Piston diameter.....	$\frac{1}{2}$ inch.
Charging stroke.....	4 $\frac{21}{32}$ inches.
Minimum hydraulic pressure.....	800 pounds per square inch.
Maximum hydraulic pressure.....	1500 pounds per square inch.

RELATIONSHIP OF PARTS: Used with:

Any single .30 caliber M2 machine gun, and an Army type A-1 hydraulic gun charger. A. E. Reference Number 52-8450.

ARMY

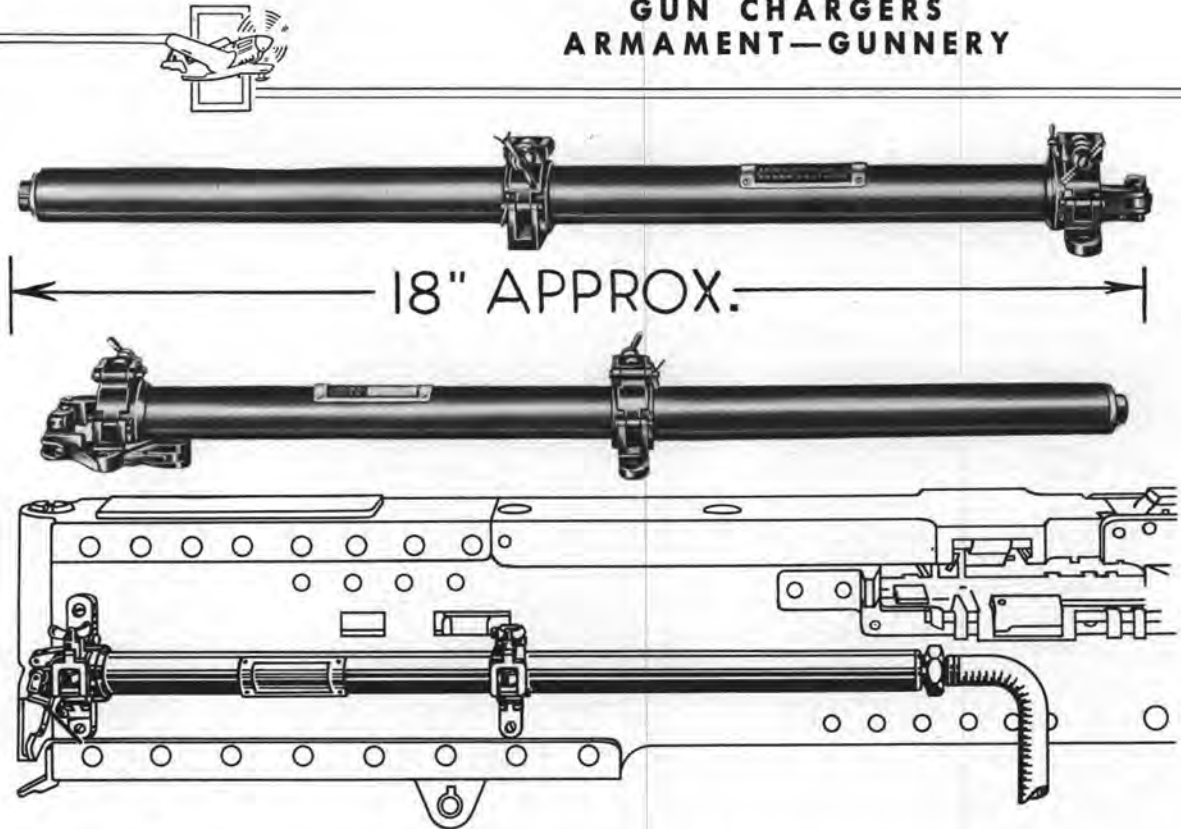
A. E. REFERENCE NUMBER: 52-2400
MANUFACTURER: Bendix Products Division of Bendix Aviation Corporation.
MANUFACTURER'S DRAWING NUMBER: 78002
MANUFACTURER'S MODEL: H
A. A. F. DRAWING NUMBER: H41G5287
TYPE DESIGNATION: D-1
A. S. C. STOCK NUMBER: 5400239040
TECHNICAL ORDER NUMBER: None.
PRODUCTION STATUS: Not under procurement for initial installation.
SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.

BRITISH

REFERENCE NUMBER: 108A/171.



CHARGER—.50 CALIBER HYDRAULIC GUN
ARMY TYPE D-2 NAVY—SEE BELOW

NAMES: .50 caliber hydraulic gun charger Cylinder—hydraulic gun charger .50 caliber
 Hydraulic gun charger cylinder Charger—gun, hydraulic BAM .50, M2 (Navy)

DESCRIPTION: This Army type D-2 hydraulic gun charger provides a means of charging a .50 caliber M2 machine gun located in a position remote from the gunner. The charger, which consists of a piston in a hydraulic cylinder, can be mounted on either side of the gun and is operated by a remote control valve.

Hydraulic pressure, from the airplane's hydraulic system, is applied through the control valve to the charging cylinder, and forces the piston against the gun bolt stud. This action carries the bolt back to the recoil position. A latch mechanism holds the bolt in this position until the pressure is released from the cylinder, permitting the bolt to return. The control valve can be set either to hold the bolt in safety position or to complete the charging cycle and prepare the gun for firing.

CHARACTERISTICS:

Dimensions.....	approximately 18 $\frac{1}{8}$ by 1 $\frac{1}{2}$ by 3 inches.
Weight.....	approximately 2 $\frac{1}{4}$ pounds.
Piston diameter.....	$\frac{11}{16}$ inch.
Charging stroke.....	$7\frac{3}{16}$ inches.
Minimum hydraulic pressure.....	800 pounds per square inch.
Maximum hydraulic pressure.....	1500 pounds per square inch.

RELATIONSHIP OF PARTS: Used with:
 A single .50 caliber M2 machine gun, and Army type A-1 hydraulic gun charging valve, A. E. Reference Number 52-8450.

ARMY

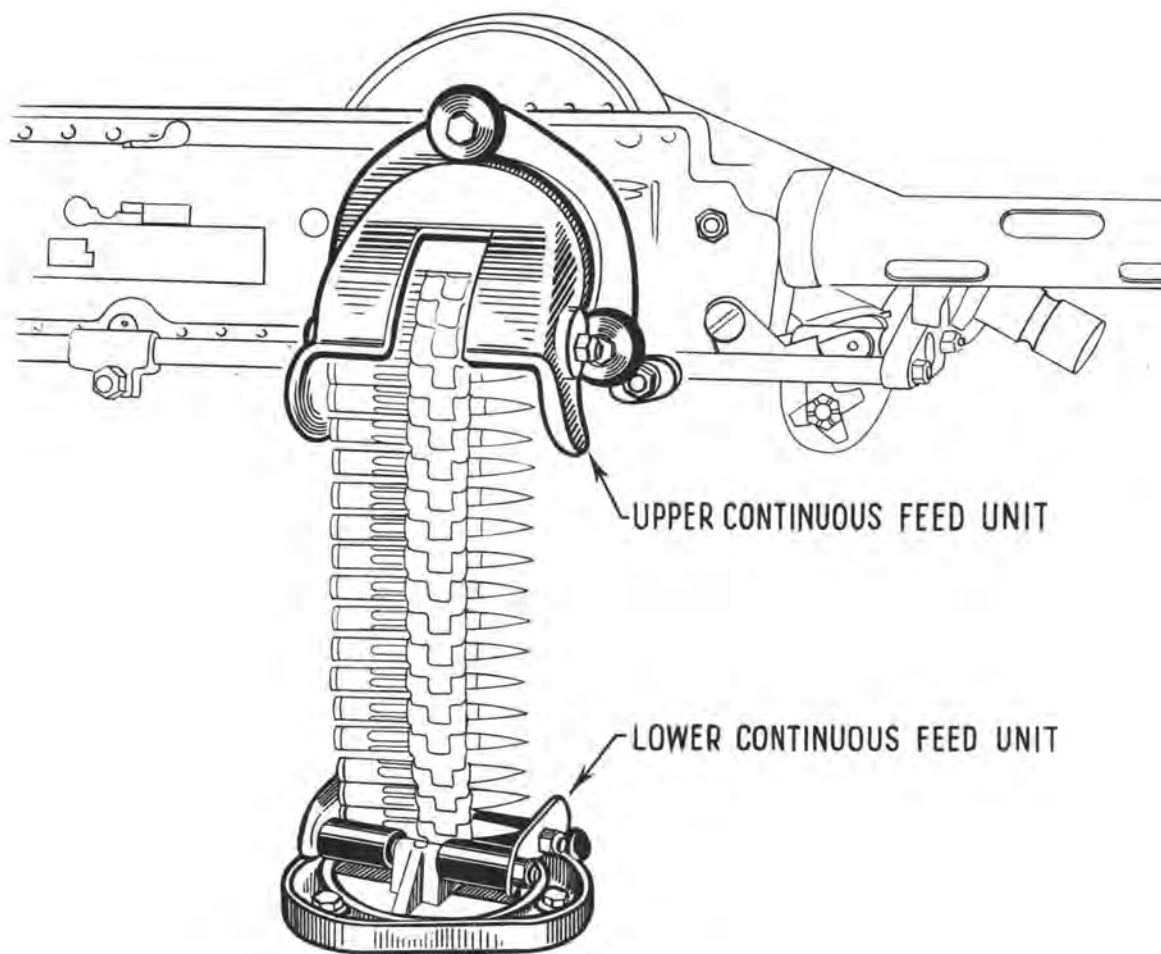
A. E. REFERENCE NUMBER: 52-2500
MANUFACTURER: Bendix Products Division of Bendix Aviation Corporation.
MANUFACTURER'S DRAWING NUMBER: 76862
MANUFACTURER'S MODEL: C
A. A. F. DRAWING NUMBER: H41G5288
TYPE DESIGNATION: D-2
A. S. C. STOCK NUMBER: 5400239050
TECHNICAL ORDER NUMBER: None.
PRODUCTION STATUS: Not under procurement for initial installation. Superseded by manual type, contractor furnished equipment.
SHIPPING DATA: Shipped as a complete unit.

NAVY

BUORD. DRAWING NUMBER: 332358
AVIATION ORDNANCE STOCK LIST NUMBER: 1-C-3512-95 (supersedes 1-C-7685).
ORDNANCE PAMPHLET NUMBER: 865;828
PROCUREMENT STATUS: Not under procurement for initial installation.

BRITISH

REFERENCE NUMBER: 108A/66



CONTINUOUS FEED UNITS

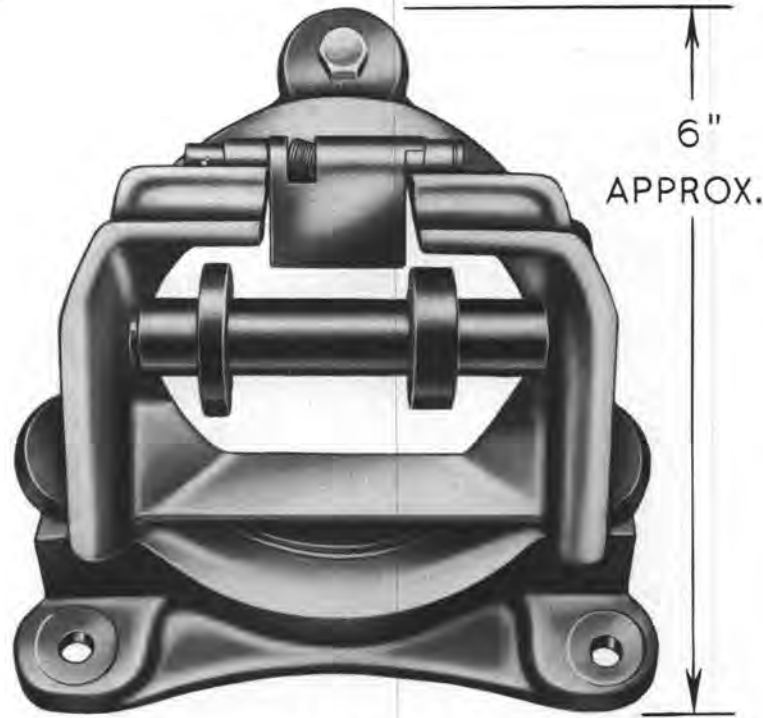
Continuous feed units enable a .30 caliber ammunition belt to be guided into a machine gun while the gun is swiveled, elevated, or depressed. These units are used with remote gun installations where ammunition must be guided for a distance. The upper unit is mounted directly on the adapter of the gun and the lower unit is placed on the ammunition box.

The units decrease belt bending but permit an increase in turning radius as the belt enters the gun.

Both units, each consisting of a guide, roller and chute, are able to turn through a complete circle. The guides and chute lead the ammunition belt, and the roller provides an even flow of cartridges.



FEED UNITS ARMAMENT—GUNNERY



FEED—LEFT HAND UPPER CONTINUOUS BELL AIRCRAFT CORP. MODEL CF-3L NAVY—SEE BELOW

NAMES: Left hand upper continuous feed
.30 caliber upper continuous feed—left hand

DESCRIPTION: The upper continuous feed unit, designed for attachment to the left hand side of the gun adapter, is used to guide and feed .30 caliber ammunition to a machine gun from a remote source. It consists of a chute, guide and rollers, through which the ammunition belt passes. This unit can be rotated through 360 degrees, and provides for adjustment of alignment between the chute and guide so that the ammunition belt can feed properly.

CHARACTERISTICS:

Dimensions..... approximately 6 by 5¼ by 3¼ inches.
Weight..... approximately 1⅝ pounds.

RELATIONSHIP OF PARTS: Used with:

Lower continuous feed, Bell model CF-5, A. E. Reference Number 52-2682, and on a single .30 caliber M2 machine gun, A. E. Reference Number 93-1440 or 93-1520.

ARMY

A. E. REFERENCE NUMBER: 52-2680
A. S. C. STOCK NUMBER: Refer to chart.
TECHNICAL ORDER NUMBER: Refer to chart.
PRODUCTION STATUS: Not under procurement for initial installation.
SHIPPING DATA: Shipped as a complete unit.

NAVY

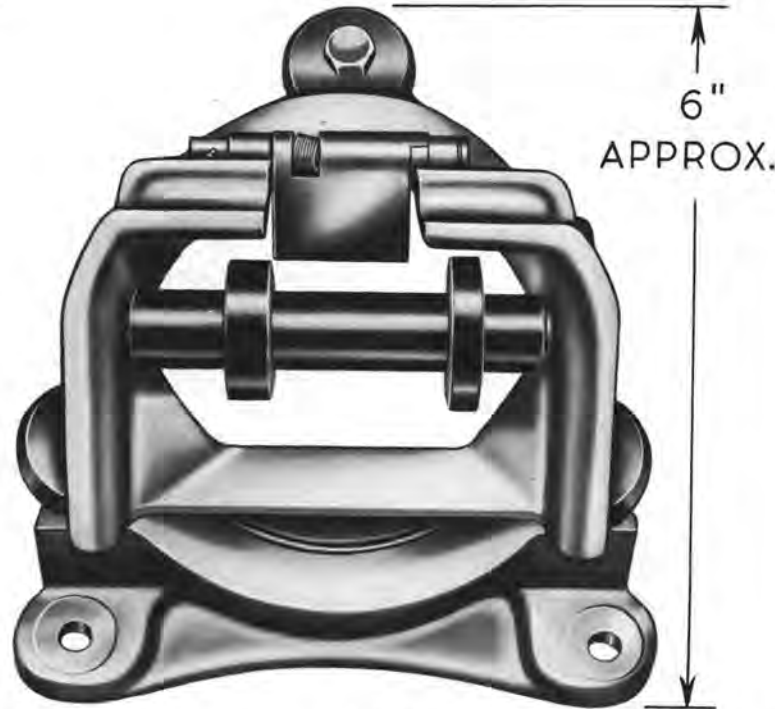
This item is identified by the Navy under the manufacturer's designation.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number	Remarks
Bell Aircraft Corp.	CF-3L	03-042-197L	A-B	5200265400	11-1-41	150J/754	
	03-059-051	03-059-051	N				Identical with the Bell model CF-3L, except includes a ratchet which can be removed if necessary.



FEED UNITS ARMAMENT—GUNNERY



FEED—RIGHT HAND UPPER CONTINUOUS BELL AIRCRAFT CORP. MODEL CF-3R NAVY—SEE BELOW

NAME: Right hand upper continuous feed

DESCRIPTION: The upper continuous feed unit, designed for attachment to the right hand side of the gun adapter, is used to guide and feed .30 caliber ammunition to a machine gun from a remote source. It consists of a chute, guide and rollers, between which the ammunition belt passes. This unit can be rotated through 360 degrees, and provides for adjustment of alignment between the chute and guide so that the ammunition belt can feed properly.

CHARACTERISTICS:

Dimensions..... approximately 6 by 5¼ by 3¼ inches.
Weight..... approximately 1⅝ pounds.

RELATIONSHIP OF PARTS: Used with:

Lower continuous feed, Bell model CF-5, A. E. Reference Number 52-2682, and a single .30 caliber M2 machine gun, A. E. Reference Numbers 93-1440 or 93-1520.

ARMY

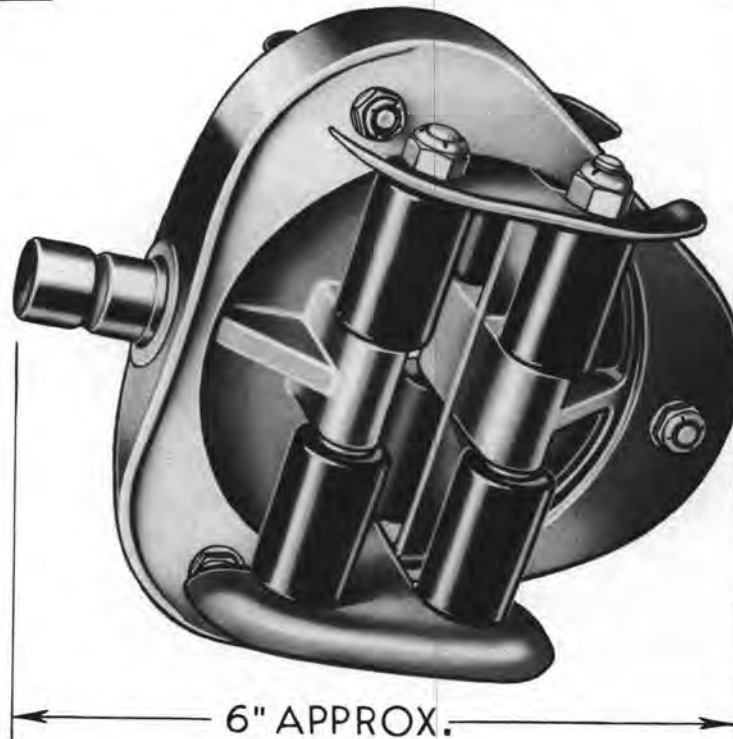
- A. E. REFERENCE NUMBER: 52-2681
- A. S. C. STOCK NUMBER: Refer to chart.
- TECHNICAL ORDER NUMBER: Refer to chart.
- PRODUCTION STATUS: Not under procurement for initial installation.
- SHIPPING DATA: Shipped as a complete unit.

NAVY

This item is identified by the Navy under the manufacturer's designation.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number	Remarks
Bell Aircraft Corporation	CF-3R	03-042-197R	A-B	5200265420	11-1-41	150J/755	
	03-059-052	03-059-052	N				Identical with Bell model CF-3R except includes a ratchet which can be removed if necessary.



FEED—LOWER CONTINUOUS
BELL AIRCRAFT CORP. MODEL CF-5 **NAVY—SEE BELOW**

NAMES: Lower continuous feed
Feed—.30 caliber lower continuous

DESCRIPTION: The lower continuous feed unit, mounted above the ammunition box, is used to guide and feed .30 caliber ammunition to a machine gun.

It consists of a guide housing, guide, guide deflectors, and rollers between which the ammunition belt passes.

One of the rollers is held in place by an eccentric bolt. This bolt is used for adjustment and alignment to insure proper ammunition feed.

The unit can be rotated 360 degrees, either horizontally or vertically, following the movement of the gun.

CHARACTERISTICS:

Dimensions.....approximately 6 by 5¼ by 3¼ inches.
Weight.....approximately 1 pound 7 ounces.

RELATIONSHIP OF PARTS: Used with:

Upper continuous feed, A. E. Reference Numbers 52-2680 or 52-2681.

ARMY

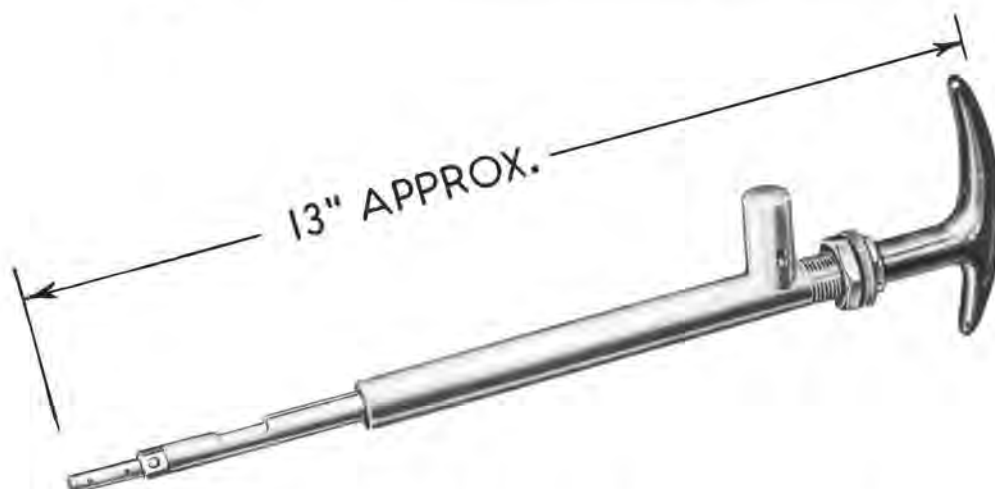
A. E. REFERENCE NUMBER: 52-2682
MANUFACTURER: Bell Aircraft Corporation.
MANUFACTURER'S MODEL NUMBER: CF-5
MANUFACTURER'S DRAWING NUMBER: GM-749-663
A. S. C. STOCK NUMBER: 5200265250
TECHNICAL ORDER NUMBER: 11-1-41
PRODUCTION STATUS: Not under procurement for initial installation.
SHIPPING DATA: Shipped as a complete unit.

NAVY

This item is identified by the Navy under the manufacturer's designation.

BRITISH

REFERENCE NUMBER: 150J/587



HANDLE—GUN CHARGING

ARMY TYPE A-2 NAVY MARK 1 MOD. 1

NAME: Gun charging handle

DESCRIPTION: This gun charging handle is used for manually charging fixed M2 remotely located machine guns. A cable connects the handle to the charging slide on the gun.

The unit consists of a tubular member, threaded at one end for mounting to the airplane structure. A grooved rod with a handle on the end passes through the tube; the cable from the gun charging device is fastened to the other end. The rod is notched so that the handle may be turned, locking the charging device in a safety position, or it may be pulled out and locked in a full recoil position. If the handle is pulled out all the way and released without turning, the full charging cycle will be completed.

CHARACTERISTICS:

Dimensions.....approximately 12³/₄ by 3⁵/₈ by ³/₄ inches.
Weight.....approximately ⁵/₈ pound.

RELATIONSHIP OF PARTS: Used with:

Fixed .30 and .50 caliber M2 machine guns, A. E. Reference Numbers, 93-1420 and 93-1560, or with Army M2 manual charger, A. E. Reference Number 52-2275 mounted on M1 or AN-M2 20-mm automatic guns.

ARMY

A. E. REFERENCE NUMBER: 52-2750

SPECIFICATIONS:

Detail..... 93-24663

MANUFACTURER: General Aviation Equipment Company.

A. A. F. DRAWING NUMBER: 31B1184 (Supersedes Army drawing 02-A-28)

TYPE DESIGNATION: A-2

A. S. C. STOCK NUMBER: 5200315800

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

NAVY

TYPE DESIGNATION: Mark 1, Modification 1

BU. ORD. DRAWING NUMBER: 178489

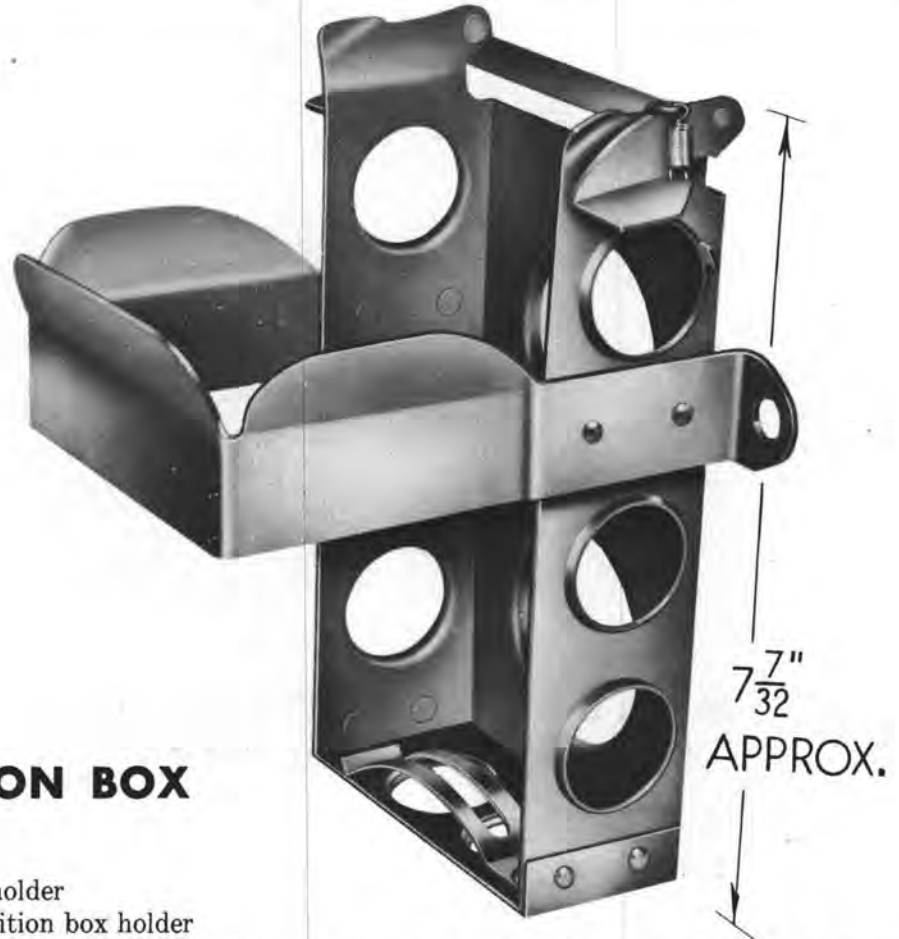
AVIATION ORDNANCE STOCK LIST NUMBER: 1-H-475

ORDNANCE PAMPHLET NUMBER: 865

PROCUREMENT STATUS: Under procurement.

BRITISH

REFERENCE NUMBER: 108A/160



HOLDER—AMMUNITION BOX
ARMY TYPE A-1

NAMES: Ammunition box holder
.30 caliber ammunition box holder

DESCRIPTION: The Army type A-1 ammunition box holder is fastened to the gun mount adapter, and is used to hold an ammunition box for a .30 caliber gun. This holder consists of a perforated metal retainer with a horizontal metal strip which secures the ammunition box when it is inserted. The holder is constructed so that empty ammunition boxes may be removed and replaced with full boxes.

CHARACTERISTICS:

Dimensions..... approximately 7¼ by 5½ by 5 inches.
Weight..... approximately 1-1/10 pounds.

RELATIONSHIP OF PARTS: Used with:

Army type L-4 ammunition box, A. E. Reference Number 52-1500 and Army type L-7 ammunition box, A. E. Reference Number 52-1550.

ARMY

A. E. REFERENCE NUMBER: 52-2800

SPECIFICATIONS:

Detail..... 93-24660
Superseded..... 24660

MANUFACTURER: Warner Industries.

A. A. F. DRAWING NUMBER: 40G7402

TYPE DESIGNATION: A-1

A. S. C. STOCK NUMBER: 5200328900

PRODUCTION STATUS: Not under procurement for initial installation.

SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.

BRITISH

REFERENCE NUMBER: 150J/577



HOLDER—PYROTECHNIC PISTOL
ARMY TYPE A-1

NAMES: Pyrotechnic pistol holder
Pistol holder

DESCRIPTION: The Army type A-1 pyrotechnic pistol holder, constructed of canvas duck, is used for carrying the Army type M2 pyrotechnic pistol. It has a zipper opening for the pistol, and four snap fasteners for attachment to a signal flare container.

CHARACTERISTICS:

Dimensions..... approximately 8¼ by 7 by 2¼ inches.
Weight..... approximately ¼ pound.

RELATIONSHIP OF PARTS: Used with:

Army type A-1 signal flare container, A. E. Reference Number 52-2250 and M2 pyrotechnic pistol, A. E. Reference Number 93-6000.

ARMY

A. E. REFERENCE NUMBER: 52-2825

SPECIFICATIONS:

Detail..... 93-24718
Superseded..... 24718

MANUFACTURER: Lite Manufacturing Company.

A. A. F. DRAWING NUMBER: 41G8920 (Supersedes drawing H41D10378).

TYPE DESIGNATION: A-1

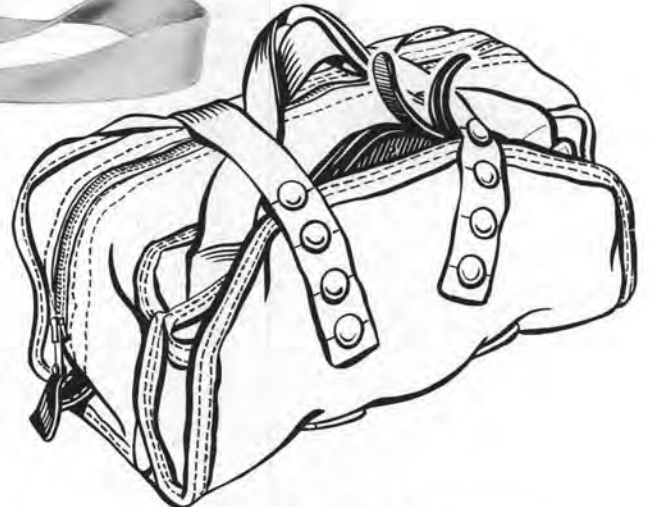
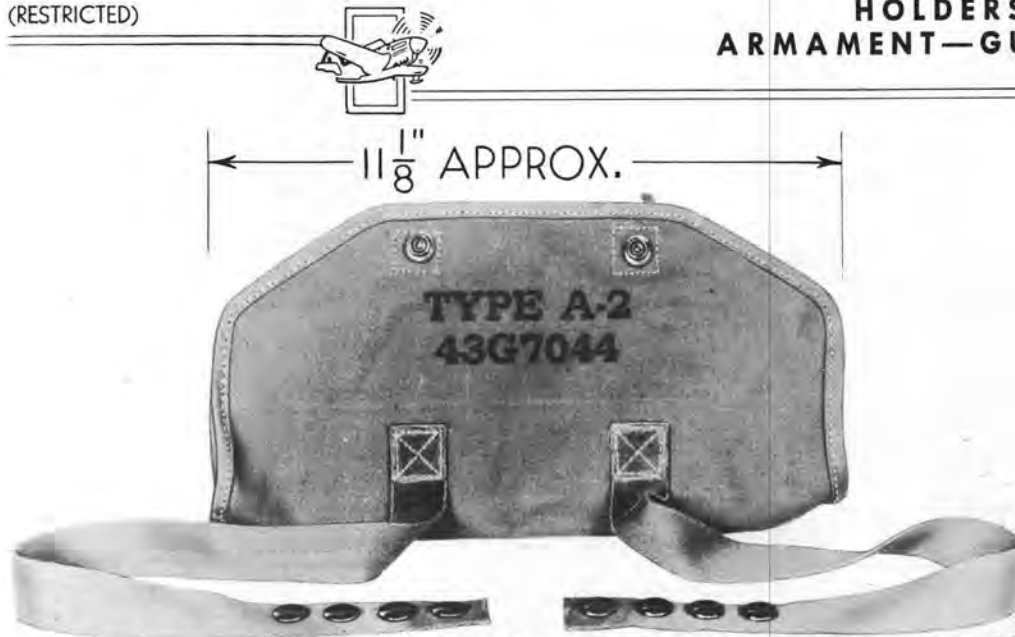
A. S. C. STOCK NUMBER: 4500494500

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.



HOLDER—PYROTECHNIC PISTOL
ARMY TYPE A-2

NAMES: Pyrotechnic pistol holder
Pistol holder

DESCRIPTION: The Army type A-2 pyrotechnic pistol holder, constructed of canvas duck, is used for carrying the Army type M8 pyrotechnic pistol. It is attached to a signal flare container by means of canvas straps and snap fasteners.

CHARACTERISTICS:

Dimensions..... approximately 11¼ by 3 by 2 inches.
Weight..... approximately 1/8 pound.

RELATIONSHIP OF PARTS: Used with:

Army type A-5, signal flare container, A. E. Reference Number 52-2254, Army type A-6 signal flare container, A. E. Reference Number 52-2255 or Army type A-7 signal flare container, A. E. Reference Number 52-2256, and AN-M8 pyrotechnic pistol, A. E. Reference Number 93-6100.

ARMY

A. E. REFERENCE NUMBER: 52-2826

SPECIFICATIONS:

Detail..... 93-24820
Superseded..... 24820

A. A. F. DRAWING NUMBER: 43G7044

TYPE DESIGNATION: A-2

A. S. C. STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

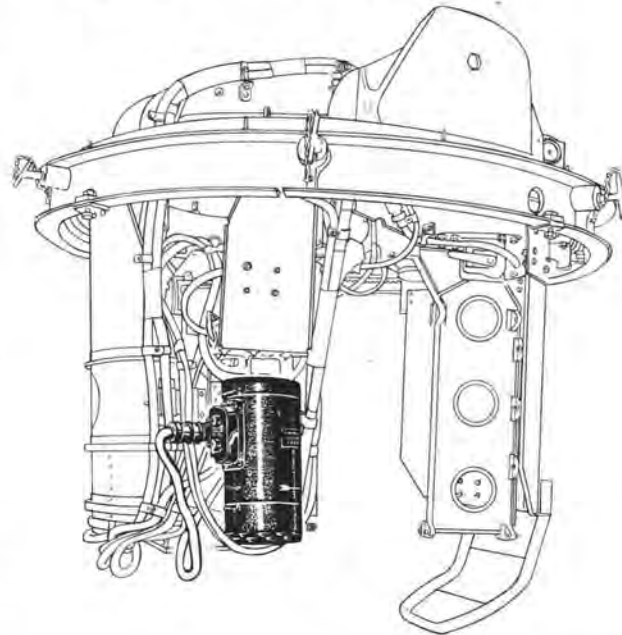
Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number
Lite Manufacturing Company	*A-2	**43G7044	A	4500494600	11-15-8
Crawford Manufacturing Company	*A-2	**43G7044	A	4500494600	11-15-8
Troy Sunshade Company	*A-2	**43G7044	A	4500494600	11-15-8

Note: *AAF type; **AAF drawing.



MOTOR — GENERATOR AMPLIDYNE LOCAL CONTROL GENERAL ELECTRIC MODEL 5AM31NJ18

NAMES: Amplidyne local control motor generator
Amplidyne Motor generator



DESCRIPTION: This type of amplidyne motor-generator, used to supply current for the operation of locally-controlled machine gun turrets, consists essentially of a direct current electric motor and a direct current output generator mounted on the same shaft. In spite of the fact that the motor operates constantly to turn the shaft, there is no output from the generator unless the generator field is excited. This field requires but a small current to produce full generator output voltage. Minute variation in the field current instantaneously produces large variations in the generator's output. This field current is controlled by two variable resistors in the turret control handles. The further the handles are moved from the center position by the gunner, the greater is the output from the amplidyne generator and the faster the turret motors move the turret and gun carriage. Two amplidyne motor generators and two turret drive motors are required for each turret; one of each for movement of the guns in elevation and depression, the others for rotation of the turret.

CHARACTERISTICS:

Dimensions.....approximately 12 by 8½ by 6¼ inches
Weight.....approximately 29 pounds
Revolutions per minute.....8300

Motor input:
Volts......27
Amperes......44
Generator output:
Volts......60
Amperes......8.8
Watts......530

RELATIONSHIP OF PARTS: Used in:

Turrets	A. E. Reference Number
Army type A-3	52-7400
Army type A-3A	52-7425
Army type A-3B	52-7450
Army type A-3C	52-7475
Army type A-15	52-7790
Army type A-16	52-7350
Army type A-9	52-7900
Army type A-9A	52-7910
Army type A-10	52-7950

Turret Drive Motor	A. E. Reference Number
G. E. model 5BA50LJ1	52-3060
G. E. model 5BA50GJ1	52-3070

ARMY

A. E. REFERENCE NUMBER: 52-3030
A. S. C. STOCK NUMBER: Refer to chart.
PRODUCTION STATUS: Under procurement.
SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.

ALL MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Manufacturer's Specification	British Reference Number
General Electric Company	5AM31NJ18	P-8111282 outline TT-5818190 assembly	A	5400009212	OST-1B	150B/1506
Thomas A. Edison, Incorporated	5AM31NJ18	P-8111282 outline TT-5818190 assembly	A	5400009212	OST-1B	150B/1506
Emerson Electric Manufacturing Company	5AM31NJ18	P-8111282 outline TT-5818190 assembly	A	5400009212	OST-1B	150B/1506

← 9 ⁵/₁₆ " APPROX. →



MOTOR—AZIMUTH TURRET DRIVE
GENERAL ELECTRIC COMPANY MODEL 5BA50LJ1

NAMES: Azimuth turret drive motor
Drive motor
Turret drive motor

DESCRIPTION: This 1/2 horsepower azimuth turret drive motor is used to horizontally rotate a gun turret. It is of the four-pole two-brush type, with a separately excited field. The motor is bolted to the turret in a vertical position, so that the armature shaft is down. This shaft carries the drive pinion of a 500 to 1 reduction gear train. The motor is equipped with sealed type ball bearings containing enough low temperature lubricant to last throughout its normal operational life. One amplidyne motor-generator is required to furnish power for operation of each drive motor.

CHARACTERISTICS:

Dimensions.....	approximately 9 ⁵ / ₁₆ by 5 ⁷ / ₈ by 4 ¹ / ₄ inches
Weight.....	approximately 8 pounds
Type.....	1/2 horsepower direct current
Full load revolutions per minute.....	3000
Field current.....	2.3 amperes
Field voltage.....	24 volts
Field resistance.....	9.4 ohms

RELATIONSHIP OF PARTS: Used with:

Amplidyne motor-generator G. E. model 5AM31NJ18, A. E. Reference Number 52-3030 in the following turrets: Army type A-3, A. E. Reference Number 52-7400; Army type A-3A, A. E. Reference Number 52-7425; Army type A-3B, A. E. Reference Number 52-7450; Army type A-3C, A. E. Reference Number, 52-7475; Army type A-15, A. E. Reference Number 52-7790; Army type A-9, A. E. Reference Number 52-7900; Army type A-9A, A. E. Reference Number 52-7910; Army type A-10, A. E. Reference Number 52-7950 and Army type A-11, A. E. Reference Number 52-8000.

ARMY

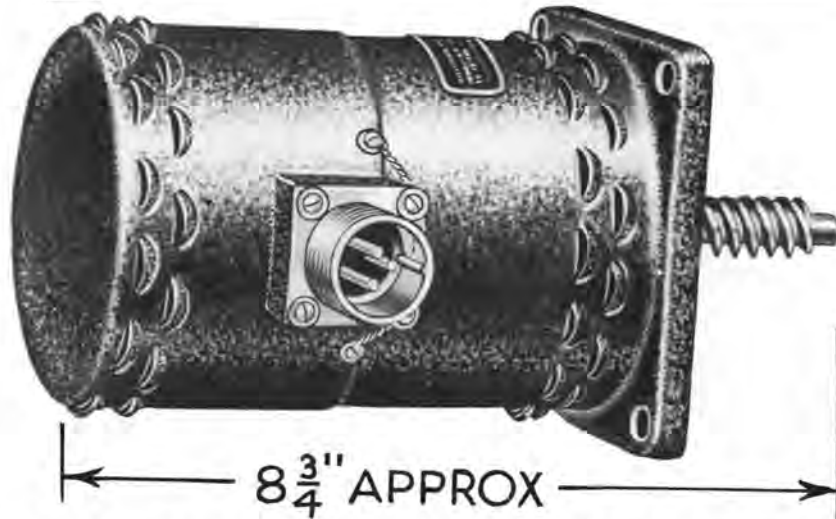
A. E. REFERENCE NUMBER: 52-3060
A. S. C. STOCK NUMBER: Refer to chart.
PRODUCTION STATUS: Under procurement.
SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.

ALL MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Manufacturer's Specification Number	British Reference Number
General Electric Company	5BA50LJ1	TT-5818151	A	5400465615	OST-1B	150B/1019
Emerson Electric Manufacturing Company	5BA50LJ1	TT-5818151	A	5400465615	OST-1B	150B/1019
American Generator and Armature Company	5BA50LJ1	TT-5818151	A	5400465615	OST-1B	150B/1019



MOTOR—ELEVATION TURRET DRIVE
GENERAL ELECTRIC COMPANY MODEL 5BA50GJ1

NAMES: Elevation turret drive motor
Drive motor Turret drive motor

DESCRIPTION: This 1/3 horsepower elevation turret drive motor is used to elevate and depress a two-gun turret gun carriage. It is of the four-pole, two-brush type, with a separately excited field. The motor is bolted to the turret in a vertical position, so that the armature shaft is up. This shaft carries the drive pinion of an 800 to 1 reduction gear train. The motor is equipped with sealed type ball bearings containing enough low temperature lubricant to last throughout normal operational life. One amplidyne motor-generator is required to furnish power for the operation of each drive motor.

CHARACTERISTICS:

Dimensions.....	approximately 8 3/4 by 5 x 1/4 4 1/4 inches
Weight.....	approximately 7 pounds
Type.....	1/3 horsepower direct current
Full load revolutions per minute.....	3000
Field current.....	1.8 amperes
Field voltage.....	24 volts
Field resistance.....	11.6 ohms

RELATIONSHIP OF PARTS: Used with:

Amplidyne motor-generator, G. E. model 5AM31NJ18, A. E. Reference Number 52-3030 in the following turrets: Army type A-3, A. E. Reference Number 52-7400; Army type A-3A, A. E. Reference Number 52-7425; Army type A-3B, A. E. Reference Number 52-7450; Army type A-3C, A. E. Reference Number 52-7475; Army type A-15, A. E. Reference Number 52-7790; Army type A-9, A. E. Reference Number 52-7900; Army type A-9A, A. E. Reference Number 52-7910; Army type A-10, A. E. Reference Number 52-7950 and Army type A-11, A. E. Reference Number 52-8000.

ARMY

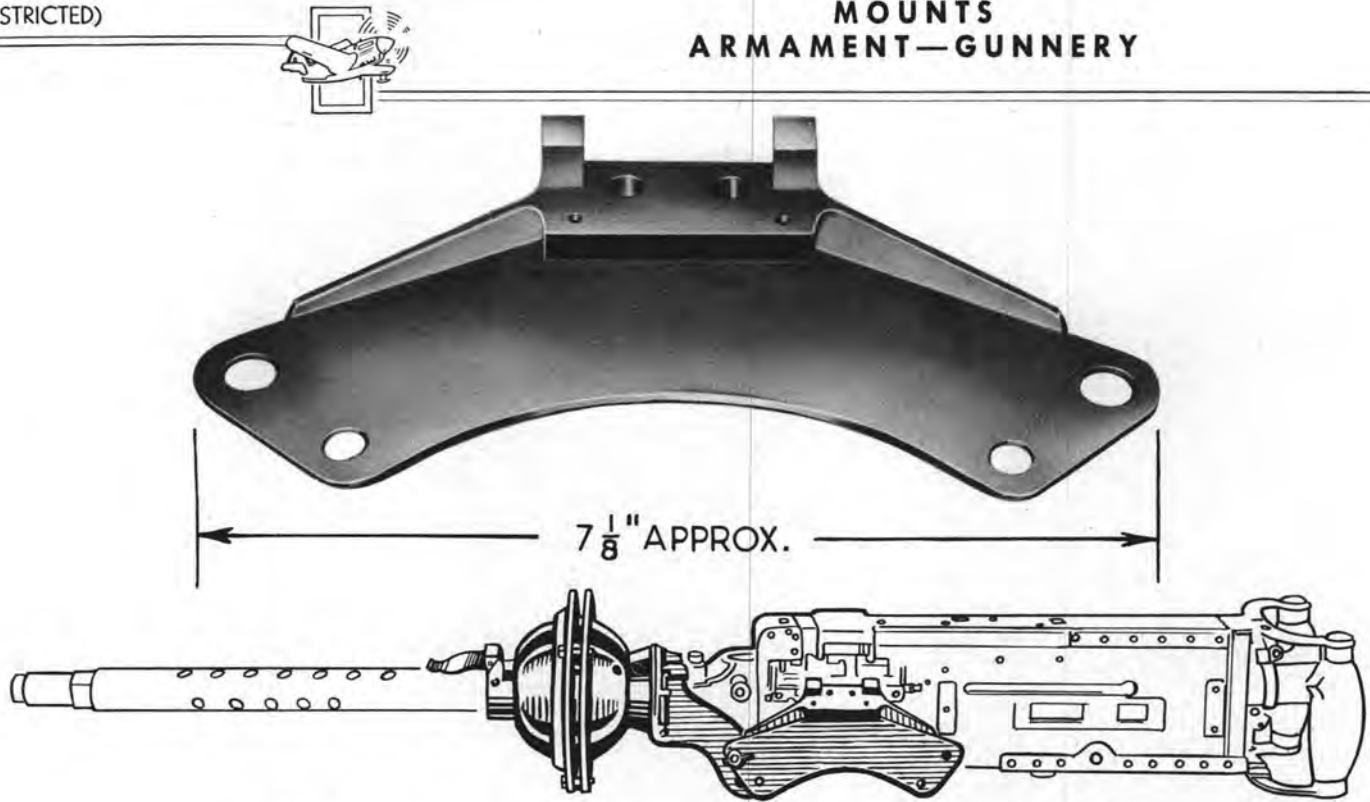
A. E. REFERENCE NUMBER: 52-3070
A. S. C. STOCK NUMBER: Refer to chart.
PRODUCTION STATUS: Under procurement.
SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Manufacturer's Specification Number	British Reference Number
General Electric Company	5BA50GJ1	TT-5818150	A	5400465630	OST-1B	150B/1027
Emerson Electric Manufacturing Company	5BA50GJ1	TT-5818150	A	5400465630	OST-1B	150B/1027



MOUNT—AMMUNITION BOX
ARMY TYPE A-3

NAMES: Ammunition box mount

DESCRIPTION: The Army type A-3 ammunition box mount is used for attaching a type A-1 ammunition box holder to a .30 caliber M2 machine gun. The mount is a welded metal bracket that is held to the gun by the belt retaining pawl pin and the gun trunnion bolt.

CHARACTERISTICS:

Dimensions..... approximately 7 1/8 by 3 by 7/8 inches.
 Weight..... approximately 1 1/2 pounds.

RELATIONSHIP OF PARTS: Used with:

Army type A-1 ammunition box holder, A. E. Reference Number 52-2800 and .30 caliber M2 machine guns, A. E. Reference Numbers 93-1440 or 93-1520.

ARMY

A. E. REFERENCE NUMBER: 52-3100

SPECIFICATIONS:

Detail..... 93-24661
 Superseded..... 24661

A. A. F. DRAWING NUMBER: 40D5858

TYPE DESIGNATION: A-3

A. S. C. STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Not under procurement for initial installation.

SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number	Remarks
St. Louis Aircraft Corporation	*A-3	**40D5858	A-B	5200466980	150J/584	
Dahlstrom Metallic Door Company	*A-3	**40D5858	A-B	5200466980	150J/584	

Note: *AAF type; **AAF drawing.



MOUNT—LEFT HAND AMMUNITION BOX ARMY TYPE C-2

NAMES: Left hand ammunition box mount
.50 caliber flexible gun ammunition box mount
Ammunition box mount

DESCRIPTION: The Army type C-2 left hand ammunition box mount is used to secure a type O-1 ammunition box, or boxes of similar design, to the left side of a .50 caliber M2 machine gun. The mount is a machined metal plate with a pair of lugs which are attached to the gun by the belt retaining pawl pin. The ammunition box is slid on the plate and spring-loaded plungers, located on the mounting bracket, prevent the box from becoming dislodged by vibration.

CHARACTERISTICS:

Dimensions approximately 5¹¹/₃₂ by 1 by 1 inches.
Weight approximately 6¹/₂ ounces.

RELATIONSHIP OF PARTS: Used with:

Army type O-1 ammunition box, A. E. Reference Number 52-1600 and .50 caliber M2 machine guns, A. E. Reference Numbers 93-1560 and 93-1590.

ARMY

A. E. REFERENCE NUMBER: 52-3200

SPECIFICATIONS:

Detail 93-24640A
Superseded 93-24640

A. A. F. DRAWING NUMBER: 37B2675

TYPE DESIGNATION: C-2

A. S. C. STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Not under procurement for initial installation. Superseded by Army type C-3 mount, A. E. Reference Number 52-3350.

SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number
Dayton Tool & Engineering Company	*C-2	**37B2675	A-B	5200467000	150J/576
	*C-3	**39B3905-L	A-B	5200467350	150J/702

Note: *AAF type; **AAF drawing.



MOUNT—RIGHT HAND AMMUNITION BOX
ARMY TYPE C-2

NAMES: Right hand ammunition box mount
.50 caliber flexible gun ammunition box mount
Ammunition box mount

DESCRIPTION: The Army type C-2 right hand ammunition box mount is used to secure a type O-1 ammunition box, or boxes of similar design, to the right side of a .50 caliber M2 machine gun. The mount is a machined metal plate with a pair of lugs which are attached to the gun by the belt retaining pawl pin. The ammunition box is slid on the plate and spring-loaded plungers, located on the mounting bracket, preventing the box from becoming dislodged due to vibration.

CHARACTERISTICS:

Dimensions.....approximately 5¹¹/₃₂ by 1 by 1 inches.
Weight.....approximately 6¹/₂ ounces.

RELATIONSHIP OF PARTS: Used with:

Army type O-1 ammunition box, A. E. Reference Number 52-1600 and .50 caliber M2 machine guns,
A. E. Reference Numbers 93-1560 and 93-1590.

ARMY

A. E. REFERENCE NUMBER: 52-3300

SPECIFICATIONS:

Detail.....93-24640A
Superseded.....93-24640

A. A. F. DRAWING NUMBER: 37B2675

A. A. F. PART NUMBER: 37B2675-1

TYPE DESIGNATION: C-2

A. S. C. STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Not under procurement for initial installation. Superseded by Army type C-3 mount, A. E. Reference Number 52-3350.

NAVY

There is no Navy equivalent for the Army item.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number
Dayton Tool & Engineering Company	*C-2	**37B2675-1	A-B	5200467050	150J/585
	*C-3	**39B3905-R	A-B	5200467360	150J/703

Note: *AAF type; **AAF drawing.



MOUNTS ARMAMENT—GUNNERY



MOUNT—LEFT HAND AMMUNITION BOX ARMY TYPE C-3

NAMES: Left hand ammunition box mount
.50 caliber flexible gun ammunition box mount
Ammunition box mount

DESCRIPTION: The Army type C-3 left hand ammunition box mount is used to secure a type O-1 ammunition box, or boxes of similar design, to the left side of a .50 caliber M2 machine gun. The mount is a machined metal plate with a pair of lugs which are attached to the gun by the belt retaining pawl pin. The ammunition box is slid on the plate and spring-loaded plungers, located on the mounting bracket, prevent the box from becoming dislodged due to vibration. This mount is similar to the Army type C-2, except that the bracket position is located $\frac{5}{16}$ inch further out from the side of the gun. This increased dimension permits the use of the type O-1 ammunition box with Army types E-8 and E-12 gun mount adapters.

CHARACTERISTICS:

Dimensions..... approximately $5\frac{11}{32}$ by $1\frac{3}{8}$ by 1 inches.
Weight..... approximately $6\frac{1}{2}$ ounces.

RELATIONSHIP OF PARTS: Used with:

Army type O-1 ammunition box, A. E. Reference Number 52-1600 on .50 caliber M2 machine guns,
A. E. Reference Numbers 93-1560 and 93-1590.

ARMY

A. E. REFERENCE NUMBER: 52-3350

SPECIFICATIONS:

Detail..... 93-24690A
Superseded..... 93-24690

A. A. F. DRAWING NUMBER: 39B3905

TYPE DESIGNATION: C-3

A. S. C. STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number	Remarks
Dayton Tool and Engineering Company	*C-3	**39B3905-L	A-B	5200467350	150J/702	
	*C-2	**37B2675	A-B	5200467000	150J/576	Cannot be used with Army types E-8 and E-12 gun mount adapters.

Note: *AAF type; **AAF drawing.



MOUNT—RIGHT HAND AMMUNITION BOX ARMY TYPE C-3

NAMES: Right hand ammunition box mount
.50 caliber flexible gun ammunition box mount
Ammunition box mount

DESCRIPTION: The Army type C-3 ammunition box mount is used to secure a type O-1 ammunition box, or boxes of similar design, to the right side of a .50 caliber M2 machine gun. The mount is a machined metal plate with a pair of lugs which attach to the gun by the belt retaining pawl pin. The ammunition box is slid on the plate and spring-loaded plungers, located on the mounting bracket, prevent the box from becoming dislodged due to vibration. This mount is similar to the Army type C-2, except that the bracket position is located $\frac{5}{16}$ inch further out from the side of the gun. This increased dimension permits the use of the type O-1 ammunition box with Army types E-8 and E-12 gun mount adapters.

CHARACTERISTICS:

Dimensions..... approximately $5\frac{11}{32}$ by $1\frac{3}{8}$ by 1 inches.
Weight..... approximately $6\frac{1}{2}$ ounces.

RELATIONSHIP OF PARTS: Used with:

Army type O-1 ammunition box, A. E. Reference Number 52-1600 on .50 caliber M2 machine guns,
A. E. Reference Numbers 93-1560 and 93-1590.

ARMY

A. E. REFERENCE NUMBER: 52-3360

SPECIFICATIONS:

Detail..... 93-24690A
Superseded..... 93-24690

A. A. F. DRAWING NUMBER: 39B3905

TYPE DESIGNATION: C-3

A. S. C. STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

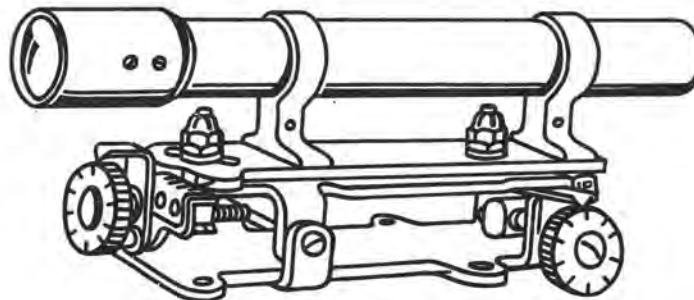
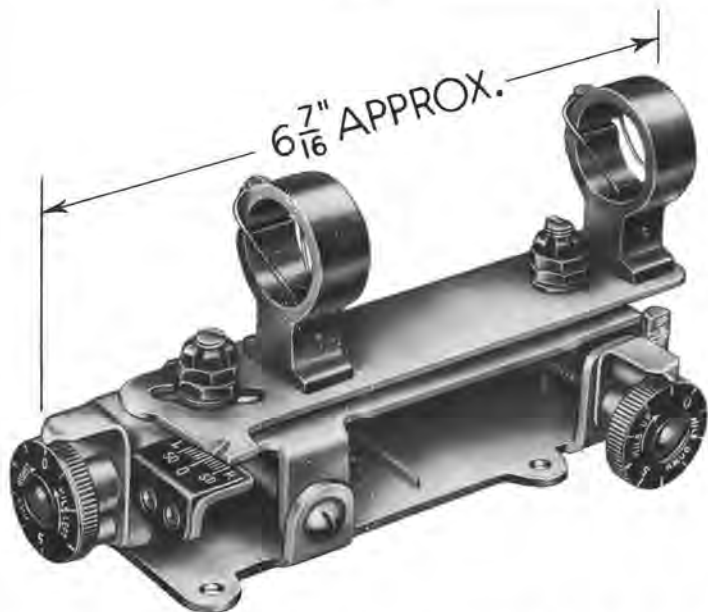
NAVY

There is no Navy equivalent for the Army item.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number	Remarks
Dayton Tool and Engineering Company	*C-3	**39B3905-R	A-B	5200467360	150J/703	
	*C-2	**37B2675-1	A-B	5200467050	150J/585	Cannot be used with Army type E-8 and E-12 gun mount adapters.

Note: *AAF type; **AAF drawing.



MOUNT—FLEXIBLE GUN SIGHT
ARMY TYPE C-4

NAMES: Flexible gun sight mount
Telescopic sight mount

DESCRIPTION: The Army type C-4 flexible gun sight mount is used to attach types E-4 and E-5 telescopic sights to Army types E-5 and E-8 gun mount adapters. It consists of two ring clamps which hold the sight, a vernier for aligning the sight to the gun, and a baseplate bracket for bolting the entire mount to the adapter.

CHARACTERISTICS:

Dimensions approximately 6⁷/₁₆ by 3¹/₂ by 2¹/₂ inches.
Weight approximately 1 pound 2 ounces.

RELATIONSHIP OF PARTS: Used with:

Army type E-4 or E-5 telescopic sights, A. E. Reference Numbers 52-5300 and 52-5350, on Army type E-5 or E-8 adapters, A. E. Reference Numbers 52-875 and 52-1100.

ARMY

A. E. REFERENCE NUMBER: 52-3400

SPECIFICATIONS:

Detail 93-24669
Superseded 24669

MANUFACTURER: American Thermometer Company.

A. A. F. DRAWING NUMBER: 40D6090

TYPE DESIGNATION: C-4

A. S. C. STOCK NUMBER: 5200471000

PRODUCTION STATUS: Not under procurement for initial installation.

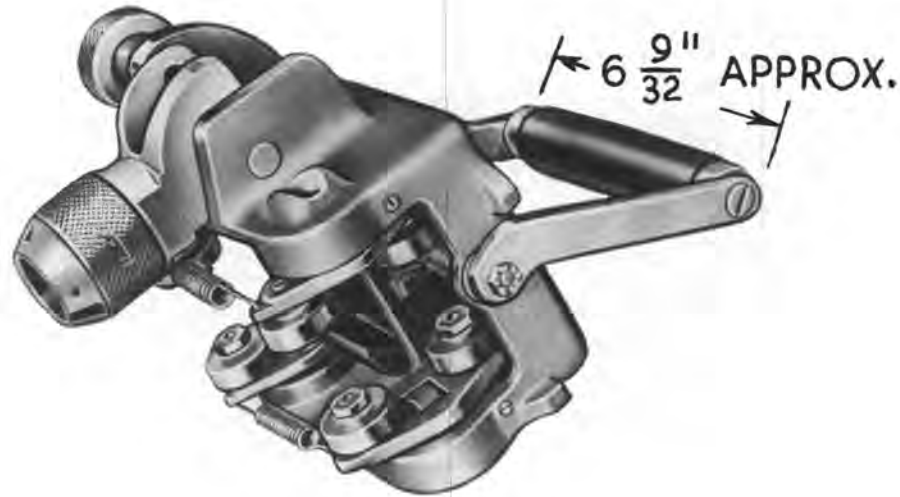
SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.

BRITISH

REFERENCE NUMBER: 108B/80



MOUNT-GUN ARMY TYPE G-1A

NAMES: Gun mount
Flexible gun mount

DESCRIPTION: The Army type G-1A gun mount provides means for moving a .30 caliber M2 machine gun along a stationary track or rail conforming to the shape of a fuselage opening. The mount consists of a steel housing surrounding a movable truck which engages the rail, a brake mechanism, and a socket with a locking device to hold and lock the gun in the desired position. It also aids in stowing the gun horizontally, when not in use.

CHARACTERISTICS:

Dimensions.....approximately 7 by 11 by 4½ inches
Weight.....approximately 8 pounds 6 ounces

RELATIONSHIP OF PARTS: Used with:

A single .30 caliber M2 machine gun mounted on an
Army type C-16 gun mount adapter..... A. E. Reference Number 52-600

ARMY

A. E. REFERENCE NUMBER: 52-3500

SPECIFICATIONS:

Detail.....93-24561A
Superseded.....93-24561

A. A. F. DRAWING NUMBER: 37G6581 (Supersedes Army Drawing Number H39G5346)

TYPE DESIGNATION: G-1A

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Not under procurement for initial installation. Superseded by Army type G-5 mount, A. E. Reference Number 52-3600.

SHIPPING DATA: Shipped as a complete unit without rail which is not furnished by the government.

NAVY

There is no Navy equivalent for the Army item.

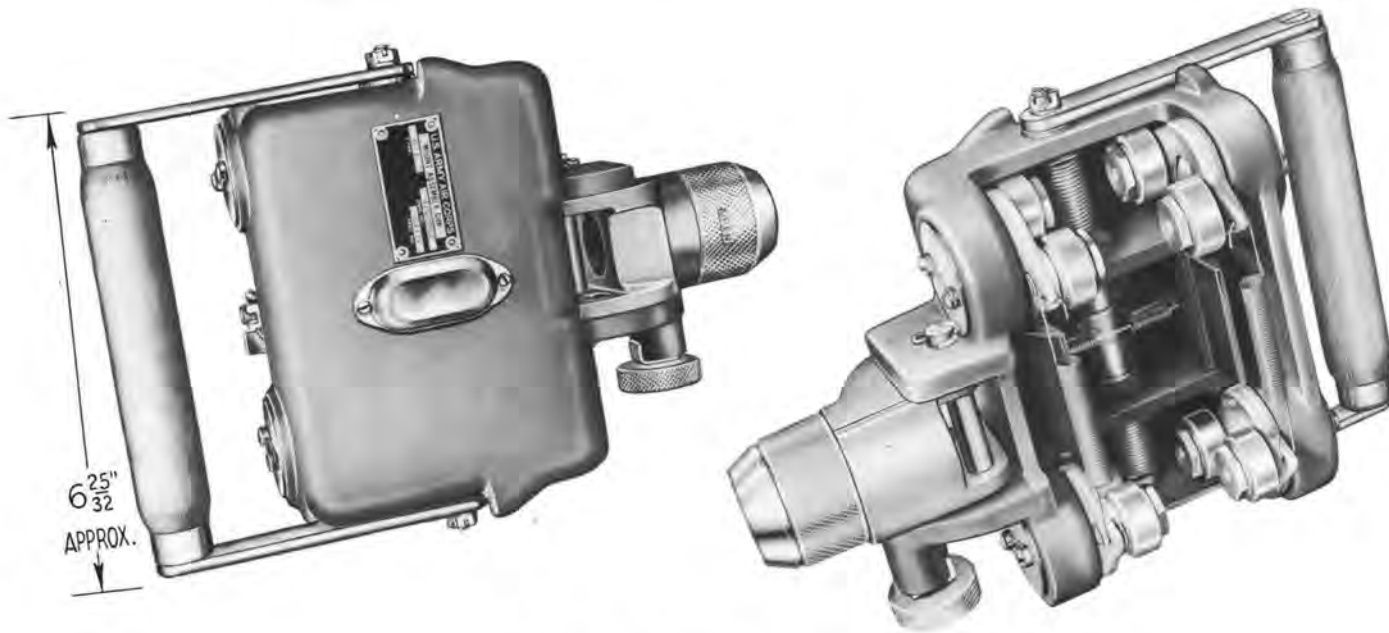
MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number	Remarks
The Duro Company	*G-1A	**37G6581	A-B	5200473300		150J/48	
	*G-5	**41G10752	A-B	5200473325	11-10-13	150J/574	Aluminum housing.

Note: *AAF type; **AAF drawing.



MOUNTS ARMAMENT—GUNNERY



MOUNT—GUN ARMY TYPE G-5

NAMES: Gun mount
Flexible gun mount

DESCRIPTION: The Army type G-5 gun mount provides means for moving a .30 caliber M2 machine gun along a stationary track or rail, conforming to the shape of a fuselage opening. The mount consists of an aluminum housing surrounding a movable truck which engages the rail, a brake mechanism, and a socket with a locking device to hold and lock the gun in the desired position. It also aids in stowing the gun horizontally, when not in use.

CHARACTERISTICS:

Dimensions.....approximately 7½ by 11⅛ by 4½ inches
Weight.....approximately 8 pounds 6 ounces

RELATIONSHIP OF PARTS: Used with:

A single .30 caliber M2 machine gun mounted on an
Army type C-16 gun mount adapter.....A. E. Reference Number 52-600

ARMY

A. E. REFERENCE NUMBER: 52-3600

SPECIFICATIONS:

Detail.....93-24719
Superseded.....24719

A. A. F. DRAWING NUMBER: 41G10752

TYPE DESIGNATION: G-5

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit, without rail which is not furnished by the government.

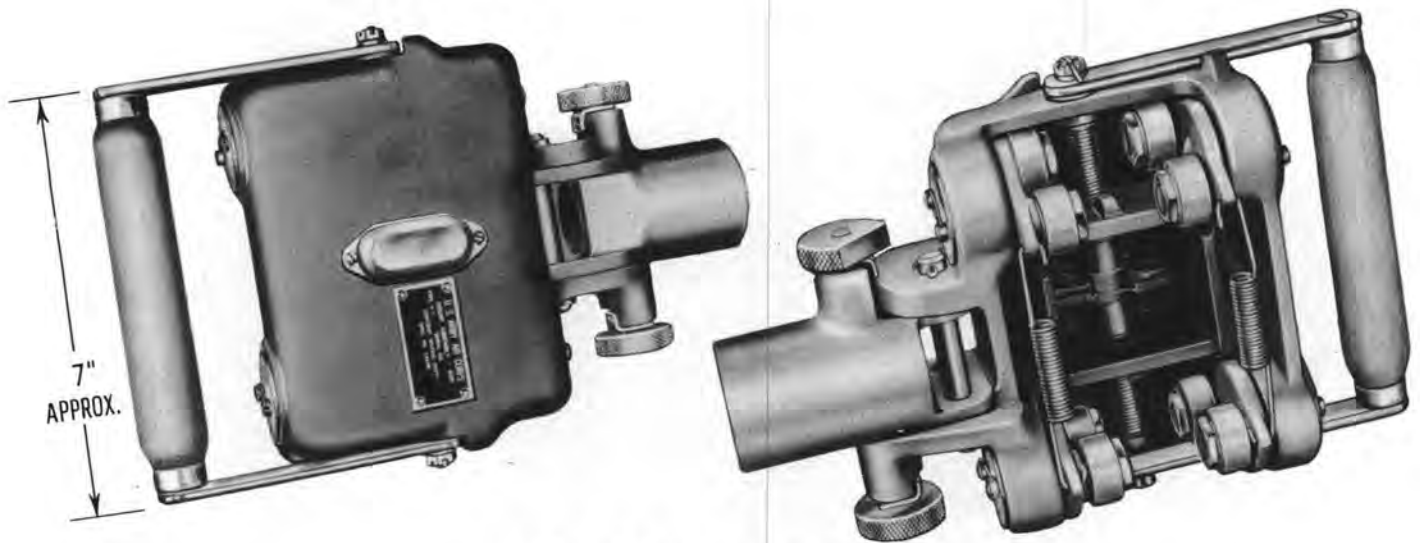
NAVY

There is no Navy equivalent for the Army item.

MODELS BELOW ARE INTERCHANGEABLE Models are used in services as noted in column 4 A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number	Remarks
The Duro Company	*G-5	**41G10752	A-B	5200473325	11-10-13	150J/574	
	*G-1A	**37G6581	A-B	5200473300		150J/48	Steel housing

Note: *AAF type; **AAF drawing.



MOUNT-GUN
ARMY TYPE H-1

NAMES: Gun mount
Flexible gun mount

DESCRIPTION: The Army type H-1 gun mount provides means for moving one .50 caliber M2 machine gun or twin, .30 caliber M2 machine guns along a stationary track or rail conforming to the shape of a fuselage opening. The mount consists of a steel housing surrounding a movable truck which engages the rail, a brake mechanism, and a socket with a locking device to hold and lock the gun, or guns, in the desired position.

CHARACTERISTICS:

Dimensions.....approximately 11 by 7 by 4½ inches
Weight.....approximately 16 pounds 8 ounces

RELATIONSHIP OF PARTS: Used with:

A single .50 caliber M2 machine gun mounted on an Army type E-11 or E-12 adapter, A. E. Reference Number 52-1300 or 52-1325; or two .30 caliber M2 machine guns mounted on a Bell model 19-G gun mount adapter, A. E. Reference Number 52-400.

ARMY

A. E. REFERENCE NUMBER: 52-3700

SPECIFICATIONS:

Detail.....93-24698
Superseded.....24698

A. A. F. DRAWING NUMBER: 41G6410 (Supersedes Army Drawing S41D6785).

TYPE DESIGNATION: H-1

A. S. C. STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit, without rail which is not furnished by the government.

NAVY

There is no Navy equivalent for the Army item.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number
The Duro Company	*H-1	**41G6410	A-B	5200473335	150J/50
Aerial Machine and Tool Company	*H-1	**41G6410	A-B	5200473335	150J/50

Note: *AAF type; **AAF drawing.



MOUNTS ARMAMENT—GUNNERY

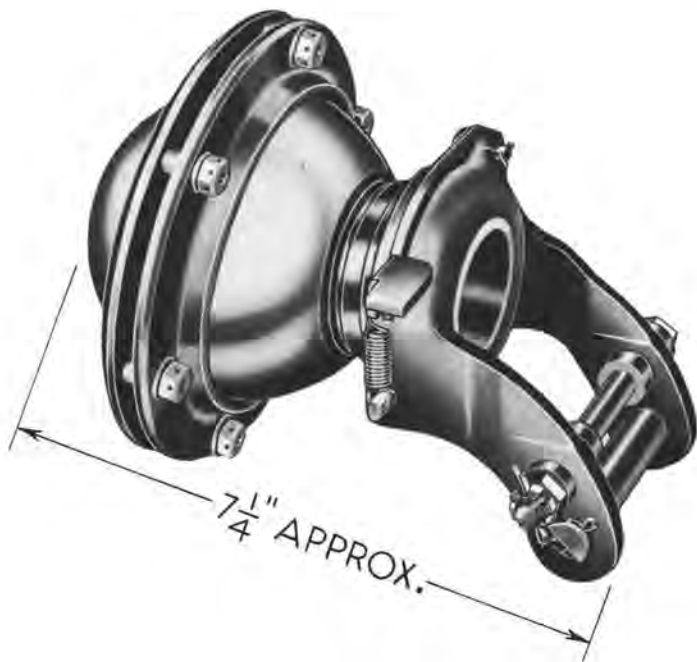
MOUNT ASSEMBLY— BALL AND SOCKET GUN ARMY TYPE K-1

NAMES: Ball and socket gun mount assembly
Ball and socket mount
Gun mount

DESCRIPTION: The Army type K-1 ball and socket gun mount, consisting of a type K-2 ball and a type C-17 adapter, accommodates a single .30 caliber M2 machine gun. The adapter is fastened to the front trunnion of the gun and clips to the rear of the ball. The socket halves, which surround the ball, attach to both sides of a plexiglass enclosure or window, where they are held by two retaining flanges. A removable sleeve in the ball may be withdrawn to permit use of a gun camera in this mount.

CHARACTERISTICS:

Dimensions approximately 5¾ by 5¾ by 7½ inches.
Weight approximately 4¼ pounds.



RELATIONSHIP OF PARTS: Used with:

A .30 caliber M2 flexible machine gun, A. E. Reference Number 93-1520.

ARMY

A. E. REFERENCE NUMBER: 52-3800

SPECIFICATIONS:

Detail 93-24655
Superseded 24655

A. A. F. DRAWING NUMBER: 40G6567

TYPE DESIGNATION K-1

A. S. C. STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Not under procurement for initial installation. Superseded by Army type K-3 ball and socket gun mount, A. E. Reference Number 52-3950.

SHIPPING DATA: Shipped as a complete unit.

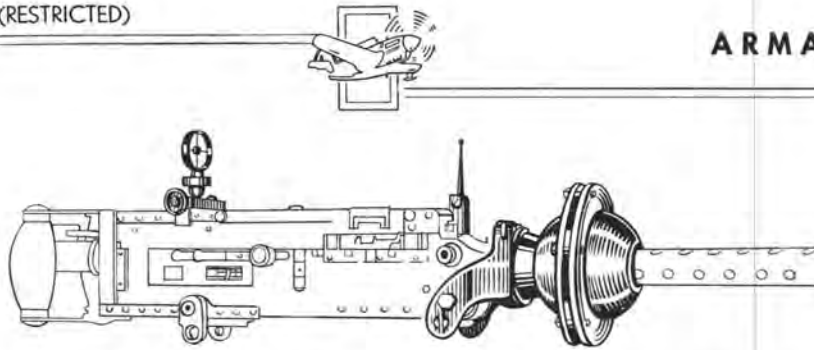
NAVY

There is no Navy equivalent for the Army item.

ALL MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number	Remarks
Moore-Eastwood and Company	*K-1	**40G6567	A-B	5200473350	150J/18	
	*K-2	**41B5641	A-B	5200473370	150J/27	Ball mount only. Requires adapter.
Iron Fireman Manufacturing Company	*K-1	**40G6567	A-B	5200473350	150J/18	
	*K-2	**41B5641	A-B	5200473370	150J/27	Ball mount only. Requires adapter.
	*K-2A	**41B10360	A-B	5200473380	150J/19	Ball mount only. Requires adapter. Non-removable sleeve.
Anetsberger Brothers Incorporated	*K-2A	**41B10360	A-B	5200473380	150J/19	Ball mount only. Requires adapter. Non-removable sleeve.
Ainsworth Manufacturing Company	*K-3	AG-150	A-B	5200473385	150J/51	Ball mount only. Requires adapter. Non-removable sleeve.

Note: *AAF type; **AAF drawing.



MOUNT — BALL AND SOCKET GUN
ARMY TYPE K-2

NAMES: Ball and socket gun mount
Ball and socket mount
Gun mount

DESCRIPTION: The Army type K-2 ball and socket gun mount, used with a single .30 caliber M2 machine gun, is a subassembly of the K-1 mount and is procured as such.

A sleeve inside the ball fits over the air jacket of the gun and is locked in place by set screws. The sleeve is removable, to permit use of a gun camera in this mount. Six bolts mount this unit through a plexiglass panel, either in the nose or waist of the airplane.

CHARACTERISTICS:

Dimensions of socket approximately 5 3/4 inches in diameter.
Dimensions of ball approximately 4 by 4 by 5 inches.
Weight approximately 4 1/4 pounds.

RELATIONSHIP OF PARTS: Used with:

Army type C-17 gun mount adapter, A. E. Reference Number 52-700 to form the type K-1 gun mount which is used on .30 caliber M2 machine guns, A. E. Reference Number 93-1520.

ARMY

A. E. REFERENCE NUMBER: 52-3850

SPECIFICATIONS:

Detail 93-24697
Superseded 24697

A. A. F. DRAWING NUMBER: 41B5641 (Supersedes Army Drawing Number 40G6567).

TYPE DESIGNATION: K-2

A. S. C. STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Not under procurement for initial installation. Superseded by Army type K-3 gun mount adapter, A. E. Reference Number 52-3950.

SHIPPING DATA: Shipped as a sub-assembly of Army type K-1, A. E. Reference Number 52-3800.

NAVY

There is no Navy equivalent for the Army item.

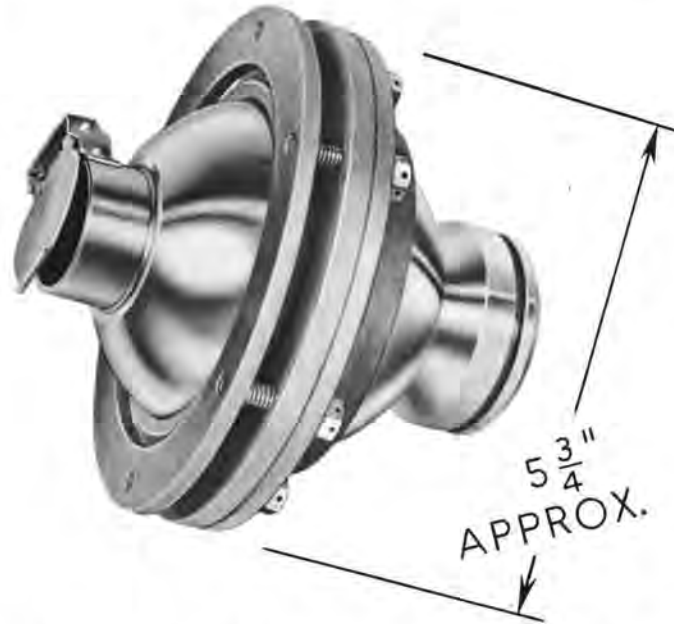
MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number	Remarks
Moore-Eastwood and Company	*K-2	**41B5641	A-B	5200473370	150J/27	
	*K-1	**40G6567	A-B	5200473350	150J/18	Includes Army type C-17 gun mount adapter.
Iron Fireman Manufacturing Company	*K-2	**41B5641	A-B	5200473370	150J/27	
	*K-1	**40G6567	A-B	5200473350	150J/18	Includes Army type C-17 gun mount adapter.
	*K-2A	**41B10360	A-B	5200473380	150J/19	Non-removable sleeve.
Ainsworth Manufacturing Company	*K-3	AG-150	A-B	5200473385	150J/51	Non-removable sleeve.
Anetsberger Brothers, Incorporated	*K-2A	**41B10360	A-B	5200473380	150J/19	Non-removable sleeve.

Note: *AAF type; **AAF drawing.



MOUNTS ARMAMENT—GUNNERY



MOUNT—BALL AND SOCKET GUN ARMY TYPE K-2A

NAMES: Ball and socket gun mount
Ball and socket mount

DESCRIPTION: The Army type K-2A ball and socket gun mount is used with a single .30 caliber M2 machine gun. This mount is a complete assembly, cast in one hollow piece with an integral sleeve. Nine bolts mount this unit through a plexiglass panel, either in the nose or waist of an airplane. A spring cap fits over the end of the ball exposed to the slipstream.

CHARACTERISTICS:

- Dimensions of socket approximately 5³/₄ inches in diameter.
- Dimensions of ball approximately 4 by 4 by 5 inches.
- Weight approximately 4¹/₂ pounds.

RELATIONSHIP OF PARTS: Used with:

Army type C-17 gun mount adapter, A. E. Reference Number 52-700, or Army type C-18 gun mount adapter and .30 caliber M2 machine gun, A. E. Reference Number 93-1520.

ARMY

A. E. REFERENCE NUMBER: 52-3900

SPECIFICATIONS:

- Detail 93-24697
- Superseded 24697

A. A. F. DRAWING NUMBER: 41B10360

TYPE DESIGNATION: K-2A

A. S. C. STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Not under procurement for initial installation. Superseded by the Army type K-3 mount, A. E. Reference Number 52-3950.

SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.

MODELS BELOW ARE INTERCHANGEABLE Models are used in services as noted in column 4 A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number	Remarks
Anetsberger Brothers, Incorporated	*K-2A	**41B10360	A-B	5200473380	150J/19	
Iron Fireman Manufacturing Company	*K-2A	**41B10360	A-B	5200473380	150J/19	
	*K-2	**41B5641	A-B	5200473370	150J/27	
	*K-1	**40G6567	A-B	5200473350	150J/18	Includes Army type C-17 gun mount adapter.
Moore-Eastwood and Company	*K-2	**41B5641	A-B	5200473370	150J/27	
	*K-1	**40G6567	A-B	5200473350	150J/18	Includes Army type C-17 gun mount adapter.
Ainsworth Manufacturing Company	*K-3	AG-150	A-B	5200473385	150J/51	

Note: *AAF type; **AAF drawing.



MOUNTS ARMAMENT—GUNNERY



MOUNT—BALL AND SOCKET GUN ARMY TYPE K-3

NAMES: Ball and socket gun mount
Ball and socket mount

DESCRIPTION: The Army type K-3 ball and socket gun mount is used with a single .30 caliber M2 machine gun. It is composed of ball halves, stamped out and tightly butt-jointed, with a non-removable sleeve extending the entire length of the ball. Six bolts mount this unit through the plexiglass in either the nose or waist of an airplane. A spring cap fits over the end of the ball exposed to the slipstream.

CHARACTERISTICS:

Dimensions of socket approximately 5 7/8 inches in diameter.
Dimensions of ball approximately 4 1/16 by 4 1/16 by 5 3/8 inches.
Weight approximately 4 1/2 pounds.

RELATIONSHIP OF PARTS: Used with:

Army type C-17 or C-18 gun mount adapters, A. E. Reference Numbers 52-700 and 52-800, and .30 caliber M2 machine gun, A. E. Reference Number 93-1520.

ARMY

A. E. REFERENCE NUMBER: 52-3950

SPECIFICATIONS:

Detail 93-24780
Superseded 24780

A. A. F. DRAWING NUMBER: 42B12323

TYPE DESIGNATION: K-3

A. S. C. STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.

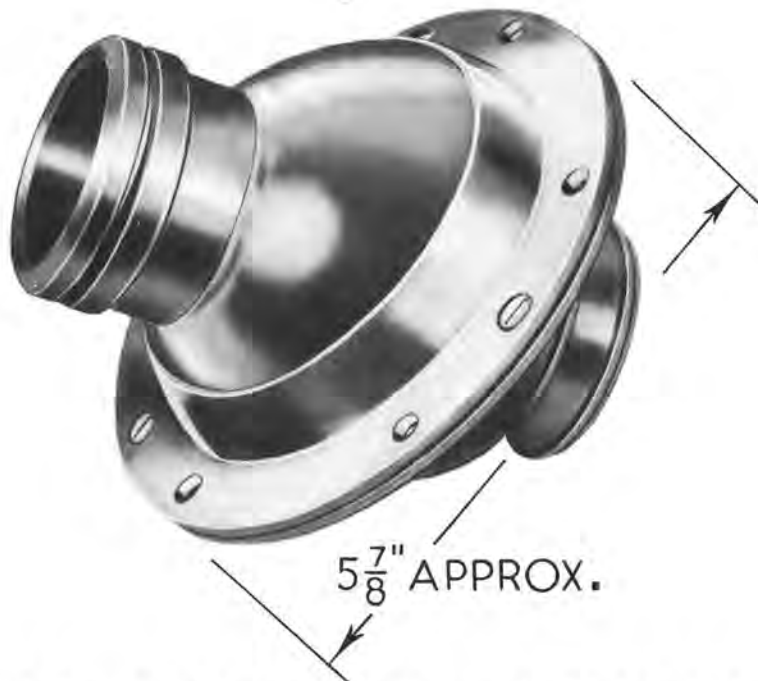
MODELS BELOW ARE INTERCHANGEABLE Models are used in services as noted in column 4 A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number	Remarks
Ainsworth Manufacturing Company	*K-3	AG-150	A-B	5200473385	150J/51	
Anetsberger Brothers, Incorporated	*K-2A	**41B10360	A-B	5200473380	150J/19	
Iron Fireman Manufacturing Company	*K-2A	**41B10360	A-B	5200473380	150J/19	
	*K-2	**41B5641	A-B	5200473370	150J/27	
	*K-1	**40G6567	A-B	5200473350	150J/18	Includes Army type C-17 gun mount adapter.
Moore-Eastwood and Company	*K-2	**41B5641	A-B	5200473370	150J/27	
	*K-1	**40G6567	A-B	5200473350	150J/18	Includes Army type C-17 gun mount adapter.

Note: *AAF type; **AAF drawing.



MOUNTS ARMAMENT—GUNNERY



MOUNT—BALL AND SOCKET GUN ARMY TYPE K-4

NAMES: Ball and socket gun mount
Ball and socket mount

DESCRIPTION The Army type K-4 ball and socket gun mount is used with a single .50 caliber M2 machine gun. The ball halves are stamped out and tightly butt-jointed, with a non-removable sleeve extending the entire length of the ball. Six bolts mount this unit to a spider through a plexiglas panel in either the nose or waist of an airplane.

CHARACTERISTICS:

Dimensions of socket.....	approximately 5 ⁷ / ₈ inches in diameter
Dimensions of ball.....	approximately 4 ¹ / ₈ by 4 ¹ / ₈ by 5 ³ / ₈ inches
Weight.....	approximately 3 ¹ / ₂ pounds

RELATIONSHIP OF PARTS: Used with:

A .50 caliber M2 machine gun, A. E. Reference Number 93-1560 with Army type C-19 gun mount adapter, A. E. Reference Number 52-850; and Army type E-11 gun mount adapter, A. E. Reference Number 52-1300.

ARMY

A. E. REFERENCE NUMBER: 52-3960

SPECIFICATIONS:

Detail.....	93-24814
Superseded.....	24814

MANUFACTURER: Ainsworth Manufacturing Company

MANUFACTURER'S DRAWING NUMBER: AG-360

A. A. F. DRAWING NUMBER: 42B19084

TYPE DESIGNATION: K-4

A. S. C. STOCK NUMBER: 5200468540

PRODUCTION STATUS: Under procurement.

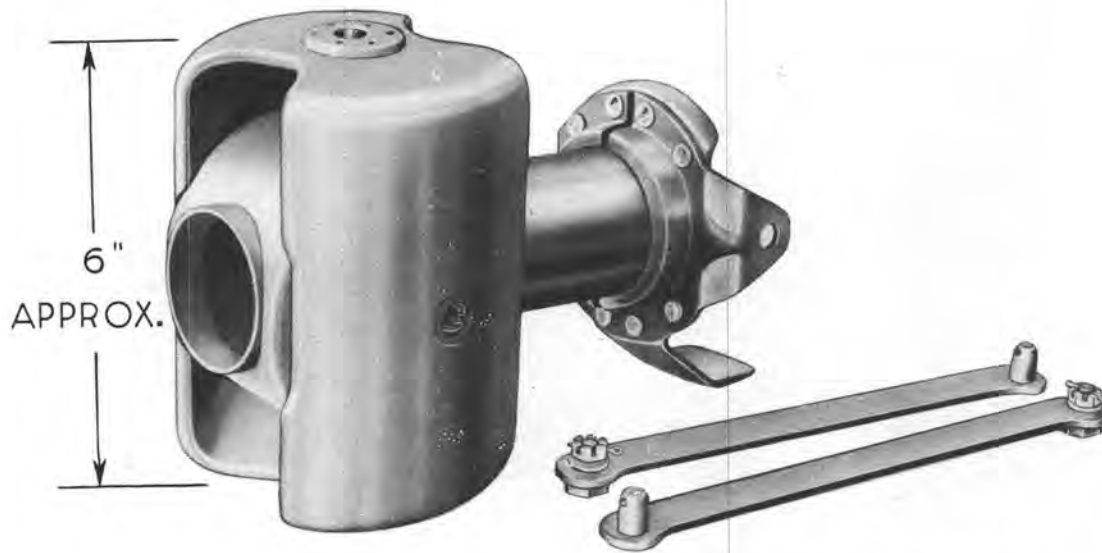
SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.

BRITISH

REFERENCE NUMBER: 150J/52



MOUNT—SWIVEL GUN
ARMY TYPE K-5

NAMES: Swivel gun mount
Ball and socket mount
Ball and socket gun mount

DESCRIPTION: The Army type K-5 swivel gun mount is used with a single .50 caliber M2 machine gun. The mount comprises a universal joint in the form of a welded stamping, consisting of two cylinders, one rotating within the other. Their axis of rotation are at right angles to each other. A tube, which fits around the gun barrel, extends through the inner cylinder, and carries the necessary parts for attaching the mount to the gun.

CHARACTERISTICS:

Dimensions..... approximately 15½ by 6 by 4¾ inches.
Weight..... approximately 5 pounds.

RELATIONSHIP OF PARTS: Used with:

A .50 caliber M2 machine gun, A. E. Reference Number 93-1560, and Army type E-11 gun mount adapter, A. E. Reference Number 52-1300.

ARMY

A. E. REFERENCE NUMBER: 52-3965

SPECIFICATIONS:

Detail..... 24838

MANUFACTURER: Ainsworth Manufacturing Co.

MANUFACTURER'S DRAWING NUMBER: AG-800

A. A. F. DRAWING NUMBER: 43G10872

TYPE DESIGNATION: K-5

A. S. C. STOCK NUMBER: 5200473200

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.

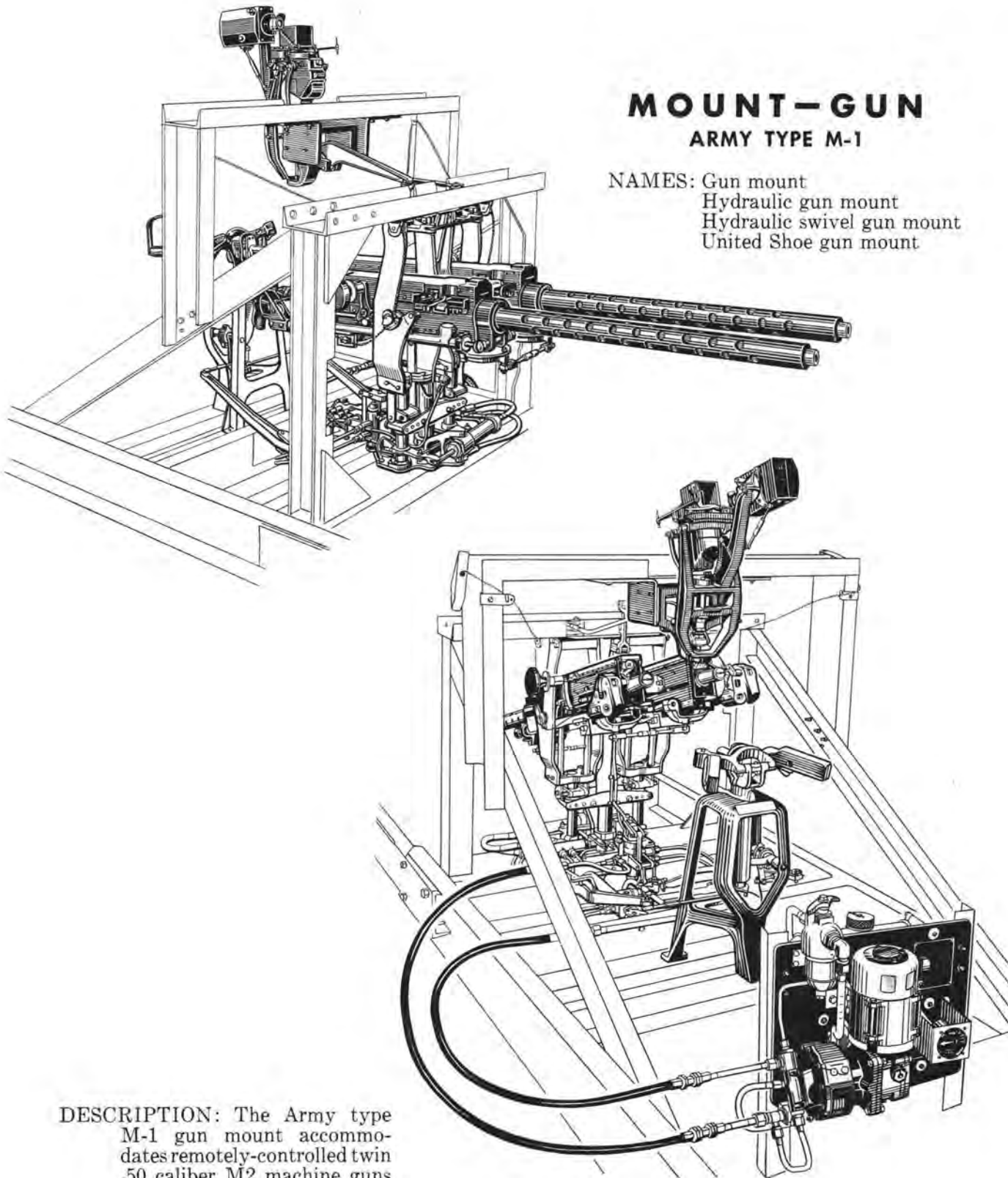
BRITISH

REFERENCE NUMBER: 150J/53

MOUNTS
ARMAMENT—GUNNERY

MOUNT—GUN
ARMY TYPE M-1

NAMES: Gun mount
Hydraulic gun mount
Hydraulic swivel gun mount
United Shoe gun mount



DESCRIPTION: The Army type M-1 gun mount accommodates remotely-controlled twin .50 caliber M2 machine guns in the tail of an airplane. It consists of a separate hydraulic unit, an N-6 flexible gun sight and camera bracket, a mount to support the guns, and a tracking device to establish rate control. The quantity of oil supplied from the hydraulic unit to the pistons and cylinders is controlled by metering valves. The gunner, situated behind armor plate, operates control handles that regulate these valves and cause the guns to move. The system can be manually operated in case of power failure by opening a dump valve and releasing trapped oil. The sight, located approximately 17 inches above the mount, is coordinated with the guns by means of mechanical linkage.

(Continued on page 69)



MOUNT—GUN

(Continued from page 68)

CHARACTERISTICS:

Dimensions.....	approximately 45 by 24 by 19 inches
Weight.....	approximately 145 pounds
Cone of fire.....	60 degrees
Speed in any direction.....	30 degrees per second
Electric motor:	
Horsepower.....	3/5
Voltage.....	24 volts direct current
Revolutions per minute.....	1000

RELATIONSHIP OF PARTS: Used with:

Army type N-6 flexible gun sight, A. E. Reference Number 52-4500, and twin .50 caliber M2 machine guns, A. E. Reference Number 93-1560.

ARMY

A. E. REFERENCE NUMBER: 52-3975
 MANUFACTURER: United Shoe Machinery Corp.
 MANUFACTURER'S DRAWING NUMBERS: V1-17; V1-152, and V1-153
 TYPE DESIGNATION: M-1
 A. S. C. STOCK NUMBER: 5200473500
 PRODUCTION STATUS: Under procurement.
 SHIPPING DATA: Shipped unassembled in three units.

NAVY

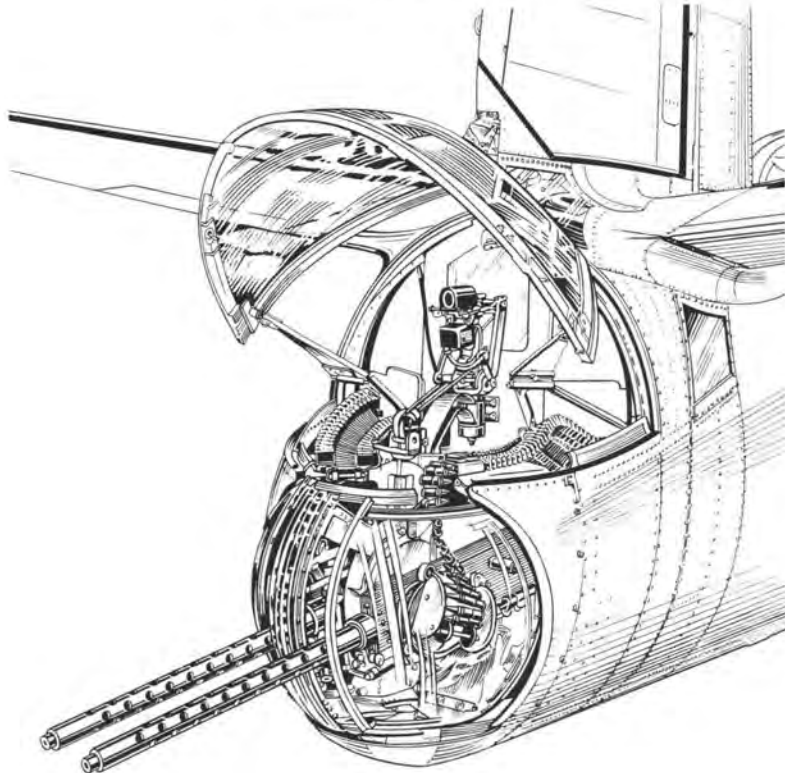
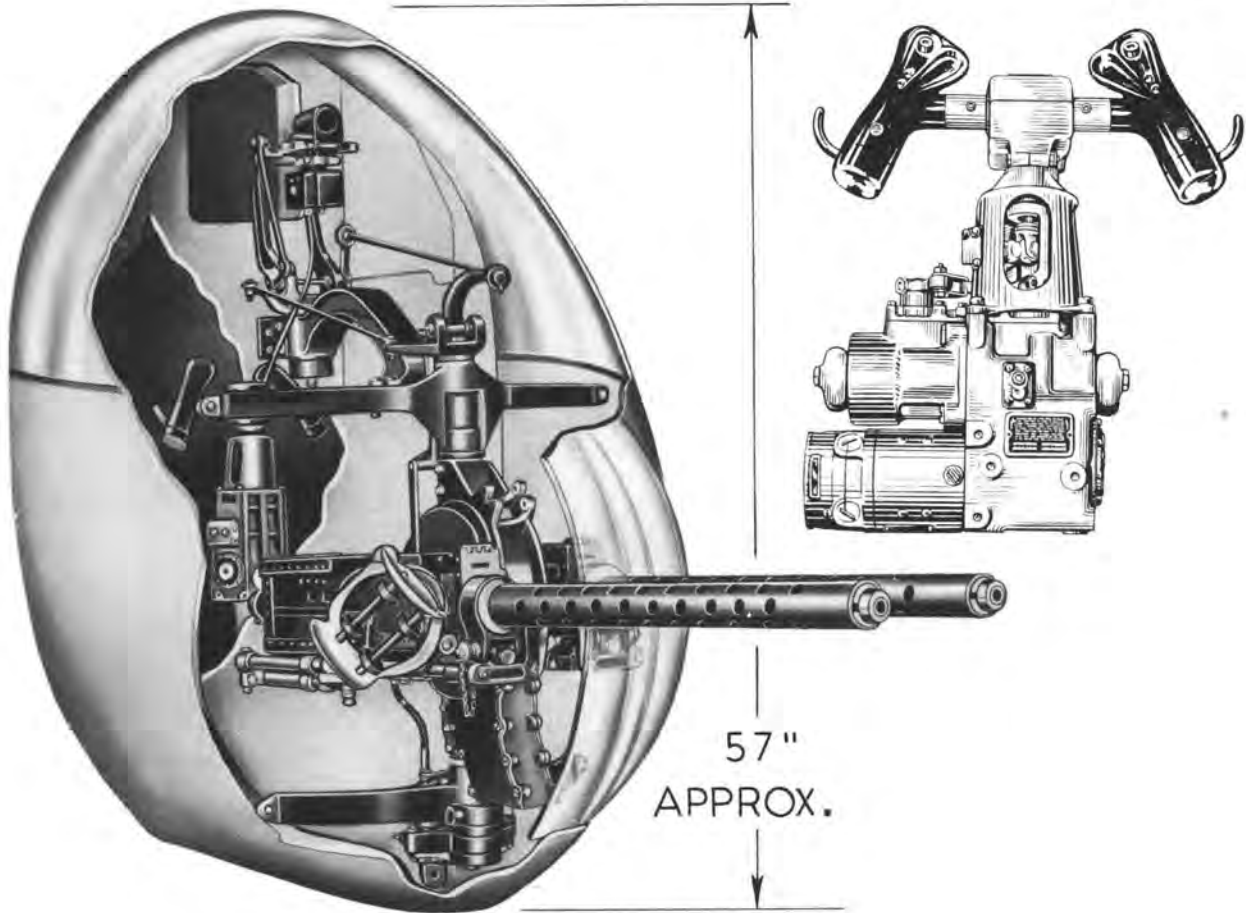
There is no Navy equivalent for the Army item.

BRITISH

REFERENCE NUMBER: 150J/54



MOUNTS ARMAMENT—GUNNERY



MOUNT—GUN ARMY TYPE M-6

NAMES: Gun mount

Bell turret

Hydraulic gun mount

Hydraulic swivel gun mount

(Continued on page 71)



MOUNT—GUN

(Continued from page 70)

DESCRIPTION: The Army type M-6 gun mount accommodates remotely-controlled twin .50 caliber M2 machine guns in the tail of an airplane. It consists of an hydraulic unit, a bracket for an Army type N-8 gun sight, a mount to support the guns, and an ammunition feed adapter. The mount is hydraulically-operated and is controlled by two variable displacement pumps. These pumps provide pressure for operation of the quadrant or vane type hydraulic motors; one controls movement in elevation, the other, in rotation. By varying the displacement of the proper pump, the position of the mount is changed. The sight is coordinated with the guns by means of linkage and is located approximately 17½ inches above the mount. The gunner operates the control handles, which are mounted above the hydraulic unit, from behind armor plate.

CHARACTERISTICS:

Dimensions	approximately 27½ by 28½ by 27 inches.
Weight	approximately 125 pounds.
Cone of fire	90 degrees.
Speed in any direction	35 degrees per second.
Electric Motor:	
Horsepower	½
Voltage	24 volts direct current
Revolutions per minute	6000

RELATIONSHIP OF PARTS: Used with:

Army type N-8 flexible gun sight, A. E. Reference Number 52-4550 and twin .50 caliber M2 machine guns, A. E. Reference Number 93-1560. Early models of this mount were equipped with Navy Mark 9 illuminated sight, A. E. Reference Number 52-5375.

ARMY

- A. E. REFERENCE NUMBER: 52-3980
- MANUFACTURER: Bell Aircraft Corp.
- MANUFACTURER'S SPECIFICATION NUMBER: 03-038-701
- MANUFACTURER'S DRAWING NUMBER: 03-038-700
- TYPE DESIGNATION: M-6
- A. S. C. STOCK NUMBER: 5200473555
- TECHNICAL ORDER NUMBER: 11-10-1
- PRODUCTION STATUS: Under procurement.
- SHIPPING DATA: Shipped as a complete unit.

NAVY

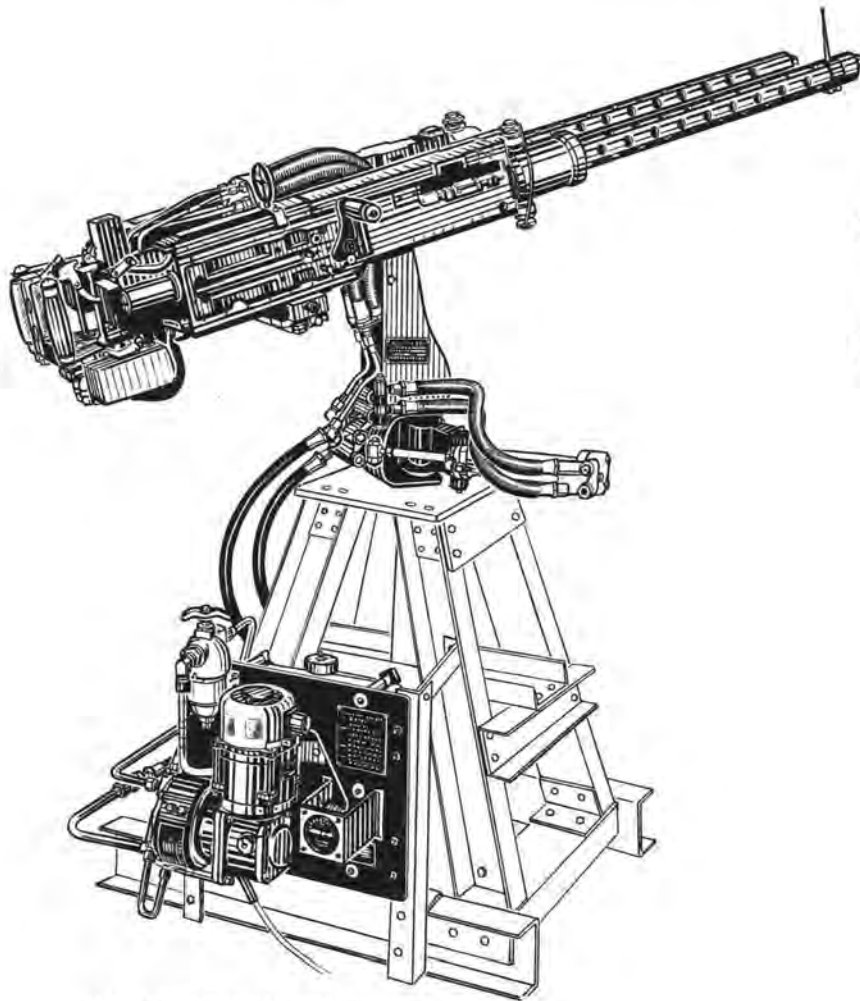
There is no Navy equivalent for the Army item.

BRITISH

REFERENCE NUMBER: 150J/33



MOUNTS ARMAMENT—GUNNERY



MOUNT—GUN ARMY TYPE M-5

NAMES: Gun mount
Hydraulic gun mount
Hydraulic swivel gun mount

DESCRIPTION: The Army type M-5 gun mount is used for local control of twin .50 caliber M2 machine guns for side window waist installations. It is hydraulically operated from a separate power unit located near the installation. This unit is capable of supplying sufficient hydraulic power for two mounts. Each mount, however, has a dumping valve whereby the gunner may release trapped oil and free the gun for manual operation in case of power failure. Two control grips are located at the rear of the mount. The left hand grip operates a metering valve which regulates the flow of oil to pistons and cylinders thus controlling the direction and rate of gun movement. A trigger which fires both guns is located in front of the right hand grip. A ring and bead sight is used with this mount.

CHARACTERISTICS:

Dimensions.....	approximately 33 by 24 by 15 inches.
Weight.....	approximately 90 pounds.
Cone of fire.....	106 degrees.
Speed in any direction.....	30 degrees per second.
Electric Motor:	
Horsepower.....	2½.
Voltage.....	24 volts direct current.
Revolutions per minute.....	2150.

RELATIONSHIP OF PARTS: Used with:

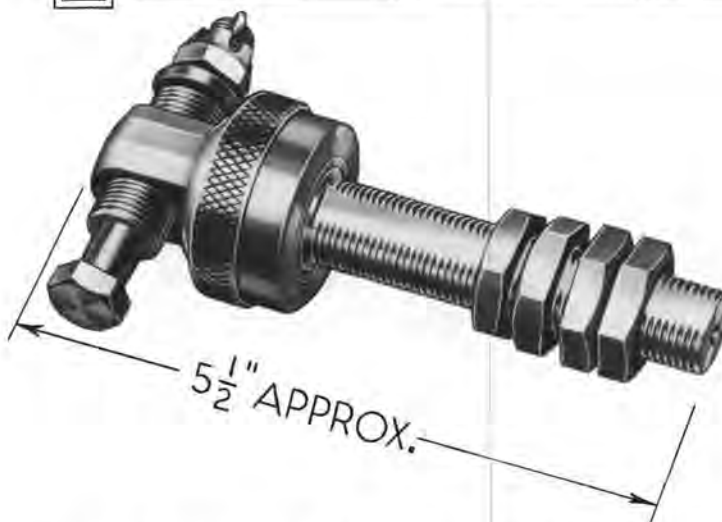
Army type A-5 gun post sight, A. E. Reference Number 52-4700 and an Army type B-11 gun ring sight, A. E. Reference Number 52-5000 on twin .50 caliber M2 flexible machine guns, A. E. Reference Number 93-1560.

ARMY

A. E. REFERENCE NUMBER: 52-3978
MANUFACTURER: United Shoe Machinery Corporation.
MANUFACTURER'S DRAWING NUMBER: V2-26
TYPE DESIGNATION: M-5
A. S. C. STOCK NUMBER: 5200473550
PRODUCTION STATUS: Under procurement.
SHIPPING DATA: Shipped unassembled.

NAVY

There is no Navy equivalent for the Army item.



POST—GUN MOUNTING
ARMY TYPE A-4 NAVY—SEE BELOW

NAMES: Gun mounting post Gun mount post Rear mounting post (Navy)
DESCRIPTION: This gun mounting post is used with fixed .30 and .50 caliber M2 machine guns. It consists of a quickly detachable post connecting the rear mounting lugs of the gun to a mounting plate installed in the airplane. Adjustment from side to side is accomplished by means of a threaded bushing at the top of the post; a set screw holds the bushing in place after adjustment. Vertical adjustment is effected by changing the position of two locking nuts on the lower, threaded, portion of the post. The upper part of the mount, which is attached to the gun, may be removed from the vertical mounting post by turning the knurled collar.

CHARACTERISTICS:
 Dimensions..... approximately 5½ by 3⅛ by 1¼ inches
 Weight..... approximately 1½ pounds
 Threaded length of post..... 3⅞ inches

RELATIONSHIP OF PARTS: Used with:
 Gun trunnion bolt and bracket, A. E. Reference Number 52-1450 to mount one .30 caliber M2 fixed machine gun, A. E. Reference Number 93-1420, or one .50 caliber M2 fixed machine gun, A. E. Reference Number 93-1560.

ARMY

A. E. REFERENCE NUMBER: 52-4100
SPECIFICATIONS:
 Detail..... 93-24608
 Superseded..... 24608
 A. A. F. DRAWING NUMBER: 38B1942 (Supersedes Army Drawing H38D5278)
 TYPE DESIGNATION: A-4
 A. S. C. STOCK NUMBER: Refer to chart.
 PRODUCTION STATUS: Under procurement.
 SHIPPING DATA: Shipped as a complete unit.

NAVY

TYPE DESIGNATION.....	A-4	Mark 1
BU. ORD. DRAWING NUMBER.....	None	179007
AVIATION ORDNANCE STOCK LIST NUMBER.....	1-P-10840	1-P-10828
ORDNANCE PAMPHLET NUMBER.....	None	865
PROCUREMENT STATUS.....	Under procurement.	Under procurement.

MODELS BELOW ARE INTERCHANGEABLE
 Models are used in services as noted in column 4
 A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number	Remarks
Crosley Corporation	*A-4	**38B1942	A-N-B	5200567100	150J/573	
Aerial Machine and Tool Company	*A-4	**38B1942	A-N-B	5200567100	150J/573	
Moore-Eastwood and Company	*A-4	**38B1942	A-N-B	5200567100	150J/573	
H. M. Thermal Control Company	*A-4	**38B1942	A-N-B	5200567100	150J/573	
Taco Heaters, Incorporated	‡Mark 1	‡‡179007	N			Has height graduations on post.
	‡Mark 3	‡‡329518	N			Issued to Douglas Aircraft only.
Appliance Manufacturing Company	‡Mark 1	‡‡179007	N			Has height graduations on post.
	‡Mark 3	‡‡329518	N			Issued to Douglas Aircraft only.

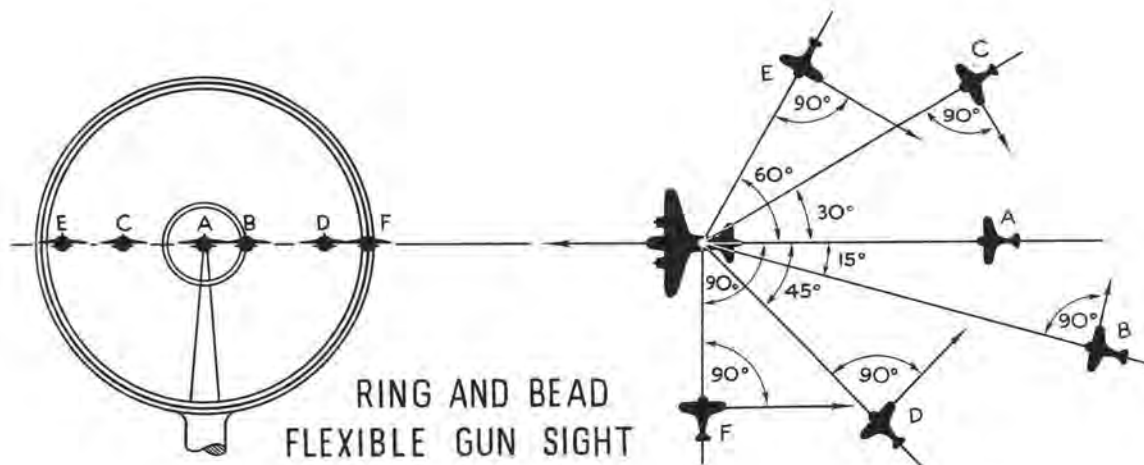
Note: *AAF type; **AAF drawing; †Navy type; ††Navy drawing.



GUN SIGHTS

Machine gun sights enable a gunner to aim more accurately at a target and thus score a greater number of hits.

The simplest types in use are the telescopic and the ring and bead sights. Telescopic sights, now relatively obsolete, consist of a simple telescope which magnifies the target, and a set of cross hairs incorporated in the eyepiece. The bead part of the ring and bead combination is mounted on top of a post which is attached to the gun adapter or the gun barrel. The ring sight is made up of concentric rings, usually two or three in number, and is mounted to the gun in alignment with the bead. The radius of the outer ring is such that, with the operator's eye located a definite distance (usually eight inches) from the ring, the angle at the gunner's eye, between the edge and center of the ring, is equal to a definite lead angle. This angle is expressed in terms of miles per hour of relative speed perpendicular to the line of sight, i.e., a 150 mile per hour ring establishes the proper lead angle at the gunner's eye when a target is traveling at a relative speed of 150 miles per hour perpendicular to the line of sight. This is true for one range only, usually 400 yards. However, with the relative speed perpendicular to the line of sight, the lead angle changes only slightly with a change in range. The inner ring is used to estimate the range. It is so designed that it will circumscribe a definite wing span at a given distance, making it possible for the gunner, after he identifies the target, to approximate the yardage to it.



(Continued on page 75)

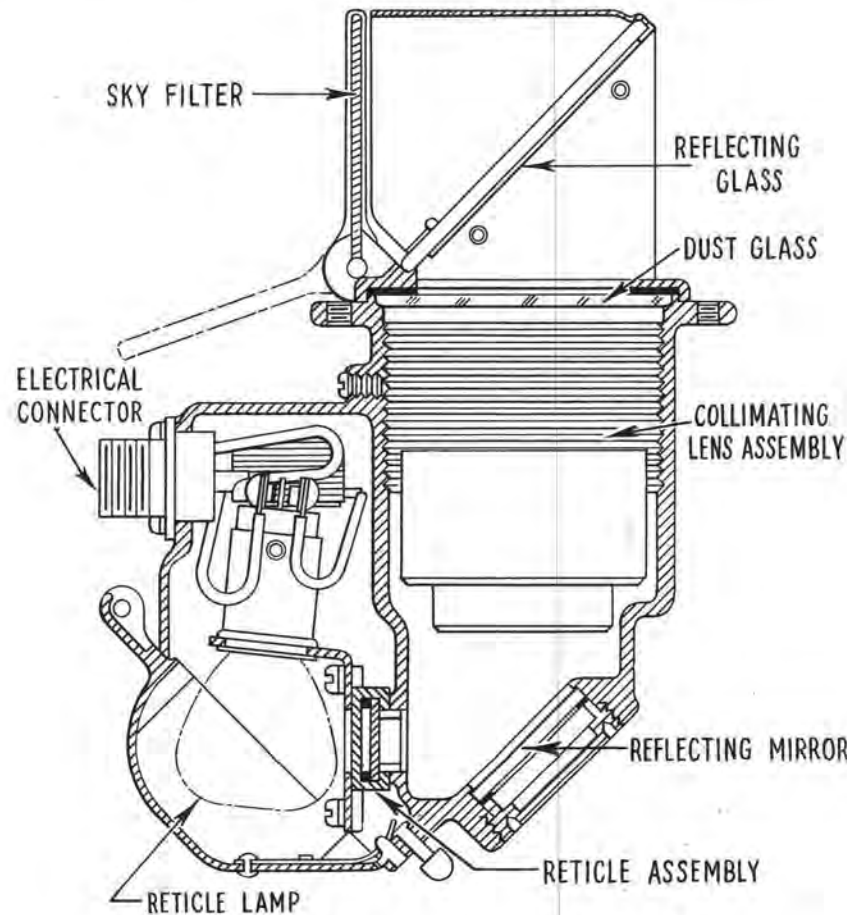


GUN SIGHTS

(Continued from page 74)

When firing, the gunner estimates the distance of the target and its flight path, aligns the bead, ring, and target, and allows a correction for the factors involved, based on his experience.

While using the ring and bead sight, errors may be incurred by a change in the relative position of the gunner's head. To correct for this, the optical, or illuminated reflector type sight, was designed. In the reflector type sight, light rays are passed through a small screen on which a circle and dot are etched. These rays then reflect the image of the circle and dot from a mirror, pass it through lenses, and cast it on a transparent reflector screen in front of the gunner. When peering through this screen at the target, the effect is the same as seeing the target and reflected image of the circle and dot in the same visual plane.



OPTICAL GUN SIGHT

To obtain still greater accuracy, gun sight development has been toward an automatic compensating or computing sight. Sights of this nature take into consideration additional variable factors, such as change in speed and direction of the target, drift of the fired bullet, speed of the airplane in which the gun is mounted, and wind effects on the bullet itself.



SIGHT—FLEXIBLE GUN POST

ARMY TYPE A-4

NAMES: Flexible gun post sight Bead sight
Gun post sight Sight, open, fore post (Navy)
Post sight

DESCRIPTION: The type A-4 flexible gun post sight is used on flexibly mounted .30 caliber M2 machine guns. It is usually employed with the Army type B-10 flexible gun ring sight.

The gun post sight is made of rust-proof steel which is given a dull finish to prevent reflection. The post is tapered, and has a red enameled bead at the small end. The other end is inserted into a split collar which is used to secure the assembly to the gun. Inside the collar is a two-piece aluminum bushing. The split collar and bushing are secured near the front of the gun barrel jacket by two bolts.

CHARACTERISTICS:

Dimensions.....approximately 5¼ by 1¾ by 1⅛ inches.
Weight.....approximately ¼ pound.
Height of post (from center of gun bore to center of bead).....3⅔ inches.

RELATIONSHIP OF PARTS: Used with:

Army type B-10 flexible gun ring sight, A. E. Reference Number 52-4900 on .30 caliber M2 machine guns, A. E. Reference Number 93-1520.



ARMY

A. E. REFERENCE NUMBER: 52-4600

SPECIFICATIONS:

Detail.....93-24585

A. A. F. DRAWING NUMBER: 37B3578

TYPE DESIGNATION: A-4

A. S. C. STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

NAVY

TYPE DESIGNATION: A-4

BU. ORD. DRAWING NUMBER: 297102

AVIATION ORDNANCE STOCK LIST NUMBER: 2-S-3090

ORDNANCE PAMPHLET NUMBER: 263 and 865

PROCUREMENT STATUS: Under procurement.

ALL MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number
Pausin Manufacturing Company	*A-4	**37B3578	A-N-B	5200727200	108B/15
Moore-Eastwood and Company	*A-4	**37B3578	A-N-B	5200727200	108B/15
International Register Company	*A-4	**37B3578	A-N-B	5200727200	108B/15

Note: *AAF type; **AAF drawing.



SIGHT—FLEXIBLE GUN POST

ARMY TYPE A-5 NAVY—SEE BELOW

NAMES: Flexible gun post sight Bead sight
Gun post sight Sight, open, fore post (Navy)
Post sight .50 caliber gun post sight

DESCRIPTION: The type A-5 flexible gun post sight is used on a single .50 caliber M2 machine gun. It is usually employed with a type B-11 flexible gun ring sight.

The gun post sight is made of rust-proof steel which is given a dull finish to prevent reflection. The post is tapered and has a red enameled bead at the small end. The other end is inserted into a split collar which is used to secure the assembly to the gun barrel jacket.

CHARACTERISTICS:

Dimensions approximately 5 $\frac{3}{8}$ by 1 by 2 inches
Weight approximately $\frac{1}{4}$ pound
Height of post (center of gun bore to center of bead) . . . 4 $\frac{11}{32}$ inches

RELATIONSHIP OF PARTS: Used with:

Army type B-11 flexible gun ring sight, A. E. Reference Number 52-5000 on .50 caliber M2 machine guns, A. E. Reference Number 93-1590.



ARMY

A. E. REFERENCE NUMBER: 52-4700

SPECIFICATIONS:

Detail 93-24586

A. A. F. DRAWING NUMBER: 37A5810

TYPE DESIGNATION: A-5

A. S. C. STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

NAVY

TYPE DESIGNATION: A-5

BU. ORD. DRAWING NUMBER: 297059

AVIATION ORDNANCE STOCK LIST NUMBER: 2-S-3091

ORDNANCE PAMPHLET NUMBER: 263 and 865

PROCUREMENT STATUS: Under procurement.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number
International Register Company	*A-5	**37A5810	A-N-B	5200727500	108B/3
American Signal Corporation	*A-5	**37A5810	A-N-B	5200727500	108B/3

Note: *AAF type; **AAF drawing.



GUN SIGHTS
ARMAMENT—GUNNERY

SIGHT—FLEXIBLE GUN POST
ARMY TYPE A-11

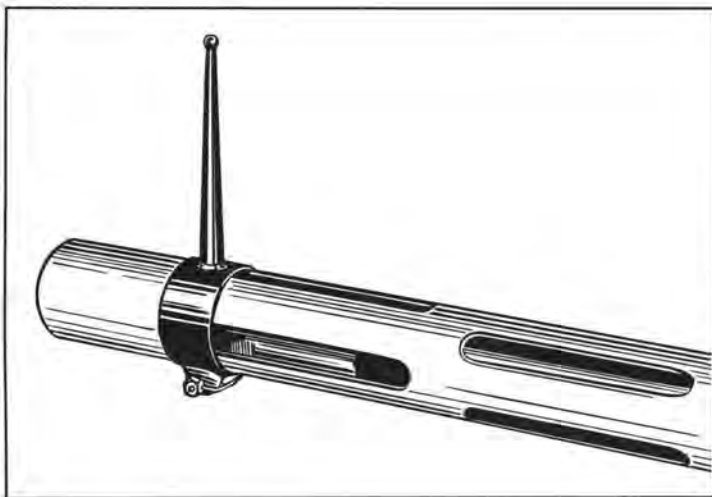
NAMES: Flexible gun post sight Bead sight
Gun post sight
Post sight
.50 caliber gun post sight

DESCRIPTION: The Army type A-11 flexible gun post sight is used on a single .50 caliber M2 machine gun. It is usually employed with a type B-13 flexible gun ring sight.

This gun post sight is made of rust-proof steel which is given a dull finish to prevent reflection. The post is tapered and has a red enameled bead at the small end. The other end is inserted into a split collar which is used to secure the assembly to the gun barrel.

CHARACTERISTICS:
Dimensions approximately 6⁵/₈ by 2 by 1 inches
Weight approximately 2 ounces
Height of post (center of gun bore to center of bead) . . . 5¹/₈ inches

RELATIONSHIP OF PARTS: Used with:
Army type B-13 flexible gun ring sight, A. E. Reference Number 52-5050, on a .50 caliber M2 machine gun, A. E. Reference Number 93-1590, mounted in an Army type E-8 adapter, A. E. Reference Number 52-1100.



ARMY

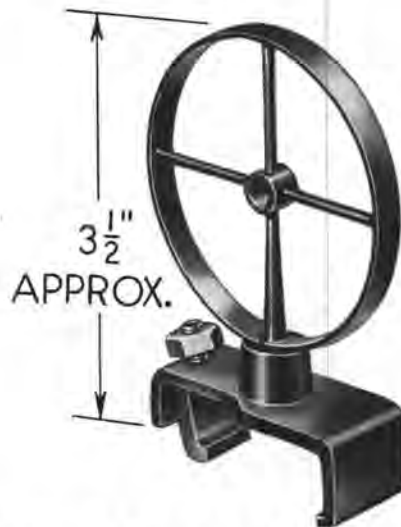
A. E. REFERENCE NUMBER: 52-4850
SPECIFICATIONS:
Detail 93-24758
Superseded 24758
MANUFACTURER: Ohio Art Company.
A. A. F. DRAWING NUMBER: 42A8317
TYPE DESIGNATION: A-11
A. S. C. STOCK NUMBER: 5200727575
TECHNICAL ORDER NUMBER: 11-35-13
PRODUCTION STATUS: Under procurement.
SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.

BRITISH

REFERENCE NUMBER: 108B/74



SIGHT—FLEXIBLE GUN RING
ARMY TYPE B-10 NAVY—SEE BELOW

NAMES: Flexible gun ring sight
Gun ring sight
Ring sight
.30 caliber gun ring sight

DESCRIPTION: The type B-10 flexible gun ring sight is used on flexibly mounted .30 caliber M2 machine guns. It is usually employed with an A-4 flexible gun post sight.

The gun ring sight is made of rust-proof steel which is given a dull finish to prevent reflection. It consists of two concentric rings and an adjustable clamp. The larger ring is connected to a metal post mounted on the clamp. The smaller ring, or center peep, is supported from the larger ring, and contains two cross hairs which are used to align the bead on the post sight with the target. The clamp, consisting of a horizontal bar with two hooked lugs, secures the sight to the cover plate of the machine gun. When in position, the ring sight will be approximately eight inches from the gunner's eye.

CHARACTERISTICS:

Dimensions..... approximately 3 1/2 by 2 3/8 by 1/8 inches
Weight..... approximately 1/4 pound
Large ring (inside diameter)..... approximately 2 1/4 inches
Small ring (inside diameter)..... approximately 1/32 inch

RELATIONSHIP OF PARTS: Used with:

Army type A-4 flexible gun post sight, A. E. Reference Number 52-4600 on a .30 caliber M2 machine gun, A. E. Reference Number 93-1520.

ARMY

A. E. REFERENCE NUMBER: 52-4900

SPECIFICATIONS:

Detail..... 93-24587

A. A. F. DRAWING NUMBER: 37B3574

TYPE DESIGNATION: B-10

A. S. C. STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

NAVY

TYPE DESIGNATION: B-10

BU. ORD. DRAWING NUMBER: 297061

AVIATION ORDNANCE STOCK LIST NUMBER: 2-S-3106

ORDNANCE PAMPHLET NUMBER: 263 and 865

PROCUREMENT STATUS: Under procurement.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number
Pausin Manufacturing Company	*B-10	**37B3574	A-N-B	5200728700	108B/18
International Register Company	*B-10	**37B3574	A-N-B	5200728700	108B/18

Note: *AAF type; **AAF drawing.

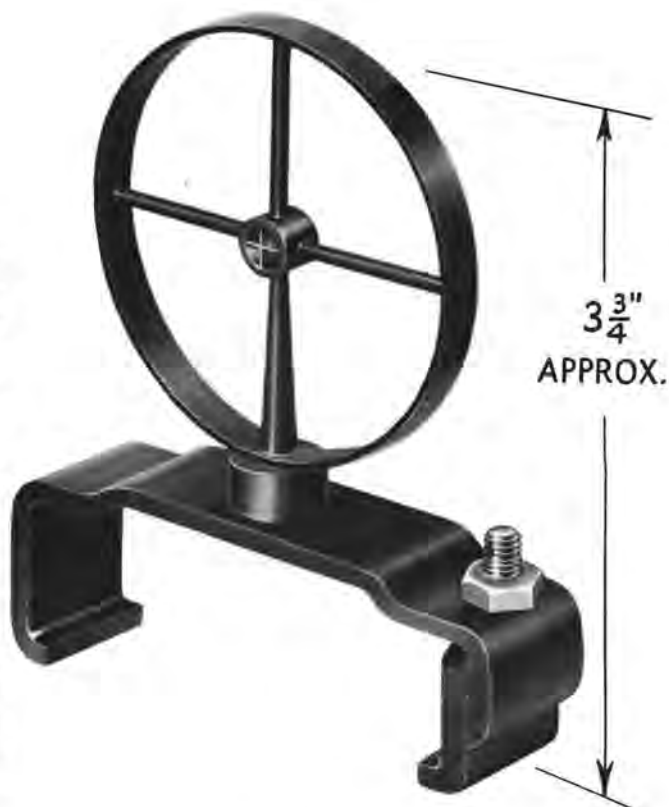


SIGHT—FLEXIBLE GUN RING ARMY TYPE B-11 NAVY—SEE BELOW

- NAMES: Flexible gun ring sight
 Gun ring sight
 Ring sight
 .50 caliber gun ring sight
 Sight, open, rear ring (Navy)

DESCRIPTION: The type B-11 flexible gun ring sight is used on flexibly mounted .50 caliber M2 machine guns. It is usually employed with an A-5 flexible gun post sight.

The gun ring sight is made of rust-proof steel which is given a dull finish to prevent reflection. It consists of two concentric rings and an adjustable clamp. The larger ring is welded to a metal post mounted on the clamp. The smaller ring, or center peep, is supported from the larger ring, and contains two cross hairs which are used to align the bead of the post sight with the target. The clamp, consisting of a horizontal bar with two hooked lugs, secures the sight to the cover plate of the machine gun. When in position, the sight will be approximately eight inches from the gunner's eye.



CHARACTERISTICS:

- Dimensions approximately 3 1/4 by 2 5/16 by 3 3/4 inches
- Weight approximately 1/2 pound
- Large ring (inside diameter) approximately 2 3/16 inches
- Small ring (inside diameter) approximately 1/32 inch

RELATIONSHIP OF PARTS: Used with:

Army type A-5 flexible gun post sight, A. E. Reference Number 52-4700 on a .50 caliber M2 machine gun, A. E. Reference Number 93-1590.

ARMY

A. E. REFERENCE NUMBER: 52-5000

SPECIFICATIONS:

Detail 93-24588

A. A. F. DRAWING NUMBER: 37A5811

TYPE DESIGNATION: B-11

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Not under procurement for initial installation. Superseded by Army type B-15 ring sight, A. E. Reference Number 52-5110

SHIPPING DATA: Shipped as a complete unit.

NAVY

TYPE DESIGNATION: B-11

BU. ORD. DRAWING NUMBER: 297057

AVIATION ORDNANCE STOCK LIST NUMBER: 2-S-3107

ORDNANCE PAMPHLET NUMBERS: 263 and 865

PROCUREMENT STATUS: Under procurement.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number
International Register Company	*B-11	**37A5811	A-N-B	5200729000	108B/4
American Signal Corporation	*B-11	**37A5811	A-N-B	5200729000	108B/4

Note: *AAF type; **AAF drawing.



SIGHT-FLEXIBLE GUN RING
ARMY TYPE B-13

NAMES: Flexible gun ring sight
Gun ring sight
Ring sight
.50 caliber gun ring sight

DESCRIPTION: The Army type B-13 flexible gun ring sight is used on flexibly mounted .50 caliber M2 machine guns. It is usually employed with an A-11 flexible gun post sight.

The gun ring sight is made of rust-proof steel, which is given a dull finish to prevent reflection. It consists of two concentric rings mounted on a bracket which is bolted directly to the rear of the gun mount assembly, approximately eight inches from the gunner's eye.

CHARACTERISTICS:

Dimensions..... approximately 3 by $2\frac{3}{8}$ by $\frac{5}{8}$ inches
Weight..... approximately 1 ounce
Large ring (inside diameter)..... approximately $1\frac{3}{4}$ inches
Small ring (inside diameter)..... approximately $\frac{1}{4}$ inch

RELATIONSHIP OF PARTS: Used with:

Army type A-11 flexible gun post, A. E. Reference Number 52-4850 on a .50 caliber M2 machine gun,
A. E. Reference Number 93-1590, mounted on an Army type E-8 gun mount adapter, A. E. Reference
Number 52-1100.

ARMY

A. E. REFERENCE NUMBER: 52-5050

SPECIFICATIONS:

Detail..... 93-24759
Superseded..... 24759

MANUFACTURER: Ohio Art Company.

A. A. DRAWING NUMBER: 42B8318

TYPE DESIGNATION: B-13

A. S. C. STOCK NUMBER: 5200729115

TECHNICAL ORDER NUMBER: 11-35-13

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.

BRITISH

REFERENCE NUMBER: 108B/75



SIGHT—TELESCOPIC GUN
ARMY TYPE E-5

NAMES: Telescopic gun sight

DESCRIPTION: The Army type E-5 telescopic gun sight is used with .30 and .50 caliber M2 machine guns. The sight is a telescope of approximately one power, incorporating a set of removable cross hairs. It is non-compensating, but when used with a type C-4 adjustable mount, it has limited adjusting facilities for aligning the line of sight to the bore axis of the gun.

Dust caps, connected by a leather strap, are provided to keep the lenses from being scratched.

CHARACTERISTICS

Dimensions approximately 9½ by 1¼ by 1¼ inches
Weight approximately ¾ pound

RELATIONSHIP OF PARTS: Used with:

Army type C-4 flexible gun sight mount, A. E. Reference Number 52-3400, on .30 or .50 caliber M2 machine guns.

ARMY

A. E. REFERENCE NUMBER: 52-5350

SPECIFICATIONS:

Detail 93-24667
Superseded: 24667

MANUFACTURER: International Register Company.

A. A. F. DRAWING NUMBER: 40B7830

TYPE DESIGNATION: E-5

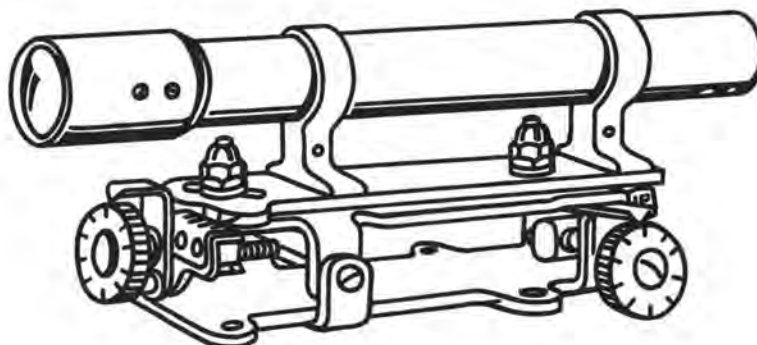
A. S. C. STOCK NUMBER: 5200729700

PRODUCTION STATUS: Not under procurement for initial installation.

SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.





SIGHT—ILLUMINATED ARMY—SEE BELOW NAVY MARK 8

NAMES: Illuminated sight
Illuminated gun sight
Fixed gun sight
Optical sight

DESCRIPTION: The Navy Mark 8 illuminated optical sight is a device used to bring fixed guns to bear on a target. The sight is secured to the cowling of an airplane so that a reflecting plate is in line with the pilot's line of vision. A lamp in the base of the sight transmits a reticle image onto the reflecting plate, at the base of which is a spirit-level bank indicator. A sponge rubber cushion on the outer rim of the lens housing protects the pilot from injury in case of accident.

This sight uses a double filament lamp. The connector is a three-pin contact type.

CHARACTERISTICS:

Dimensions approximately 10½ by 6½ by 4⅛ inches
Weight approximately 3½ pounds
Voltage 12 volts direct current

RELATIONSHIP OF PARTS: Used with:

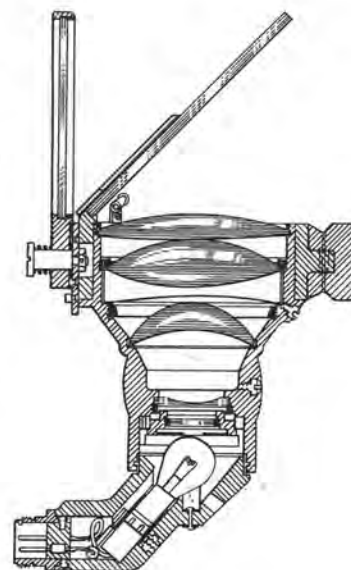
Lamp Trade Number 1652 IF, S-8 IF, 21/21 candlepower, 13 volts.

ARMY

A. E. REFERENCE NUMBER: 52-5370
TYPE DESIGNATION: Navy Mark 8
A. S. C. STOCK NUMBER: Refer to chart.
PRODUCTION STATUS: Not under procurement for initial installation. Used only on aircraft procured for or from the Navy Department by the Army.
SHIPPING DATA: Shipped as a complete unit including lamp.

NAVY

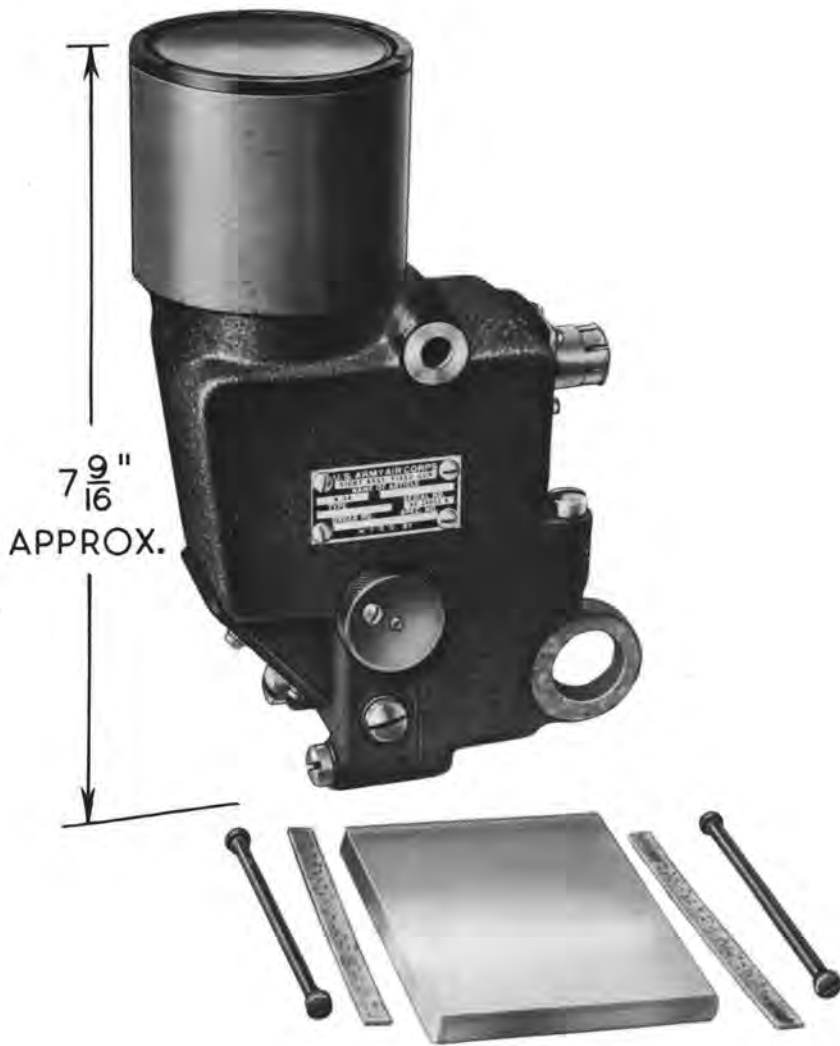
TYPE DESIGNATION: Mark 8
ORDNANCE SPECIFICATION: 2349
BU. ORD. DRAWING NUMBER: 238544
AVIATION ORDNANCE STOCK LIST NUMBER: 2-S-3114
ORDNANCE PAMPHLET NUMBER: 263, 803 and 865
ORDNANCE CIRCULAR LETTER: V19-42
PROCUREMENT STATUS: Not under procurement for initial installation.



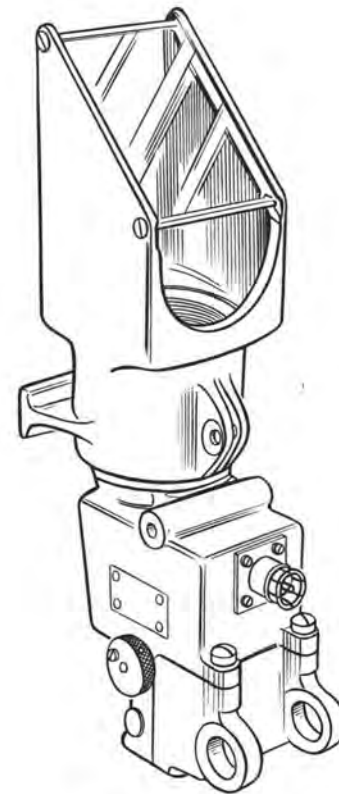
MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number
Bausch and Lomb Optical Company	*Mark 8	**N-238544	A-N-B	5200730750	108B/20
Bell and Howell Company	*Mark 8	**N-238544	A-N-B	5200730750	108B/20

Note: *Navy type; **Bu. Ord. drawing.



**SIGHT—
FIXED GUN**
ARMY TYPE N-3A
NAVY—SEE BELOW



NAMES: Fixed gun sight
Illuminated sight
Illuminated gun sight
Optical sight

DESCRIPTION: The type N-3A fixed gun sight, usually mounted in the pilot's cockpit, is of the single wire grounded type. The sight consists of a main housing containing a lamp and lamp socket, a circle and center dot reticle, a mirror, a lens, and a toggle switch. This sight projects an image of the reticle on to a reflector screen held in a reflector support. This support is a separate item used in conjunction with the sight.

The lamp used contains two filaments; if one filament does not light, the gunner reverses the toggle switch and brings the other filament into use.

(Continued on page 85)



SIGHT— FIXED GUN

(Continued from page 84)

CHARACTERISTICS:

Dimensions.....	approximately 7 ⁹ / ₁₆ by 3 ¹ / ₂ by 5 ¹ / ₂ inches
Weight.....	approximately 3 ¹ / ₂ pounds
Voltage.....	12 to 28 volts direct current
Electrical receptacle.....	Army part number 39A2389
Contact pin.....	Army part number 38A1782

RELATIONSHIP OF PARTS: Used with:

Lamp Trade Number 1052 I. F., A. E. Reference Number 88-8300 and gun sight image reflector support, A. E. Reference Number 52-6400, or Army type A-1 or A-2 pilot's bombsight head, A. E. Reference Number 64-2000 or 64-2005.

ARMY

A. E. REFERENCE NUMBER: 52-4400

SPECIFICATIONS:

Detail.....	93-24659B
Superseded.....	93-24659A

A. A. F. DRAWING NUMBER: 41G6436

TYPE DESIGNATION: N-3A

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Not under procurement for initial installation. Superseded by Army type N-3B, A. E. Reference Number 52-4425.

SHIPPING DATA: Shipped as a complete unit less lamp.

Note: Gun sight image reflector and pilot's bombsight head must be ordered separately.

NAVY

TYPE DESIGNATION: N-3A

AVIATION ORDNANCE STOCK LIST NUMBER: 2-S-3117

PROCUREMENT STATUS: Not under procurement for initial installation.

MODELS BELOW ARE INTERCHANGEABLE

Models are used in services as noted in column 4

A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number	Remarks
Service Tool and Engineering Company	*N-3A	**41G6436	A-N-B	5200726630	11-35-5	108B/12	Single pin push-on type electrical connector.
	*N-3B	**42G20092	A-B	5200726635	11-35-5	108B/68	Two pin screw-on type electrical connector.

NOTE: These sights may be used in a 12-volt circuit by replacing the lamp with lamp, Trade Number 1120 I.F., A.E. Reference Number 88-3200.
 Note: *AAF type; **AAF drawing.



GUN SIGHTS ARMAMENT—GUNNERY



SIGHT—FIXED GUN ARMY TYPE N-3B

NAMES: Fixed gun sight Illuminated sight Illuminated gun sight Optical sight

DESCRIPTION: The Army type N-3B fixed gun sight, usually mounted in the pilot's cockpit, is of the two wire type, to prevent compass deviation. The sight consists of a main housing containing a lamp and lamp socket, a circle and center dot reticle, a mirror, a lens, and a toggle switch. This sight projects an image of the reticle onto a reflector screen held in a reflector support. This support is a separate item used in conjunction with the sight.

The lamp used in this sight contains two filaments; if one filament does not light, the gunner reverses the toggle switch and brings the other filament into use.

CHARACTERISTICS:

- Dimensions..... approximately 7⁹/₁₆ by 3¹/₂ by 5¹/₂ inches
- Weight..... approximately 3¹/₂ pounds
- Voltage..... 12-28 volts direct current
- Electrical connector..... AN3102-12S-3P

RELATIONSHIP OF PARTS: Used with:

Lamp Trade Number 1052 I. F., A. E. Reference Number 88-8300 and gun sight image reflector, A. E. Reference Number 52-6400, or Army types A-1 and A-2 pilot's bombsight head, A. E. Reference Number 64-2000 or 64-2005.

ARMY

A. E. REFERENCE NUMBER: 52-4425

SPECIFICATIONS:

- Detail..... 93-24817
- Superseded..... 24817

A. A. F. DRAWING NUMBER: 42G20092

TYPE DESIGNATION: N-3B

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit including lamp. Gun sights of early manufacture were shipped less lamp. Gun sight image reflector or pilot's bombsight head must be ordered separately.

NAVY

There is no Navy equivalent for the Army item.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number	Remarks
Service Tool and Engineering Company	*N-3B	**42G20092	A-B	5200726635	11-35-5	108B/68	Two pin screw-on type electrical connector.
	*N-3A	**41G6436	A-N-B	5200726630	11-35-5	108B/12	Single pin push-on type electrical connector.

NOTE: These sights may be used in a 12-volt circuit by replacing the lamp with lamp, Trade Number 1120 I. F., A. E. Reference Number 88-3200.
*AAF type; **AAF drawing.



SIGHT—FLEXIBLE GUN

ARMY TYPE N-6



NAMES: Flexible gun sight
Illuminated sight
Illuminated gun sight
Optical sight

Reticle reflecting sight

DESCRIPTION: The Army type N-6 flexible gun sight, usually mounted in a machine gun turret, is of the single wire grounded type. The sight consists of a main housing and a removable reflector support. The housing contains a lamp and lamp socket, a circle and center dot reticle, a filter, a mirror, a lens, and a toggle switch. The image reflector support attached to the main housing includes a reticle reflector and a daylight filter, or sun screen. This screen may be placed in one of three positions to control the degree of sunlight protection. The reflector support uses cork strips around the glass to prevent breakage due to severe temperature changes.

This sight projects an image of the reticle onto the reflector screen held in the reflector support.

The lamp used in the sight contains two filaments; if one filament does not light, the gunner reverses the toggle switch and brings the other filament into use.

CHARACTERISTICS:

Dimensions . . . approximately
7¹³/₃₂ by 4³¹/₃₂
by 3¹⁵/₁₆ inches.
Weight approximately
2¹/₈ pounds.
Voltage 12-28 volts direct
current.
Electrical
connector . . . AN3102-10S-2P.

RELATIONSHIP OF PARTS: Used with:

Lamp Trade Number 1052 I. F., A. E. Reference Number 88-8300, in 24 volt circuits, and Lamp Trade Number 1120 I.F., A.E. Reference Number 88-3200, in 12 volt circuits. Army type A-1 or A-2 pilot's bombsight head, A. E. Reference Number 64-2000 or 64-2005 may be used with this sight by removing the reflector support and installing an adapter.



ARMY

A. E. REFERENCE NUMBER: 52-4500

SPECIFICATIONS:

Detail 24704A
Superseded 24704

A. A. F. DRAWING NUMBER: 41D9625

TYPE DESIGNATION: N-6

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Not under procurement for initial installation. Superseded by Army type N-6A, A. E. Reference Number 52-4525.

SHIPPING DATA: Shipped as a complete unit, less lamp.

NAVY

There is no Navy equivalent for the Army item.

ALL MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

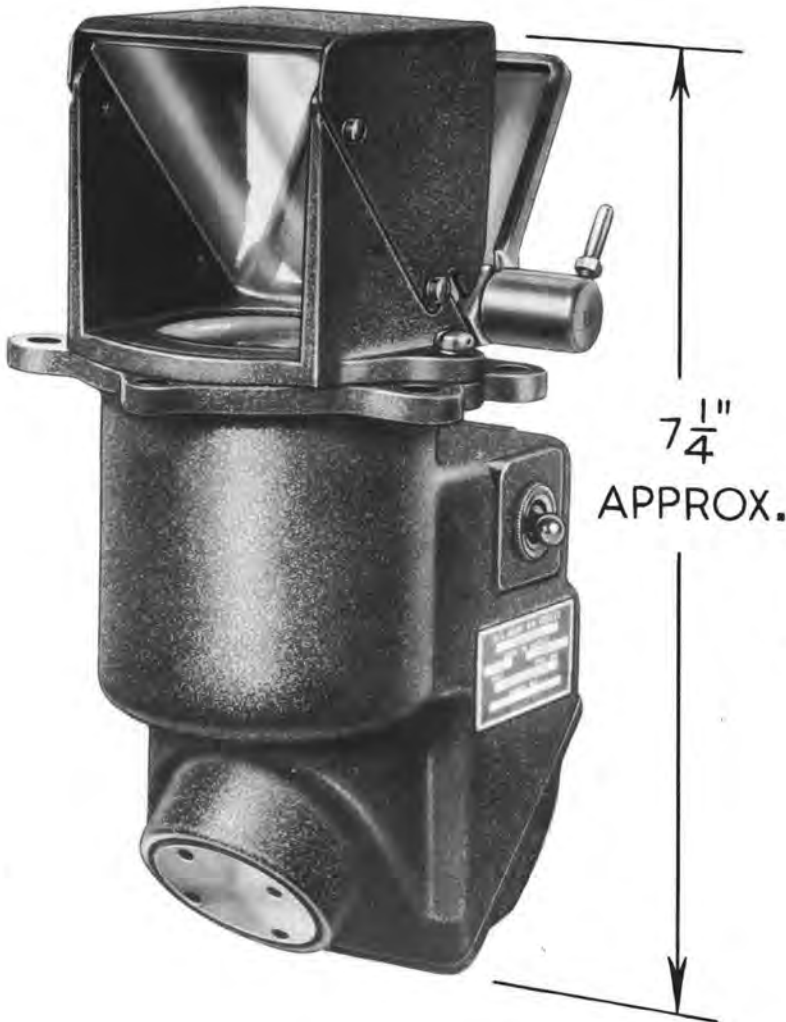
Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number	Remarks
S. E. Bowser Company	*N-6	**41D9625	A-B	5200726690	11-35-12	108B/19	
	*N-6A	**42G14292	A-B	5200730700		108B/70	
E. A. Laboratories	*N-6	**41D9625	A-B	5200726690	11-35-12	108B/19	
Bell and Howell Company	*N-8	**163-A	A	5200731575	11-35B-1		†

†For 24 volt circuit use lamp, Trade Number 844, A. E. Reference Number 88-8400. Replace with lamp, Trade Number 842, A. E. Reference Number 88-3300 for 12 volt use.

Note: *AAF type; **AAF drawing.



**SIGHT—
FLEXIBLE GUN**
ARMY TYPE N-6A



NAMES: Flexible gun sight
Illuminated sight
Illuminated gun sight
Optical sight

DESCRIPTION: The Army type N-6A flexible gun sight, usually mounted in a machine gun turret, is of the single wire grounded type. The sight consists of a main housing and removable reflector support. The housing contains a lamp and lamp socket, a circle and center dot reticle, a filter, a mirror, a lens, and a toggle switch. The image reflector support attached to the main housing includes a reticle reflector and a daylight filter, or sun screen. This screen may be placed in any position and has two adjusting knobs to control the degree of sunlight protection.

This sight projects an image of the reticle on to the reflector screen held in the reflector support.

The lamp used in the sight contains two filaments; if one filament does not light, the gunner reverses the toggle switch and brings the other filament into use.

(Continued on page 89)



SIGHT— FLEXIBLE GUN

(Continued from page 88)

CHARACTERISTICS:

Dimensions..... approximately 7¼ by 5⅜ by 4 inches
 Weight..... approximately 2⅛ pounds
 Voltage..... 12-28 volts direct current
 Electrical connector..... AN3102-10S-2P

RELATIONSHIP OF PARTS: Used with:

Lamp Trade Number 1052 I. F., A. E. Reference Number 88-8300, in 24 volt circuits, and Lamp Trade Number 1120 I. F., A. E. Reference Number 88-3200, in 12 volt circuits.

Army type A-1 or A-2 pilot's bombsight head, A. E. Reference Number 64-2000 or 64-2005 may be used with this sight by removing the reflector support and installing an adapter.

ARMY

A. E. REFERENCE NUMBER: 52-4525

SPECIFICATIONS:

Detail: 93-24704
 Superseded: 24704A

A. A. F. DRAWING NUMBER: 42G14292

TYPE DESIGNATION: N-6A

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit, including lamp. Gun sights of early manufacture were shipped less lamp.

NAVY

There is no Navy equivalent for the Army item.

MODELS BELOW ARE INTERCHANGEABLE

Models are used in services as noted in column 4

A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number	Remarks
S. E. Bowser Company	*N-6A	**42G14292	A-B	5200730700		108B/70	
	*N-6	**41D9625	A-B	5200726690	11-35-12	108B/19	
E. A. Laboratories	*N-6	**41D9625	A-B	5200726690	11-35-12	108B/19	
Bell and Howell Company	*N-8	163-A	A	5200731575	11-35B-1		†

†For 24 volt circuit use lamp, Trade Number 844, A. E. Reference Number 88-8400. Replace with lamp, Trade Number 842, A. E. Reference Number 88-3300, for 12 volt use.

Note: *AAF type; **AAF drawing.



SIGHT—ILLUMINATED NAVY MARK 9

NAMES: Illuminated sight
Illuminated gun sight

Flexible gun sight
Optical sight



DESCRIPTION: The Navy Mark 9 illuminated optical sight is mounted on turret gun carriages or flexible gun mounts. The sight consists of a main housing and a reflector support. The housing contains a lamp and lamp socket, a reticle, a lens, and a snap type switch. The image reflector support attaches to the main housing and incorporates the reticle reflector and a daylight filter, or sunscreen. This sight projects an image of the reticle onto the reflector screen held in the reflector support. The snap switch incorporates a rheostat, which can be turned to vary the intensity of illumination of the sight.

Connected to the sight is a two-foot rubber insulated wire with a threaded electrical connection containing two pin-type contacts.

CHARACTERISTICS:

- Dimensions.....approximately 6³/₈ by 3¹/₂ by 3¹/₂ inches
- Weight.....approximately 1¹/₂ pounds
- Voltage.....12 to 28 volts direct current

RELATIONSHIP OF PARTS: Used with:

Lamp, Trade Number 1664 IF, S-8 IF, 21/6 candlepower, 28 volts.

ARMY

A. E. REF. NO.: 52-5375
 TYPE DESIGNATION: Navy Mark 9
 A. S. C. STOCK NO.: Refer to chart.
 PROD. STATUS: Not under procurement for initial installation. Used on aircraft procured for or from the Navy Department. Superseded by Army type N-8 sight, A. E. Reference Number 52-4550.

SHIPPING DATA: Shipped as a complete unit, including lamp.

NAVY

TYPE DESIGNATION: Mark 9
 ORD. SPEC.: 2366
 BU. ORD. DRAW. NO.: 300481
 AVIATION ORDNANCE STOCK LIST NUMBER: 2-S-3115
 ORD. PAMPHLET NO.: 263 and 865
 ORDNANCE CIRCULAR LETTER NUMBER: V19-42
 PROCUREMENT STATUS: Under procurement.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number
American Cystoscope Makers, Incorporated	*Mark 9	ORD28177	A-N-B	5200730760	108B/21
Wollensak Optical Company	*Mark 9	ORD28177	A-N-B	5200730760	108B/21

NOTE: Navy Mark 9, Mod. 1 sight is identical to the Mark 9 except that Lamp, Trade Number 1684 IF, S8-, IF, 21/6 candlepower, 12-16 volts is used for 12 volt service.

Note: *Navy type.



SIGHT-FLEXIBLE GUN
ARMY TYPE N-8

NAMES: Flexible gun sight
Illuminated sight
Illuminated gun sight
Optical sight

Retiflector sight

DESCRIPTION: The Army type N-8 flexible gun sight, usually mounted in a machine gun turret, is of the single wire grounded type. The sight's main housing consists of a lamp and lamp socket in a removable base, a circle and center dot recticle, a filter or sun screen, and a mirror set up horizontally above a reflector glass.

The recticle consists of a glass with one opaque surface containing the recticle design. This sight projects an image of the recticle onto the reflector screen held in a reflector support.

The lamp used in this sight contains two filaments; if one filament does not light, the gunner reverses the toggle switch and brings the other filament into use. A ring and bead sight is provided in case of power failure.

CHARACTERISTICS:

Dimensions.....approximately 6 1/8 by 4 by 5 3/4 inches.
Weight.....approximately 1 1/4 pounds.
Voltage.....12-28 volts direct current.
Electrical connector.....AN3102-10S-2P.

RELATIONSHIP OF PARTS: Used with:

Lamp, Trade Number 844, A. E. Reference Number 88-8400 in 24-volt circuits, and Lamp, Trade Number 842, A. E. Reference Number 88-3300, in 12-volt circuits.

ARMY

A. E. REFERENCE NUMBER: 52-4550

TYPE DESIGNATION: N-8

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit, including lamp.

NAVY

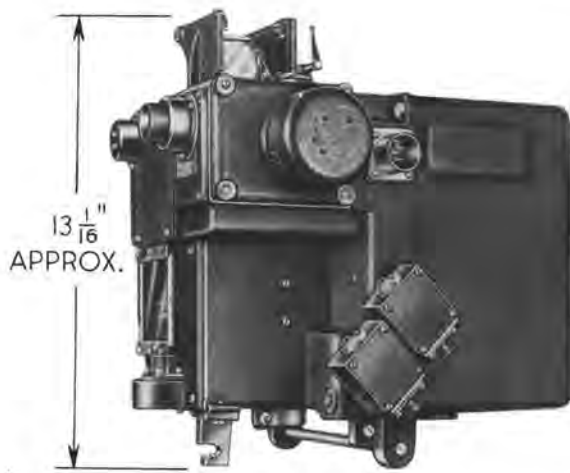
There is no Navy equivalent for the Army item.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number	Remarks
Bell and Howell Company	*N-8	163-A	A	5200731575	11-35B-1		
S. E. Bowser Company	*N-6	**41D9625	A-B	5200726690	11-35-12	108B/19	See note
	*N-6A	**42G14292	A-B	5200730700		108B/70	See note
E. A. Laboratories	*N-6	**41D9625	A-B	5200726690	11-35-12	108B/19	See note

NOTE: In 24-volt circuit use Lamp, Trade Number 1052 I.F., A.E. Reference Number 88-8300, and in 12-volt circuit use Lamp, Trade Number 1120 I.F., A. E. Reference Number 88-3200.
Note: *AAF type; **AAF drawing.

GUN SIGHTS ARMAMENT—GUNNERY



SIGHT—AUTOMATIC COMPENSATING GUN ARMY TYPE K-3

NAMES: Automatic compensating gun sight Sperry computing sight
 Computing sight Sperry computer

DESCRIPTION: The Army type K-3 automatic compensating gun sight is used in the types A-1 and A-1A upper turrets. The sight is mounted on a cradle that attaches to, and moves with, the guns. This sight consists of an optical system, an automatic computing mechanism and a range finder, combined into a single unit. The optical system is used to locate the target in space. The computing mechanism and range finder solves prediction and ballistic deflections for the projectile and automatically transmits these solutions to the optical system. This causes the line of sight to be offset from the gun bore in proportion to the predicted deflections, thereby insuring a greater proportion of hits. The gunner moves the sight (and the guns) so that the line of sight follows the movement of the target. A ring and bead sight, which is folded when not in use, is provided in case of power supply failure.

CHARACTERISTICS:

Dimensions.....approximately 13¹/₁₆ by 13¹/₃₂ by 10¹³/₃₂ inches.
Weight.....approximately 25 pounds.
Operating voltage.....24 volts direct current

RELATIONSHIP OF PARTS: Used with:

Army type A-1 and A-1A upper turrets, A. E. Reference Numbers 52-7600 and 52-7625, and lamp, Trade Number 1327, 12-16 volts, 32 candlepower, RP-11 bulb, single contact prefocused base.

ARMY

A. E. REFERENCE NUMBER: 52-4250
TYPE DESIGNATION: K-3
A. S. C. STOCK NUMBER: Refer to chart.
TECHNICAL ORDER NUMBER: Refer to chart.
PRODUCTION STATUS: Under procurement.
SHIPPING DATA: Shipped as a complete unit including lamp.

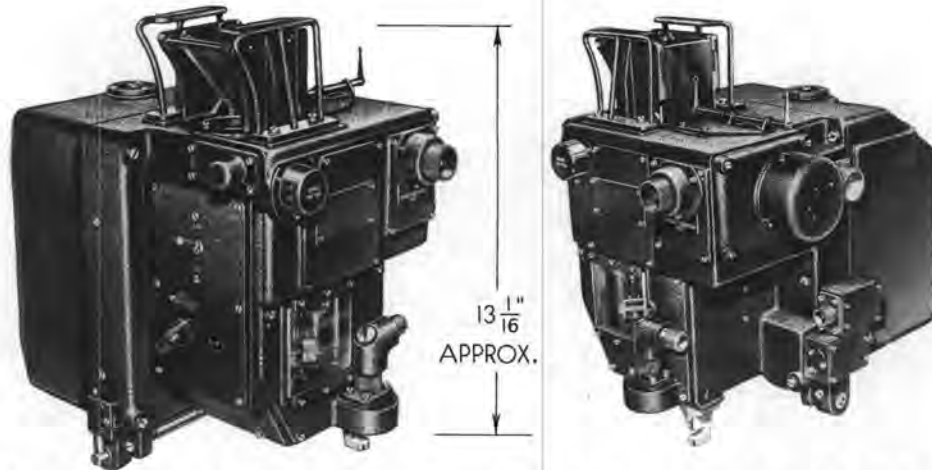
NAVY

There is no Navy equivalent for the Army item.

ALL MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	Manufacturer's Specification	
Sperry Gyroscope Company	*K-3	646398-A assembly 644853-H outline	A	5900731750	11-35A-1	S-69834	
	*K-4	646636-A assembly 645418-H outline	A	5900719910	11-35A-1	S-69834	See note
National Cash Register Company	*K-3	646398-A assembly 644853-H outline	A	5900731750	11-35A-1		
	*K-4	646636-A assembly 645418-H outline	A	5900719910	11-35A-1		See note

NOTE: The Army type K-3 is identical to Army type K-4, with the exception that the flexible shaft input connection boxes on the K-3 are tilted at an angle and both outlets face the same direction. Some of the lettering on the K-4 is inverted, for use in lower turrets.
Note: *AAF type.



SIGHT-AUTOMATIC COMPENSATING GUN
ARMY TYPE K-4

NAMES: Automatic compensating gun sight Sperry computing sight
 Computing sight Sperry computer

DESCRIPTION: The Army type K-4 automatic compensating sight, used in the types A-2 and A-13 lower ball turrets, is mounted securely inside the ball of the turret. This sight consists of an optical system, an automatic computing mechanism, and a range finder, combined into a single unit. The optical system is used to locate the target in space. The computing mechanism and range finder solve prediction and ballistic deflections for the projectile and automatically transmit these solutions to the optical system. This causes the line of sight to be offset from the gun bore in proportion to the predicted deflections, insuring a greater proportion of hits. The gunner moves the sight (and the turret) so that the line of sight follows the movement of the target. A ring and bead sight, which is folded when not in use, is provided, in case of power supply failure.

CHARACTERISTICS:

Dimensions..... approximately 13 $\frac{1}{16}$ by 13 $\frac{1}{32}$ by 10 $\frac{13}{32}$ inches.
Weight..... approximately 25 pounds.
Operating voltage..... 24 volts direct current.
Lamp..... Trade Number 1327, 12-16 volts, 32 candle-power, RP-11 bulb, single contact pre-focused base.

RELATIONSHIP OF PARTS: Used with:
Army type A-2 and A-13 lower turrets, A. E. Reference Numbers 52-7200 and 52-8050.

ARMY

A. E. REFERENCE NUMBER: 52-4260
TYPE DESIGNATION: K-4
A. S. C. STOCK NUMBER: Refer to chart.
TECHNICAL ORDER NUMBER: Refer to chart.
PRODUCTION STATUS: Under procurement.
SHIPPING DATA: Shipped as a complete unit including lamp.

NAVY

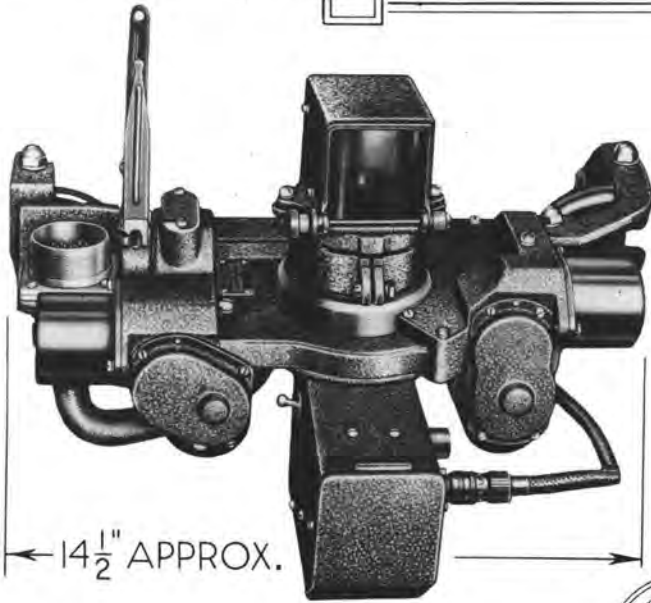
There is no Navy equivalent for the Army item.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	Manufacturer's Specification	Remarks
Sperry Gyroscope Company	*K-4	646636-A assembly 645418-H outline	A	5900719910	11-35A-1	S-69834	
	*K-3	646398-A assembly 644853-H outline	A	5900731750	11-35A-1	S-69834	See note
National Cash Register Company	*K-4	616636-A assembly 645418-H outline	A	5900719910	11-35A-1		
	*K-3	646398-A assembly 644853-H outline	A	5900731750	11-35A-1		See note

NOTE: The Army type K-3 is identical to Army type K-4, with the exception that the flexible shaft input connection boxes on the K-3 are tilted at an angle and both outlets face the same direction. Some of the lettering on the K-4 is inverted for use in lower turrets.
Note: *AAF type.

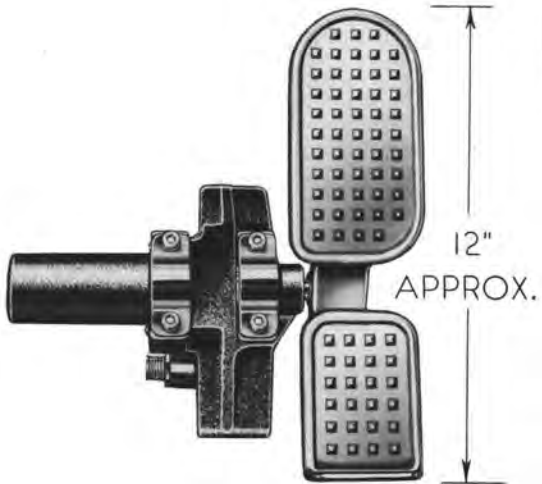
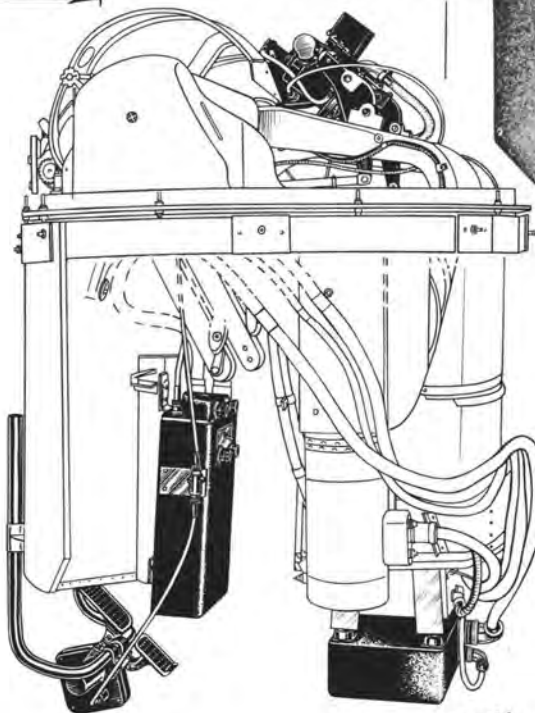
GUN SIGHTS ARMAMENT—GUNNERY



← 14 1/2" APPROX.



18 1/2"
APPROX.



12"
APPROX.



16 3/4" APPROX.

SIGHT-COMPENSATING ARMY TYPE K-8

NAMES: Compensating sight
Computing sight

Fairchild compensating sight
Automatic compensating sight

(Continued on page 95)



SIGHT-COMPENSATING

(Continued from page 94)

DESCRIPTION: The Army type K-8 compensating gun sight is used with .50 caliber M2 machine guns mounted in an upper turret. The sight assembly consists of a control unit, power unit, a sight mount, and a foot control. The sight is driven by flexible shafts from the turret's azimuth and elevation drives and provides compensation for the range, indicated airspeed, altitude of the airplane in which it is mounted, and relative speed of the target with respect to the turret. All corrections are automatically made by the sight after the gunner has set the dials for the altitude, indicated airspeed of his own airplane, and the span of the target.

A ring and bead sight, which can be folded out of the way when not in use, is provided in case the power supply should fail.

CHARACTERISTICS:

Dimensions

Control unit.....	approximately 18½ by 10 by 6¼ inches.
Sight unit.....	approximately 14½ by 14½ by 10 inches.
Foot control unit.....	approximately 12 by 10½ by 7½ inches.
Power unit.....	approximately 16 by 9½ by 4¼ inches.

Weight

Control unit.....	approximately 23 pounds.
Foot control unit.....	approximately 5 pounds.
Sight unit.....	approximately 10 pounds.
Power unit.....	approximately 30 pounds.

RELATIONSHIP OF PARTS: Used with:

Martin turrets type A-3C, A. E. Reference Number 52-7475.

ARMY

A. E. REFERENCE NUMBER: 52-4270

TYPE DESIGNATION: K-8

A. S. C. STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped unassembled in separate units.

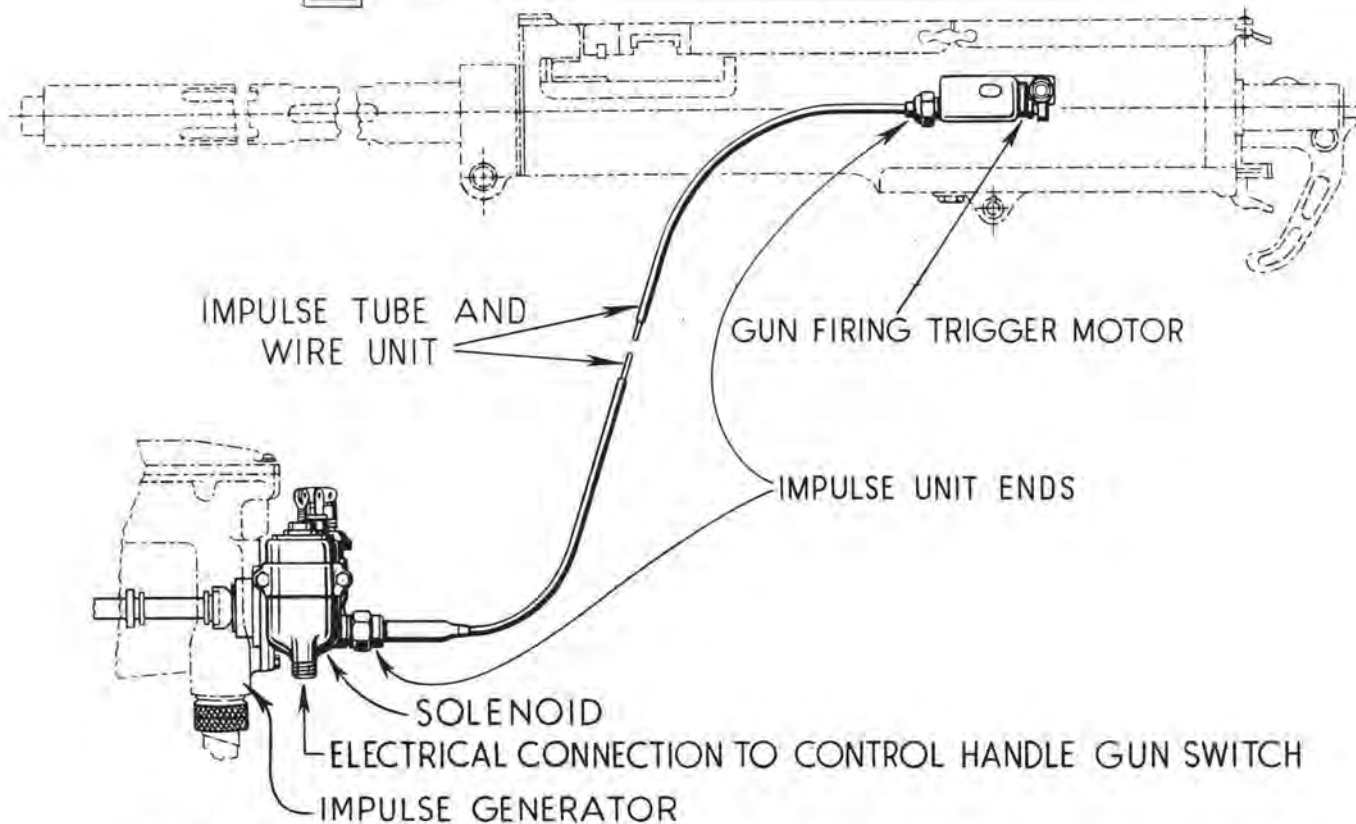
NAVY

There is no Navy equivalent for the Army item.

ALL MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Manufacturer's Specification Number
Fairchild Aviation Corporation	F-180	V-361	A	5900721500	F-180
Addressograph Multigraph Corporation	F-180	V-361	A	5900721500	
Thomas B. Gibbs and Company	F-180	V-361	A	5900721500	

SYNCHRONIZERS ARMAMENT—GUNNERY



MACHINE GUN SYNCHRONIZING SYSTEM MACHINE GUN SYNCHRONIZERS

A machine gun synchronizer is a device to control a fixed machine gun so that its projectiles may be fired through the arc of rotation of a propeller. It is arranged so that the projectile is fired after a propeller blade passes the muzzle of the gun.

This synchronizer includes an impulse generator, an impulse tube and wire, a trigger motor and an electrical control.

The impulse generator creates the timed impulses that actuate the trigger motor. It is mounted on the engine's synchronizer mounting pad, and contains a camshaft which is driven by a splined drive from the airplane engine. The cam is rotated at propeller speed, and has a number of lobes, depending on the number of propeller blades. A cam follower generates an impulse when actuated by each lobe.

Impulses are transmitted to the trigger by the impulse tube and wire unit. This unit consists of a wire inside a steel tube with suitable couplings at each end to allow the wire to move freely. One end of the wire is attached to the plunger on the impulse generator, and the other end to the trigger motor.

The trigger motor, mounted on the side of the fixed machine gun, is actuated by the timed impulses which are transmitted along the impulse wire. Each impulse pulls the trigger motor plunger forward against the trigger motor slide, forcing the end of the slide through a slot in the side of the gun and tripping the firing mechanism.

The entire synchronizer system is operated by an electrical control, which consists of a solenoid attached to the head of the impulse generator, a control handle gun switch, and a safety switch. The type of solenoid used depends on the circuit voltage. When the control handle gun switch is depressed, the solenoid is energized and frees the cam follower in the generator. This allows the spring in the trigger motor to pull the cam follower against the cam. Rotation of the cam produces the timed impulses to actuate the trigger motor. When the control switch is released, the solenoid plunger is returned to its original position by a spring and locks the cam follower in a position where no impulses may be generated.



GENERATOR—GUN SYNCHRONIZER IMPULSE
ARMY TYPE E-8 NAVY—SEE BELOW

NAMES: Gun synchronizer impulse generator
 Synchronizer—gun impulse generator

DESCRIPTION: The Army type E-8 gun synchronizer impulse generator is part of the synchronizing system which is used to control the firing of .30 and .50 caliber M2 machine guns. This unit generates the timed mechanical impulses which enable the trigger motor to fire the gun.

The major parts of the impulse generator unit are a housing, a cam, an eccentric sleeve and a reciprocating cam follower. The cam is rotated at propeller speed and contains one, two, or three lobes for use with either a two, three, or four bladed propeller. A solenoid, actuated by the control handle gun switch, retracts a plunger from the shoulder of the cam follower and allows the follower to be pulled against the cam. Rotation of the cam then produces a series of mechanical impulses.

CHARACTERISTICS:

Dimensions.....approximately 6 1/8 by 3 1/2 by 3 inches.
 Weight.....approximately 2 1/4 pounds.

RELATIONSHIP OF PARTS: Used with:

Army type E-3 impulse unit, A. E. Reference Number 52-2600, Army type E-3A trigger motor, A. E. Reference Number 52-3000, and Army type G-10 gun firing solenoid, A. E. Reference Number 52-6300.

ARMY

A. E. REFERENCE NUMBER: 52-2700

SPECIFICATIONS:

Detail.....93-24609A
 Superseded.....93-24609

A. A. F. DRAWING NUMBER: 38D4828

TYPE DESIGNATION: E-8

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

NAVY

TYPE DESIGNATION: E-8

SPECIFICATIONS:

General.....M-460

BU. AER. DRAWING NUMBER: W. A. C. 114081; 114081-N-1, or Ranger 7588

BU. AER. F. S. S. C. STOCK NUMBER: R-86-G-37010

ORDNANCE PAMPHLET NUMBER: 552

BU. AER. CIRCULAR LETTER NUMBER: Aer-Ma-12431-EG-F41-14

PROCUREMENT STATUS: Under procurement.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number
Metal Specialty Company	*E-8	**38D4828	A-N-B	5200291050	11-20-13	108A 161
Moore-Eastwood and Company	*E-8	**38D4828	A-N-B	5200291050	11-20-13	108A 161

Note: *AAF type; **AAF drawing.



ENDS—IMPULSE UNIT
ARMY TYPE E-3 NAVY MARK 1

NAMES: Impulse unit ends

Cable ends—impulse, BAM, —.30 and .50 caliber (Navy)

Impulse tube and wire ends

DESCRIPTION: These are the end fittings and couplings of the gun synchronizer's impulse tube and wire unit which connects the impulse generator to the trigger motor. The impulse tube and wire unit consists of a steel tube, a single strand of steel wire and the necessary couplings and fittings. The airplane contractor furnishes the wire and tubing. The end fittings and couplings are provided by the Government.

CHARACTERISTICS:

Dimensions:

End for type E-8 impulse generator..... approximately 4 1/2 by 1 1/4 by 1 1/4 inches.

End for type E-3A trigger motor..... approximately 1 1/8 by 1 1/16 by 1 1/16 inches.

Weight..... approximately 1 pound (together).

RELATIONSHIP OF PARTS: Used with:

Army type E-8 impulse generator, A. E. Reference Number 52-2700, and Army type E-3A trigger motor, A. E. Reference Number 52-3000.

ARMY

A. E. REFERENCE NUMBER: 52-2600

SPECIFICATIONS:

Detail..... 93-24592

Superseded..... 24592

A. A. F. DRAWING NUMBER: 076031 and H35G5394

TYPE DESIGNATION: E-3

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit, consisting of one impulse generator end and one trigger motor end packed together.

NAVY

TYPE DESIGNATION: Mark 1

BU. ORD. DRAWING NUMBER: Assembly, 163658; Installation, 300936

AVIATION ORDNANCE STOCK LIST NUMBER: 1-C-60

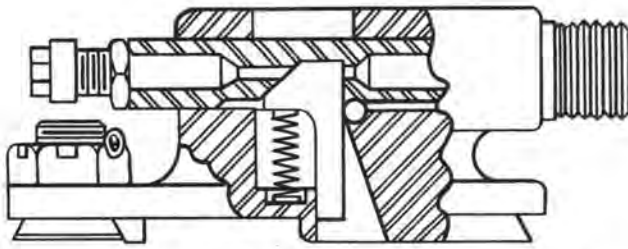
PUBLICATIONS: O. P. 865, O. P. 552, OCL V-54

PROCUREMENT STATUS: Under procurement.

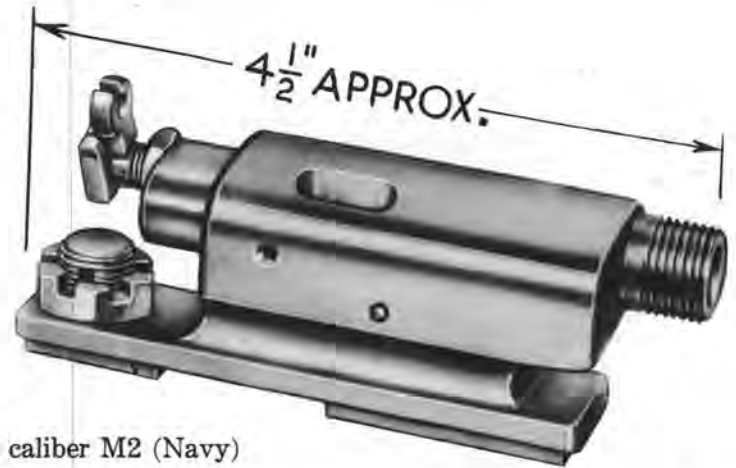
MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number
Tietzman Engineering Company	*E-3	**076031	A-N-B	5200250600	11-20-13	108A/37
Johnson Fare Box Company	*E-3	**076031	A-N-B	5200250600	11-20-13	108A/37

NOTE: Ends listed above are identical to Navy Mark I, except that Navy furnishes ends complete with wire.
Note: *AAF type; **AAF drawing.



**MOTOR—TRIGGER
ARMY TYPE E-3 NAVY MARK 1**

**NAMES:** Trigger motor

Motor—trigger, BAM—.30 and .50 caliber M2 (Navy)

Synchronizer trigger motor

DESCRIPTION: This trigger motor, mounted on the side of synchronized .30 and .50 caliber M2 fixed machine guns, is actuated by the timed impulses transmitted along the impulse wire from the impulse generator. It consists of a steel housing containing a slide, slide spring, plunger, plunger spring and an adjusting screw. The slide is beveled, and rides on a cam in the plunger. As the plunger is pulled forward, the slide is forced upward and into the gun. This trips the firing mechanism. An adjusting screw is used to vary the distance the slide may project into the gun.

CHARACTERISTICS:

Dimensions..... approximately 4½ by 1½ by 1¼ inches.
Weight..... approximately ⅞ pound.

RELATIONSHIP OF PARTS: Used with:

Type E-8 gun synchronizer impulse generator, A. E. Reference Number 52-2700, and Army type E-3 impulse unit ends, A. E. Reference Number 52-2600.

ARMY

A. E. REFERENCE NUMBER: 52-2900

SPECIFICATIONS:

Detail..... 93-24593

A. A. F. DRAWING NUMBER: 076023

TYPE DESIGNATION: E-3

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Not under procurement for initial installation. Superseded by Army type E-3A trigger motor, A. E. Reference Number 52-3000.

SHIPPING DATA: Shipped as a complete unit.**NAVY**

TYPE DESIGNATION: Mark 1

BU. ORD. DRAWING NUMBER: 178474

AVIATION ORDNANCE STOCK LIST NUMBER: 1-M-619

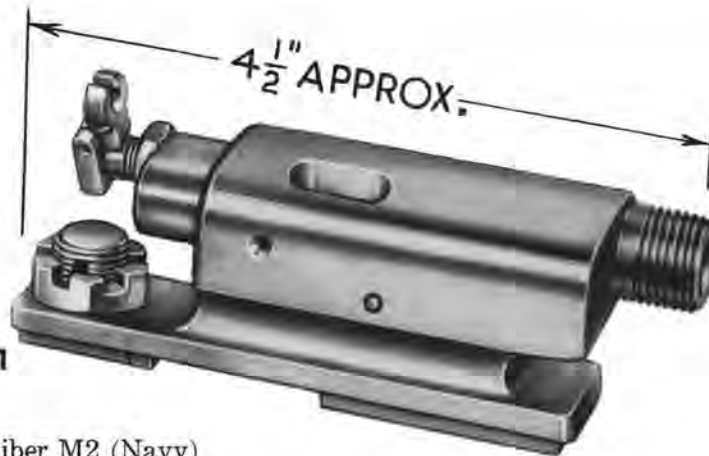
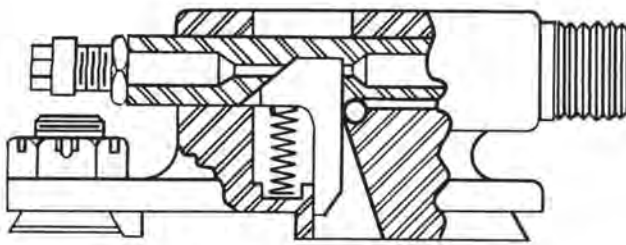
ORDNANCE PAMPHLET NUMBER: 865; 552

PROCUREMENT STATUS: Not under procurement for initial installation.**MODELS BELOW ARE INTERCHANGEABLE****Models are used in services as noted in column 4****A-Army, N-Navy, B-British**

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number
L. A. B. Corporation	*E-3	**076023	A-B	5200465600	11-20-11	108A/1
	*E-3A	**42B3980	A-B	5200239040	11-20-15	108A/158
John Oster Manufacturing Company	*E-3	**076023	A-B	5200465600	11-20-11	108A/1
	*E-3A	**42B3980	A-B	5200239040	11-20-15	108A/158
Argus Manufacturing Company	†Mark 1	††178474	N			
Crown Cork & Seal Company	†Mark 1, Mod. 1	††227622	N			§

Note: §Same as E-3A, except for 0.0017 inch difference in housing; *AAF type; **AAF drawing; †Navy type; ††Navy drawing.

SYNCHRONIZERS ARMAMENT—GUNNERY



MOTOR—TRIGGER ARMY TYPE E-3A NAVY MARK 1 MOD. 1

NAMES: Trigger motor
Motor—trigger, BAM—.30 or .50 caliber M2 (Navy)
Synchronizer trigger motor

DESCRIPTION: This trigger motor, mounted on the side of synchronized .30 and .50 caliber M2 fixed machine guns, is actuated by the timed impulses transmitted along the impulse wire from the impulse generator. It consists of a steel housing containing a slide, slide spring, plunger, plunger spring and an adjusting screw. The slide is beveled, and rides on a cam in the plunger. As the plunger is pulled forward, the slide is forced upward and into the gun. This trips the firing mechanism. An adjusting screw is used to vary the distance the slide may project into the gun.

This trigger motor is the same type as the type E-3, except for modification of the plunger and slide. The length of the slide has been shortened 0.010 inch to prevent the gun from firing too close to the propeller blades. A relief has also been added to the top side of the plunger, to limit extent of over-travel.

CHARACTERISTICS:

Dimensions..... approximately 4 1/2 by 1 1/2 by 1 3/4 inches.
Weight..... approximately 1/8 pound.

RELATIONSHIP OF PARTS: Used with:

Type E-8 gun synchronizer impulse generator, A. E. Reference Number 52-2700, and Army type E-3 impulse unit ends, A. E. Reference Number 52-2600.

ARMY

A. E. REFERENCE NUMBER: 52-3000

SPECIFICATIONS:

Detail..... 93-24593A
Superseded..... 93-24593

A. A. F. DRAWING NUMBER: 42B3980

TYPE DESIGNATION: E-3A

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

NAVY

TYPE DESIGNATION: Mark 1 Mod. 1

BU. ORD. DRAWING NUMBER: 227622

AVIATION ORDNANCE STOCK LIST NUMBER: 1-M-621-200

ORDNANCE PAMPHLET NUMBER: 865; 552

ORDNANCE CIRCULAR LETTER: V-7-43

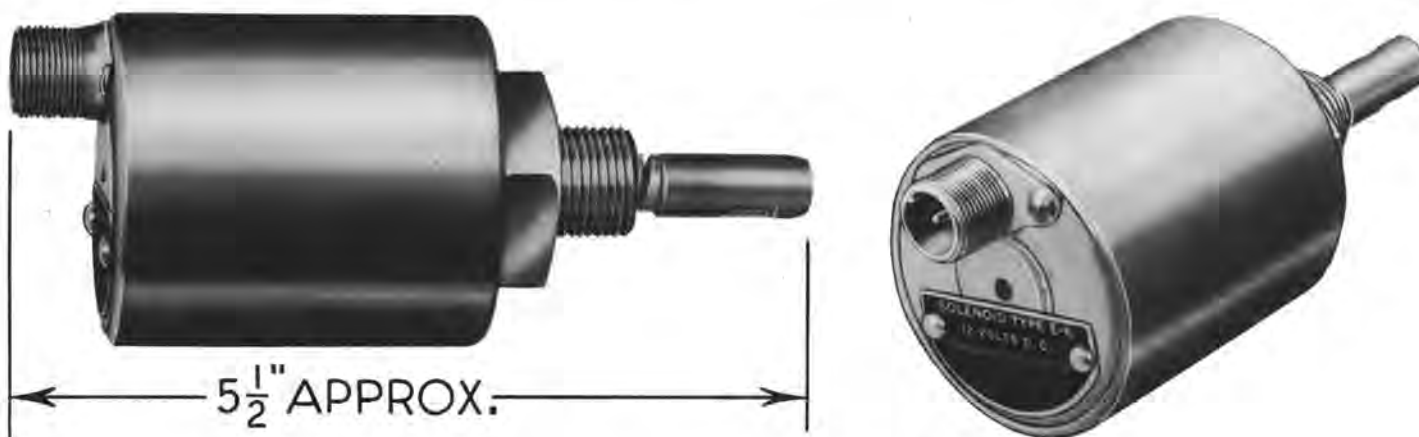
PROCUREMENT STATUS: Under procurement.

ALL MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number	Remarks
L. A. B. Corporation	*E-3A	**42B3980	A-B	5200239040	11-20-15	108A/158	
	*E-3	**076023	A-B	5200465600	11-20-11	108A/1	
John Oster Manufacturing Company	*E-3A	**42B3980	A-B	5200239040	11-20-15	108A/158	
	*E-3	**076023	A-B	5200465600	11-20-11	108A/1	
Crown Cork & Seal Company	‡Mark 1, Mod. 1	‡‡227622	N				§
Argus Manufacturing Company	‡Mark 1	‡‡227622	N				

Note: §Same as E-3A except for 0.0017 inch difference in housing; *AAF type; **AAF drawing; ‡Navy type; ‡‡Bu. Ord. drawing.

GUN SOLENOIDS ARMAMENT—GUNNERY



SOLENOID—GUN ARMY TYPE E-6 NAVY TYPES 12 AND 230-A

NAMES: Gun solenoid
Gun firing solenoid
Firing solenoid
Electric trigger control (Navy)
Solenoid

DESCRIPTION: This solenoid, used for electrical trigger control of remotely-placed synchronized machine guns, is attached to an impulse generator which is synchronized with the engine's propeller. A movable plunger in the solenoid is inserted in the locking pin of the impulse generator. When the solenoid is energized by pressing the firing switch, magnetic forces in the core of the solenoid coil surrounding it attract the plunger, permitting timed mechanical impulses to be transmitted by the generator to a trigger motor. Impulses are generated as long as the solenoid is energized.

This solenoid is provided with a single pin screw-on type electrical connector.

CHARACTERISTICS:

Dimensions.....approximately 4 1/2 by 2 1/4 by 2 1/4 inches
Weight.....approximately 2 3/4 pounds
Operating voltage.....12 volts direct current
Current drain.....16 amperes
Plunger stroke.....0.122 inches
Electrical connector.....AND10066-10S-2P

RELATIONSHIP OF PARTS: Used with:

Army type E-4 impulse generator, which is furnished by the airplane contractor.

ARMY

A. E. REFERENCE NUMBER: 52-5650

SPECIFICATIONS:

Detail.....93-24743
Superseded.....24743

TYPE DESIGNATION: E-6

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

NAVY

TYPE DESIGNATION: 12

A. S. O. STOCK NUMBER: R86-S-60000

BU. AER. CIRCULAR LETTER: Aer-MA-12431-EG-F41-14

PROCUREMENT STATUS: Under procurement.

230-A

R86-S-60040

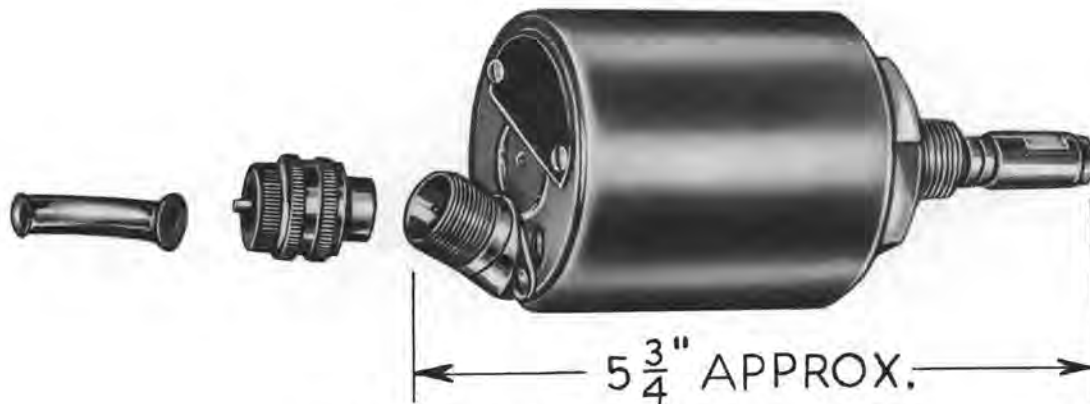
Aer-MA-12431-EG-F41-14

Under procurement.

MODELS BELOW ARE INTERCHANGEABLE Models are used in services as noted in column 4 A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number	Remarks
Magnavox Company, Incorporated	*E-6	14D3G4	A-N-B	5200752600		105D/92	
Star Machine Manufacturers, Incorporated	*E-4	**Detailed specification 94-24610	A-B	5200752550	11-1-30	105D/87	†
Pollak Manufacturing Company	*E-4	**Detail specification 94-24610	A-B	5200752550	11-1-30	105D/87	†

†Has single pin push-on type electrical connector. Airplane connector must be changed.
Note: *AAF type; **AAF drawing.



SOLENOID—GUN
ARMY TYPE E-8

NAMES: Gun solenoid
Gun firing solenoid
Firing solenoid
Solenoid

DESCRIPTION: The Army type E-8 solenoid, used for electrical trigger control of remotely-placed synchronized machine guns, is attached to an impulse generator which is synchronized with the engine's propeller. A movable plunger in the solenoid is inserted in the locking pin of the impulse generator. When the solenoid is energized by pressing the firing switch, magnetic forces in the core of the solenoid coil attract the plunger, permitting timed mechanical impulses to be transmitted by the generator to a trigger motor. Impulses are generated as long as the solenoid is energized.

The electrical connector is a single pin screw-on type installed at a 30 degree angle.

CHARACTERISTICS:

Dimensions..... approximately 5 3/4 by 2 1/4 by 2 1/4 inches
Weight..... approximately 2 3/4 pounds
Operating voltage..... 12 volts direct current
Current drain..... 20 amperes
Plunger stroke..... 0.112 inches
Electrical connector..... AND10066-10S-2P

RELATIONSHIP OF PARTS: Used with:

Army type E-4 impulse generator which is furnished by the airplane engine contractor.

ARMY

A. E. REFERENCE NUMBER: 52-5670

SPECIFICATIONS:

Detail..... 93-24768
Superseded..... 24768

MFR.: Magnavox Company, Incorporated

MFR. DRAWING NUMBER: 1411G2

TYPE DESIGNATION: E-8

A. S. C. STOCK NUMBER: 5200752625

TECHNICAL ORDER NUMBER: 11-1-30

PRODUCTION STATUS: Under procurement. Supersedes Army type E-2A gun solenoid, A. E. Reference Number 52-5500.

SHIPPING DATA: Shipped as a complete unit including mating electrical connector plug AN3106-10S-2S.

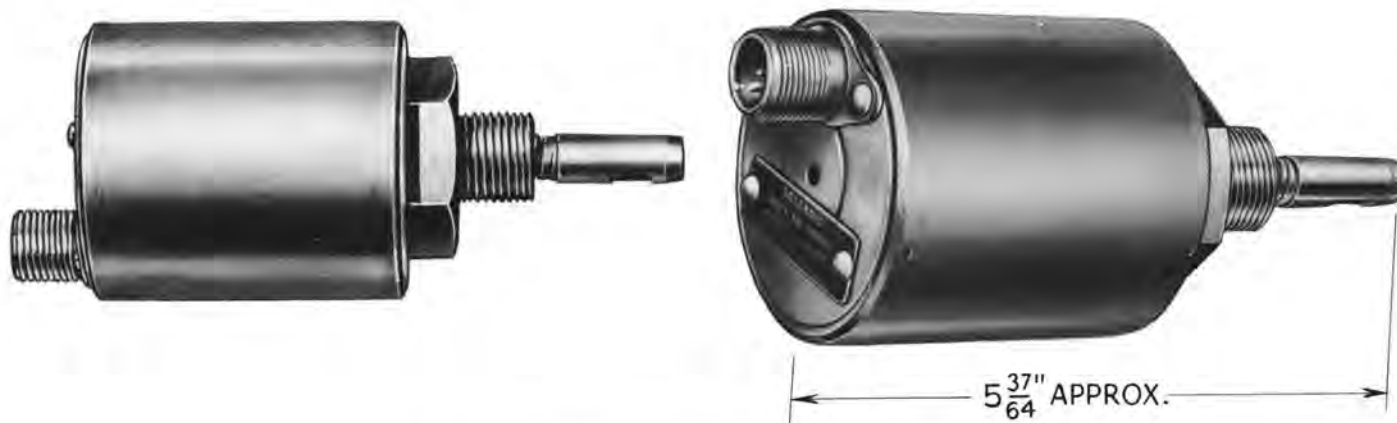
NAVY

There is no Navy equivalent for the Army item.

BRITISH

REFERENCE NUMBER: 105D/90

GUN SOLENOIDS ARMAMENT—GUNNERY



SOLENOID—GUN

ARMY TYPE G-10 NAVY TYPES 24 AND 240

NAMES: Gun solenoid
Gun firing solenoid
Firing solenoid
Solenoid

Electric trigger control (Navy)

DESCRIPTION: This solenoid, used for electrical trigger control of remotely placed synchronized machine guns, is attached to an impulse generator synchronized with the engine's propeller. A movable plunger in the solenoid is inserted in the locking pin of the impulse generator. When the solenoid is energized by pressing the firing switch, magnetic forces in the core of the solenoid coil attract the plunger, permitting timed mechanical impulses to be transmitted by the generator to a trigger motor. Impulses are generated as long as the solenoid is energized.

The electrical connector is the single pin screw-on type.

CHARACTERISTICS:

Dimensions.....approximately 5½ by 2¼ by 2¼ inches
Weight.....approximately 2¾ pounds
Operating voltage.....24 volts, direct current
Current drain.....10 amperes
Plunger stroke.....0.112 inches

RELATIONSHIP OF PARTS: Used with:

Army type E-8 impulse generator, A. E. Reference Number 52-2700.

ARMY

A. E. REFERENCE NUMBER: 52-6300

SPECIFICATIONS:

Detail.....93-24740
Superseded.....24740

TYPE DESIGNATION: G-10

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement. Supersedes Army Type G-2, A. E. Reference Number 52-5800.

SHIPPING DATA: Shipped as a complete unit.

NAVY

TYPE DESIGNATION: 24; 240

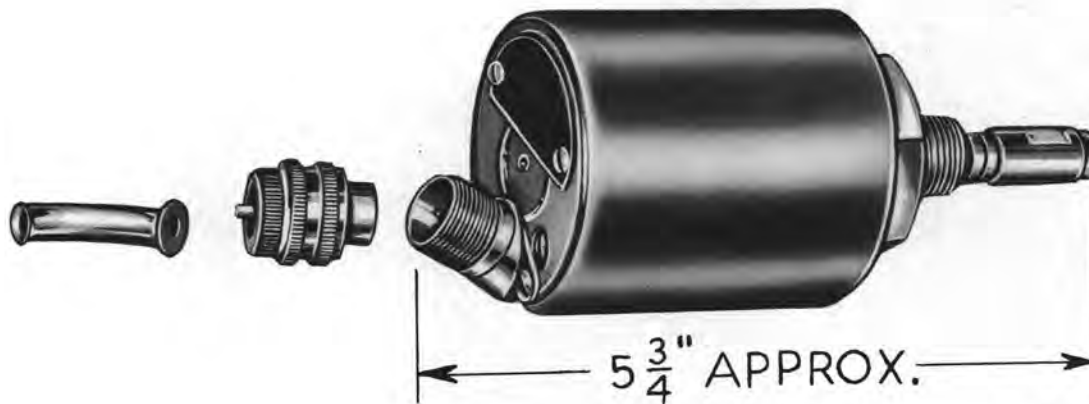
A. S. O. STOCK NUMBER: R-86-S-60010

PROCUREMENT STATUS: Under procurement.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number
Magnavox Company	*G-10	14D3G1	A-N-B	5200752865	11-1-30	105D/51
	†24; 240	14DG1	N-B			105D/51

Note: *AAF type; †Navy type



SOLENOID—GUN
ARMY TYPE G-16

NAMES: Gun solenoid
Gun firing solenoid
Firing solenoid
Solenoid

DESCRIPTION: The Army type G-16 solenoid, used for electrical trigger control of remotely placed synchronized machine guns, is attached to an impulse generator which is synchronized with the engine's propeller. A movable plunger in the solenoid is inserted in the locking pin of the impulse generator. When the solenoid is energized by pressing the firing switch, magnetic forces in the core of the solenoid coil attract the plunger, permitting timed mechanical impulses to be transmitted by the generator to the trigger motor. Impulses are generated as long as the solenoid is energized. The electrical connector is a single pin screw-on type, installed at a 30 degree angle.

CHARACTERISTICS:

Dimensions	approximately 5 ³ / ₄ by 2 ¹ / ₄ by 2 ¹ / ₄ inches
Weight	approximately 3 pounds
Operating voltage	24 volts direct current
Current drain	10 amperes
Plunger stroke	0.174 inches

RELATIONSHIP OF PARTS: Used with:

Army type E-4 impulse generator, which is furnished by the aircraft engine contractor.

ARMY

A. E. REFERENCE NUMBER: 52-6375

SPECIFICATIONS:

Detail	93-24769
Superseded	24769

MFR.: Magnavox Company, Incorporated

MFR. DRAWING NUMBER: 14D11G1

TYPE DESIGNATION: G-16

A. S. C. STOCK NUMBER: 5200750000

TECHNICAL ORDER NUMBER: 11-1-30

PRODUCTION STATUS: Under procurement.

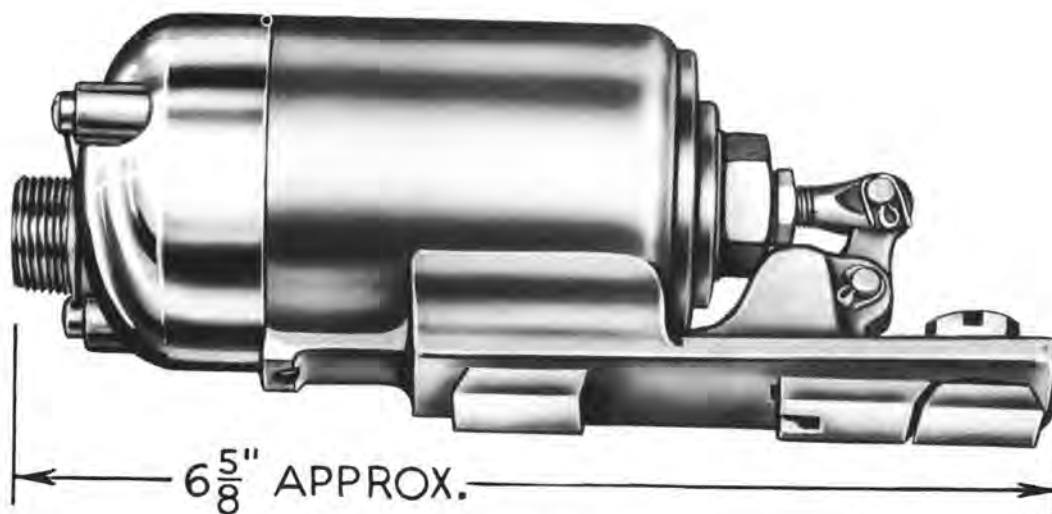
SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.

BRITISH

REFERENCE NUMBER: 105D/80



SOLENOID—LEFT HAND GUN
ARMY TYPE C-4B NAVY MARK 3 MODIFICATION 2

NAMES: Left hand gun solenoid
Gun firing solenoid
Firing solenoid
Solenoid
Electric trigger control (Navy)

DESCRIPTION: This solenoid, used for electrical trigger control of free-firing remotely-placed .30 and .50 caliber M2 machine guns, is mounted on the left hand side of the gun. A movable plunger is connected to the sear of the gun by a lever arm. When the solenoid is energized by pressing the firing switch in the cockpit, magnetic forces in the core of the solenoid coil attract the plunger, release the sear the fire the gun. Release of the firing switch opens the circuit and a spring returns the plunger to its original position, causing the gun to cease firing.
This solenoid is provided with a two pin push-on type connector.

CHARACTERISTICS:

Dimensions	approximately 6 ⁵ / ₈ by 2 ¹ / ₄ by 2 ¹ / ₄ inches.
Weight	approximately 2 ⁷ / ₈ pounds.
Operating voltage	12 volts direct current.
Current drain	18 amperes.
Plunger stroke	0.344 inches.

RELATIONSHIP OF PARTS: Used on:
.30 and .50 caliber M2 free firing machine guns, A. E. Reference Numbers 93-1420 and 93-1560.

ARMY

A. E. REFERENCE NUMBER: 52-5390

SPECIFICATIONS:

Detail	93-24682A
Superseded	93-24682

A. A. F. DRAWING NUMBER: 37B2301 (Supersedes Army Drawing Number 34B6051)

TYPE DESIGNATION: C-4B

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Not under procurement for initial installation. Superseded by Army type C-4C Solenoid, A. E. Reference Number 52-5400.

SHIPPING DATA: Shipped as a complete unit.

(Continued on page 107)



SOLENOID—LEFT HAND GUN

(Continued from page 106)

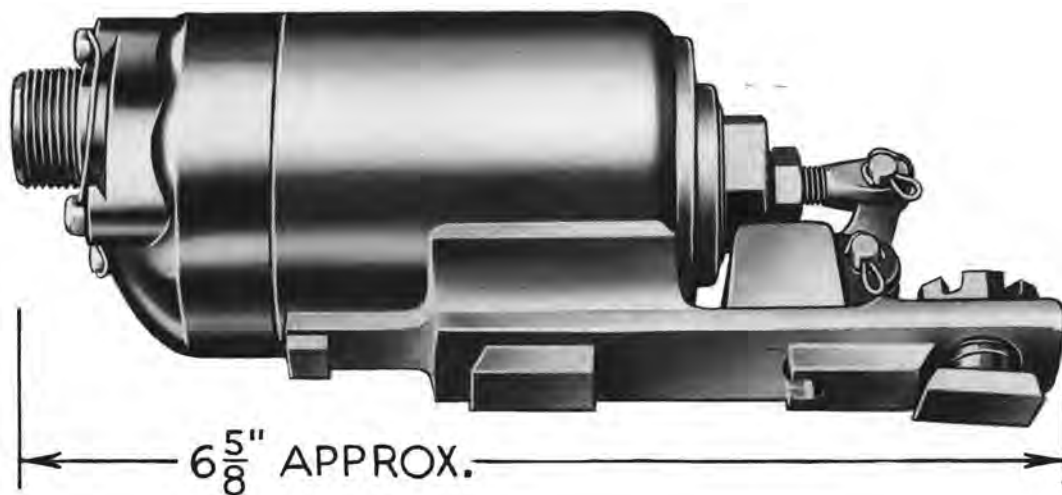
NAVY

TYPE DESIGNATION: Mark 3 Mod. 2
 BU. ORD. DRAWING NUMBER: 189812
 AVIATION ORDNANCE STOCK LIST NUMBER: 1-C-5461
 ORDNANCE PAMPHLET NUMBER: 865
 PROCUREMENT STATUS: Not under procurement for initial installation.

ALL MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number	Remarks
Electric Auto Lite Company	*C-4B	**37B2301	A-N-B	5200751600	11-1-30	105D/45	Has two pin push-on type electrical connector.
	*C-4B	**37B2301-1	A-N-B	5200751900	11-1-30	105D/77	Has two pin push-on type electrical connector.
	*C-4C	**41B5099R	A-N-B	5200751960	11-1-30	105D/58	Has two pin screw-on type electrical connector. Airplane connector must be changed.
	*C-4C	**41B5099L	A-N-B	5200751950	11-1-30	105D/57	Has two pin screw-on type electrical connector. Airplane connector must be changed.
Pollak Manufacturing Company	*C-4B	**37B2301	A-N-B	5200751600	11-1-03	105D/45	Has two pin push-on type electrical connector.
	*C-4B	**37B2301-1	A-N-B	5200751900	11-1-30	105D/77	Has two pin push-on type electrical connector.
Delco-Remy Division of General Motors Corporation	*C-4B	**37B2301	A-N-B	5200751600	11-1-30	105D/45	Has two pin push-on type electrical connector.
	*C-4B	**37B2301-1	A-N-B	5200751900	11-1-30	105D/77	Has two pin push-on type electrical connector.
	*C-4C	**41B5099R	A-N-B	5200751960	11-1-30	105D/58	Has two pin screw-on type electrical connector. Airplane connector must be changed.
Star Machine Manufacturers, Incorporated	*C-4C	**41B5099L	A-N-B	5200751950	11-1-30	105D/57	Has two pin screw-on type electrical connector. Airplane connector must be changed.
	*C-4B	**37B2301	A-N-B	5200751600	11-1-30	105D/45	Has two pin push-on type electrical connector.
	*C-4B	**37B2301-1	A-N-B	5200751900	11-1-30	105D/77	Has two pin push-on type electrical connector.

NOTE: Type C-4B and C-4C solenoids may be converted from right to left hand, and vice versa, by reversing the terminal positions.
 Note: *AAF type; **AAF drawing.



SOLENOID—RIGHT HAND GUN
ARMY TYPE C-4B NAVY MARK 3 MOD. 2

NAMES: Right hand gun solenoid Electric trigger control (Navy)
Gun firing solenoid
Firing solenoid
Solenoid

DESCRIPTION: This solenoid, used for electrical trigger control of free-firing remotely placed .30 and .50 caliber M2 machine guns, is mounted on the right hand side of the gun. A movable plunger is connected to the sear of the gun by a lever arm. When the solenoid is energized by pressing the firing switch in the cockpit, magnetic forces in the core of the solenoid coil attract the plunger, release the sear, and fire the gun. Release of the firing switch opens the circuit and a spring returns the plunger to its original position, causing the gun to cease firing.

This solenoid is provided with a two-pin push-on type connector.

CHARACTERISTICS:

- Dimensions approximately 6 5/8 by 2 1/4 by 2 1/4 inches.
- Weight approximately 2 pounds 14 ounces.
- Operating voltage 12 volts direct current.
- Current drain 18 amperes.
- Plunger stroke 0.344 inches.

RELATIONSHIP OF PARTS: Used on:

.30 and .50 caliber M2 free-firing machine guns, A. E. Reference Numbers 93-1420 and 93-1560.

ARMY

A. E. REFERENCE NUMBER: 52-5395

SPECIFICATIONS:

- Detail 93-24682A
- Superseded 93-24682

A. A. F. DRAWING NUMBER: 37B2301 (Supersedes Army Drawing Number 34B6051)

A. A. F. PART NUMBER: 37B2301-1

TYPE DESIGNATION: C-4B

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Not under procurement for initial installation. Superseded by Army type C-4C solenoid, A. E. Reference Number 52-5450.

SHIPPING DATA: Shipped as a complete unit.

(Continued on page 109)



SOLENOID—RIGHT HAND GUN

(Continued from page 108)

NAVY

TYPE DESIGNATION: Mark 3 Mod. 2
 BU. ORD. DRAWING NUMBER: 189812
 AVIATION ORDNANCE STOCK LIST NUMBER: 1-C-5461
 ORDNANCE PAMPHLET NUMBER: 865
 PROCUREMENT STATUS: Not under procurement for initial installation.

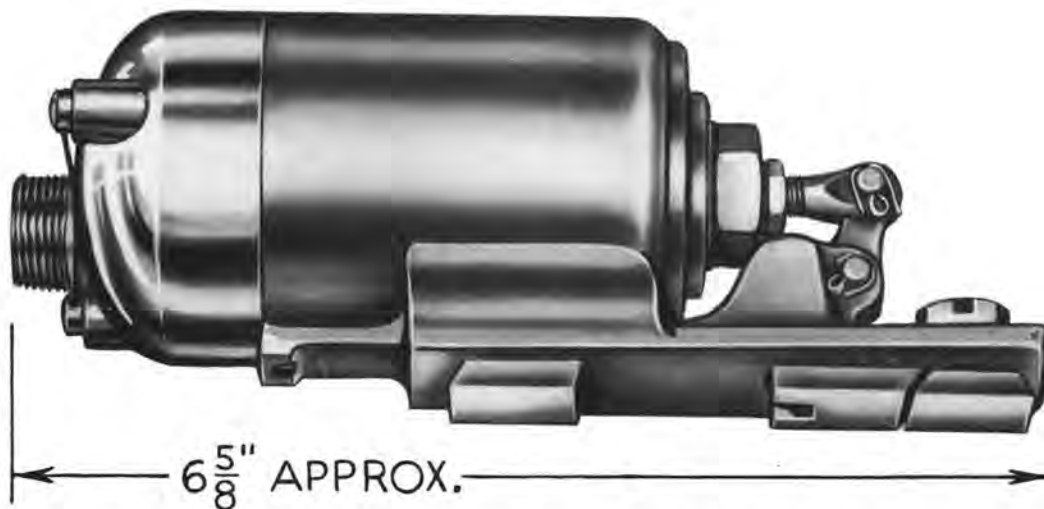
ALL MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number	Remarks
Electric Auto Lite Company	*C-4B	**37B2301-1	A-N-B	5200751900	11-1-30	105D/77	Has two pin push-on type electrical connector.
	*C-4B	**37B2301	A-N-B	5200751600	11-1-30	105D/45	Has two pin push-on type electrical connector.
	*C-4C	**41B5099R	A-N-B	5200751960	11-1-30	105D/58	Has two pin screw-on type electrical connector. Airplane connector must be changed.
	*C-4C	**41B5099L	A-N-B	5200751950	11-1-30	105D/57	Has two pin screw-on type electrical connector. Airplane connector must be changed.
Pollak Manufacturing Company	*C-4B	**37B2301-1	A-N-B	5200751900	11-1-30	105D/77	Has two pin push-on type electrical connector.
	*C-4B	**37B2301	A-N-B	5200751600	11-1-30	105D/45	Has two pin push-on type electrical connector.
Delco-Remy Division of General Motors Corporation	*C-4B	**37B2301-1	A-N-B	5200751900	11-1-30	105D/77	Has two pin push-on type electrical connector.
	*C-4B	**37B2301	A-N-B	5200751600	11-1-30	105D/45	Has two pin push-on type electrical connector.
	*C-4C	**41B5099R	A-N-B	5200751960	11-1-30	105D/58	Has two pin screw-on type electrical connector. Airplane connector must be changed.
Star Machine Manufacturers, Incorporated	*C-4C	**41B5099L	A-N-B	5200751950	11-1-30	105D/57	Has two pin screw-on type electrical connector. Airplane connector must be changed.
	*C-4B	**37B2301	A-N-B	5200751600	11-1-30	105D/45	Has two pin push-on type electrical connector.
	*C-4B	**37B2301-1	A-N-B	5200751900	11-1-30	105D/77	Has two pin push-on type electrical connector.

NOTE: Type C-4B and C-4C solenoids may be converted from right to left hand or vice versa by reversing the terminal positions.
 Note: *AAF type; **AAF drawing.



GUN SOLENOIDS ARMAMENT—GUNNERY



SOLENOID—LEFT HAND GUN

ARMY TYPE C-4C NAVY MARK 3 MODIFICATION 2

NAMES: Left hand gun solenoid
Gun firing solenoid
Firing solenoid
Solenoid

Electric trigger control (Navy)

DESCRIPTION: This solenoid, used for electrical trigger control of free-firing remotely placed .30 and .50 caliber M2 machine guns, is mounted on the left hand side of the gun. A movable plunger is connected to the sear of the gun by a lever arm. When the solenoid is energized by pressing the firing switch, magnetic forces in the core of the solenoid coil attract the plunger, release the sear and fire the gun. Release of the firing switch opens the circuit and a spring returns the plunger to its original position, causing the gun to cease firing.

This solenoid is provided with a two-pin screw-on type electrical connector.

CHARACTERISTICS:

Dimensions.....	approximately 6 ⁵ / ₈ by 2 ¹ / ₄ by 2 ¹ / ₄ inches.
Weight.....	approximately 2 ⁷ / ₈ pounds.
Operating voltage.....	12 volts direct current.
Current drain.....	18 amperes.
Plunger stroke.....	0.344 inches.

RELATIONSHIP OF PARTS: Used with:

.30 and .50 caliber M2 free firing machine guns, A. E. Reference Numbers 93-1420 and 93-1560.

ARMY

A. E. REFERENCE NUMBER: 52-5400

SPECIFICATIONS:

Detail.....	93-24682A
Superseded.....	93-24682

A A. F. DRAWING NUMBER: 41B5099L

TYPE DESIGNATION: C-4C

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Not under procurement for initial installation.

SHIPPING DATA: Shipped as a complete unit.

(Continued on page 111)



SOLENOID—LEFT HAND GUN

(Continued from page 110)

NAVY

TYPE DESIGNATION: Mark 3 Mod. 2
 BU. ORD. DRAWING NUMBER: 189812
 AVIATION ORDNANCE STOCK LIST NUMBER: 1-C-5461
 ORDNANCE PAMPHLET NUMBER: 865
 PROCUREMENT STATUS: Not under procurement for initial installation.

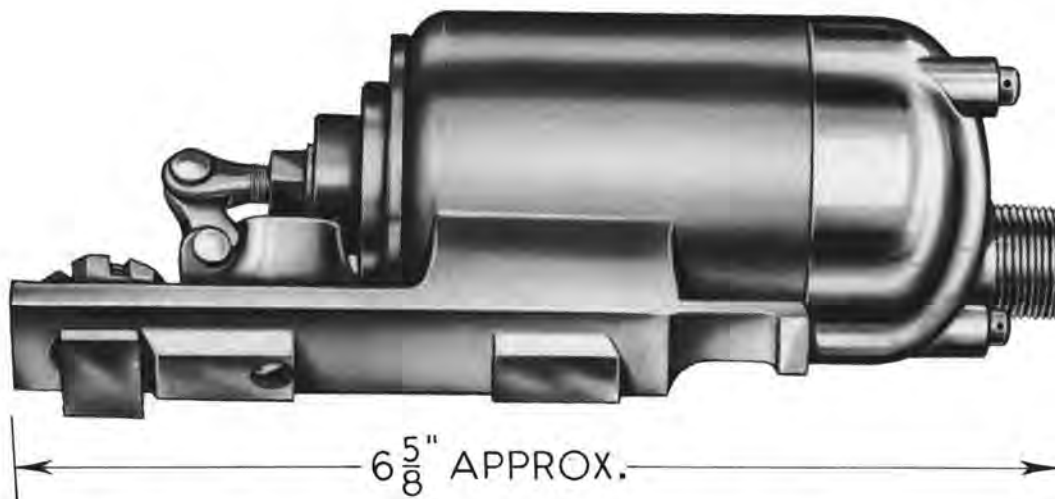
ALL MODELS BELOW ARE INTERCHANGEABLE

Models are used in services as noted in column 4

A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number	Remarks
Electric Auto Lite Company	*C-4C	**41B5099L	A-N-B	5200751950	11-1-30	105D/57	Has two pin screw-on type electrical connector.
	*C-4C	**41B5099R	A-N-B	5200751960	11-1-30	105D/58	Has two pin screw-on type electrical connector.
	*C-4B	**37B2301	A-N-B	5200751600	11-1-30	105D/45	Has two pin push-on type electrical connector. Airplane connector must be changed.
	*C-4B	**37B2301-1	A-N-B	5200751900	11-1-30	105D/77	Has two pin push-on type electrical connector. Airplane connector must be changed.
Delco-Remy Division of General Motors Corporation	*C-4C	**41B5099L	A-N-B	5200751950	11-1-30	105D/57	Has two pin screw-on type electrical connector.
	*C-4C	**41B5099R	A-N-B	5200751960	11-1-30	105D/58	Has two pin screw-on type electrical connector.
	*C-4B	**37B2301	A-N-B	5200751600	11-1-30	105D/45	Has two pin push-on type electrical connector. Airplane connector must be changed.
	*C-4B	**37B2301-1	A-N-B	5200751900	11-1-30	105D/77	Has two pin push-on type electrical connector. Airplane connector must be changed.
Pollak Manufacturing Company	*C-4B	**37B2301	A-N-B	5200751600	11-1-30	105D/45	Has two pin push-on type electrical connector. Airplane connector must be changed.
	*C-4B	**37B2301-1	A-N-B	5200751900	11-1-30	105D/77	Has two pin push-on type electrical connector. Airplane connector must be changed.
Star Machine Manufacturers, Incorporated	*C-4B	**37B2301	A-N-B	5200751600	11-1-30	105D/45	Has two pin push-on type electrical connector. Airplane connector must be changed.
	*C-4B	**37B2301-1	A-N-B	5200751900	11-1-30	105D/77	Has two pin push-on type electrical connector. Airplane connector must be changed.

NOTE: Type C-4C and C-4B solenoids may be converted from right to left hand or vice versa by reversing the terminal positions.
 Note: *AAF type. **AAF drawing.



SOLENOID—RIGHT HAND GUN
ARMY TYPE C-4C NAVY MARK 3 MODIFICATION 2

NAMES: Right hand gun solenoid
Gun firing solenoid
Firing solenoid
Solenoid
Electric trigger control (Navy)

DESCRIPTION: This solenoid, used for electrical trigger control of free-firing remotely-placed .30 and .50 caliber M2 machine guns, is mounted on the right hand side of the gun. A movable plunger is connected to the sear of the gun, by a lever arm. When the solenoid is energized by pressing the firing switch, magnetic forces in the core of the solenoid coil attract the plunger, release the sear, and fire the gun. Release of the firing switch opens the circuit and a spring returns the plunger to its original position, causing the gun to cease firing.

This solenoid is provided with a two pin screw-on type connector.

CHARACTERISTICS:

Dimensions..... approximately 6⁵/₈ by 2¹/₄ by 2¹/₄ inches.
Weight..... approximately 2⁷/₈ pounds.
Operating voltage..... 12 volts direct current.
Current drain..... 18 amperes.
Plunger stroke..... 0.344 inches.

RELATIONSHIP OF PARTS: Used with:

.30 and .50 caliber M2 free firing machine guns, A. E. Reference Numbers 93-1420 and 93-1560.

ARMY

A. E. REFERENCE NUMBER: 52-5450

SPECIFICATIONS:

Detail..... 93-24682A
Superseded..... 93-24682

A. A. F. DRAWING NUMBER 41B5099R

TYPE DESIGNATION: C-4C

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Not under procurement for initial installation.

SHIPPING DATA: Shipped as a complete unit.

(Continued on page 113)



SOLENOID—RIGHT HAND GUN

(Continued from page 112)

NAVY

TYPE DESIGNATION: Mark 3 Mod. 2
 BU. ORD. DRAWING NUMBER: 189812
 AVIATION ORDNANCE STOCK LIST NUMBER: 1-C-5461
 ORDNANCE PAMPHLET NUMBER: 865
 PROCUREMENT STATUS: Not under procurement for initial installation.

ALL MODELS BELOW ARE INTERCHANGEABLE

Models are used in services as noted in column 4

A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number	Remarks
Electric Auto-Life Company	*C-4C	**41B5099R	A-N-B	5200751960	11-1-30	105D/58	Two pin screw-on type electrical connector.
	*C-4C	**41B5099L	A-N-B	5200751950	11-1-30	105D/57	Two pin screw-on type electrical connector.
	*C-4B	**37B2301	A-N-B	5200751600	11-1-30	105D/45	Two pin push-on type electrical connector. Airplane connector must be changed.
	*C-4B	**37B2301-1	A-N-B	5200751900	11-1-30	105D/77	Two pin push-on type electrical connector. Airplane connector must be changed.
Delco-Remy Division of General Motors Corporation	*C-4C	**41B5099R	A-N-B	5200751960	11-1-30	105D/58	Two pin screw-on type electrical connector.
	*C-4C	**41B5099L	A-N-B	5200751950	11-1-30	105D/57	Two pin screw-on type electrical connector.
	*C-4B	**37B2301	A-N-B	5200751600	11-1-30	105D/45	Two pin push-on type electrical connector. Airplane connector must be changed.
Pollak Manufacturing Company	*C-4B	**37B2301-1	A-N-B	5200751900	11-1-30	105D/77	Two pin push-on type electrical connector. Airplane connector must be changed.
	*C-4B	**37B2301	A-N-B	5200751600	11-1-30	105D/45	Two pin push-on type electrical connector. Airplane connector must be changed.
	*C-4B	**37B2301-1	A-N-B	5200751900	11-1-30	105D/77	Two pin push-on type electrical connector. Airplane connector must be changed.
Star Machine Manufacturers, Incorporated	*C-4B	**37B2301	A-N-B	5200761600	11-1-30	105D/45	Two pin push-on type electrical connector. Airplane connector must be changed.
	*C-4B	**37B2301-1	A-N-B	5200751900	11-1-30	105D/77	Two pin push-on type electrical connector. Airplane connector must be changed.

NOTE: Type C-4C and C-4B solenoids may be converted from right to left hand or vice versa by reversing the terminal positions.
 Note: *AAF type. **AAF drawing.

GUN SOLENOIDS ARMAMENT—GUNNERY



SOLENOID—GUN

ARMY TYPE G-4A NAVY MARK 4 MODIFICATION 1

NAMES: Gun solenoid Solenoid Firing solenoid
 Gun firing solenoid Electric trigger control (Navy)

DESCRIPTION: The G-4A solenoid, used for electrical trigger control of free-firing remotely-placed .50 caliber, M2 machine guns, is mounted on the side of the gun. A movable plunger is connected to the sear of the gun by a lever arm. When the solenoid is energized by pressing the firing switch in the cockpit, magnetic forces in the core of the solenoid coil attract the plunger, release the sear and fire the gun. Release of the firing switch opens the circuit and a spring returns the plunger to its original position, causing the gun to cease firing.

The connector is the single pin screw-on type.

CHARACTERISTICS:

Dimensions	approximately 6 by 2 ³ / ₄ by 2 ¹ / ₄ inches.
Weight	approximately 2 ³ / ₄ pounds.
Operating voltage	24 volts direct current.
Current drain	8 amperes.
Plunger stroke	3/16 inch.
Electrical connector	Army part number 41A9227 (identical to AN3102-10S-2P)

RELATIONSHIP OF PARTS: Used with:
.50 caliber M2 machine guns, A. E. Reference Number 93-1560.

ARMY

A. E. REFERENCE NUMBER: 52-6000

SPECIFICATIONS:

Detail	94-24620
Superseded	24620

A. A. F. DRAWING NUMBER: 41B3718

TYPE DESIGNATION: G-4A

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

NAVY

TYPE DESIGNATION: Mark 4 Mod. 1

BU. ORD. DRAWING NUMBER: 300186

AVIATION ORDNANCE STOCK LIST NUMBER: 1-C-5461-15

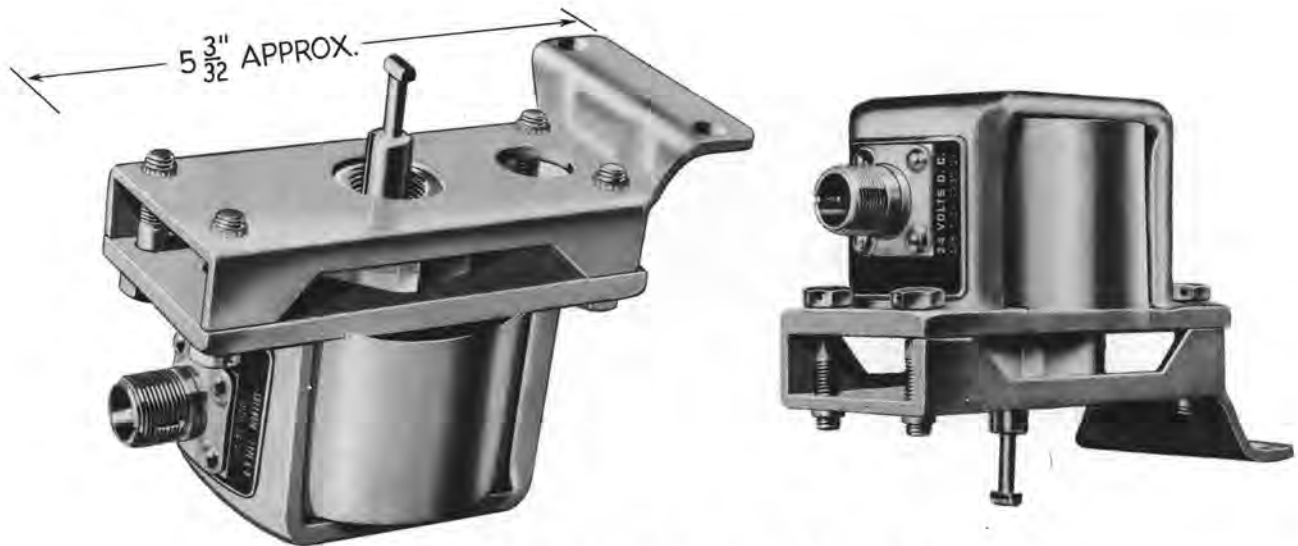
PUBLICATIONS: OP. 865, OS. 2359

PROCUREMENT STATUS: Under procurement.

ALL MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number
Webster Electric Company	*G-4A	**41B3718	A-N-B	5200752825	11-1-30	105D/17
	*G-9	**H41D10358	A-N-B	5200752755	11-1-30 11-20-12	105D/29
Delco-Remy Division of General Motors Corporation	*G-4A	**41B3718	A-N-B	5200752825	11-1-30	105D/17
Electric Auto Lite Company	*G-9	**H41D10358	A-N-B	5200752855	11-20-16	105D/29
					11-1-30	
					11-20-12	
Magnavox Company, Incorporated	*G-9	14D1G1	A-N-B	5200752855	11-20-16	105D/29
					11-1-30	
					11-20-12	

Note: *AAF type; **AAF drawing.



SOLENOID—GUN
ARMY TYPE G-8

NAMES: Gun solenoid Gun firing solenoid Firing solenoid Solenoid

DESCRIPTION: The Army type G-8 solenoid is used for electrically controlling the fire of a 20 mm cannon. The axis of the solenoid coil is perpendicular to the mounting flange and a movable plunger is connected to the sear of the gun's trigger mechanism by means of a shaft which protrudes through the solenoid mounting bracket. When the solenoid is energized by pressing the firing switch, magnetic forces in the core of the solenoid coil attract the plunger, release the sear, and fire the gun. Release of the firing switch opens the circuit and a spring returns the plunger to its original position, causing the gun to cease firing.

The electrical connector is the single pin screw-on type.

CHARACTERISTICS:

Dimensions.....	approximately 5 1/8 by 2 5/8 by 3 1/2 inches.
Weight.....	approximately 4 1/8 pounds.
Operating voltage.....	24 volts direct current.
Current drain.....	10 amperes.
Plunger stroke.....	5/16 inch.
Electrical connector.....	AN3102-10S-2P.

RELATIONSHIP OF PARTS: Used with:
M1 or AN-M2 20-mm automatic guns.

ARMY

A. E. REFERENCE NUMBER: 52-6100

SPECIFICATIONS:

Detail.....	93-24702
Superseded.....	24702

A. A. F. DRAWING NUMBER: H41G9104

TYPE DESIGNATION: G-8

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Not under procurement for initial installation. Superseded by Army type G-17 solenoid, A. E. Reference Number 52-6380 (now known as Ordnance type AN-M1).

SHIPPING DATA: Shipped as a complete unit.

NAVY

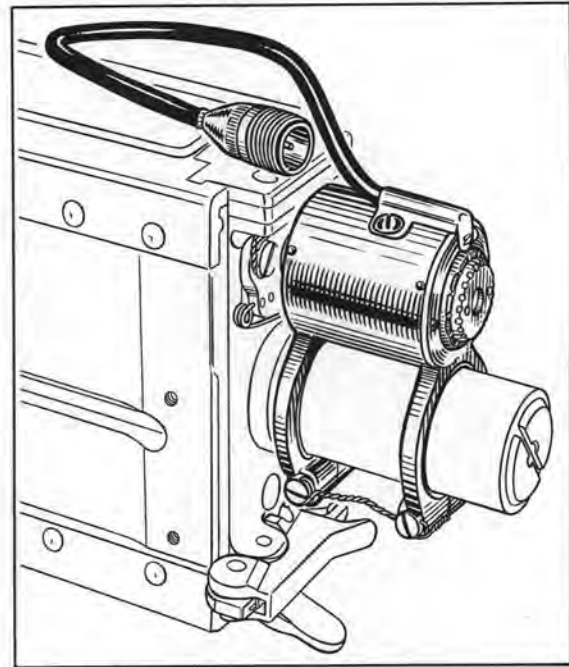
There is no Navy equivalent for the Army item.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	Reference Number	Remarks
Magnavox Company, Inc.	*G-8	14D2G1	A-B	5200752845	11-1-30 11-1-37	105D/36	
	*G-17 (AN-M1)	14D22G3	A-N-B			105D/93	§
	†Mark 6, Mod. 1 (AN-M1)	99028	N-B			105D/93	§
Ordnance Office, War Department	AN-M1	C70766	A-N-B			105D/93	§

§Complete with sear cover plate, Ordnance drawing number C70814.
Note: *AAF type. †Navy type.

GUN SOLENOIDS ARMAMENT—GUNNERY



SOLENOID—GUN

ARMY TYPE G-11 NAVY MARK 7 MODIFICATION 1

NAMES: Gun solenoid
Gun firing solenoid

Firing solenoid Solenoid
Electric trigger control (Navy)

DESCRIPTION: The G-11 solenoid, used for the electrical trigger control of free firing .50 caliber, model M2 machine guns, is mounted on a bracket attached to the buffer tube of the gun. A movable plunger is connected to the trigger arm. When the solenoid is energized by pressing the firing switch, magnetic forces in the core of the solenoid coil attract the plunger, release the sear and fire the gun. Release of the firing switch opens the circuit and a spring returns the plunger to its original position, causing the gun to cease firing. The coil is connected to the battery system by a long conduit extension with a female connector on the free end. This connector is the single-prong screw-on type.

CHARACTERISTICS:

Dimensions	approximately 3 1/4 by 3 3/4 by 1 7/8 inches.
Weight	approximately 1 1/3 pounds.
Operating voltage	24 volts, direct current.
Current drain	5 4/5 amperes.
Plunger stroke	0.062 inches.

RELATIONSHIP OF PARTS: Used with:

Army type A-1 manual trigger, A. E. Reference Number 52-7075, on a .50 caliber M2 machine gun, A. E. Reference Number 93-1560.

ARMY

A. E. REFERENCE NUMBER: 52-6350

SPECIFICATIONS:

Detail	93-24746
Superseded	24746

TYPE DESIGNATION: G-11

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

NAVY

TYPE DESIGNATION: Mark 7 Mod. 1
BU. ORD. SKETCH NUMBER: 99030
AVIATION ORDNANCE STOCK LIST
NUMBER: 1-C-5463

ORDNANCE PAMPHLET NUMBER: 865
PROCUREMENT STATUS: Under procure-
ment.

ALL MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number
Webster Electric Company	*G-11	**93-24746 Detail Specification	A-B	5200752867	11-1-30	105D/59
Magnavox Company, Incorporated	*G-11 †Mark 7, Mod. 1	**14D5G3 ††99030	A-B N	5200752867	11-1-30	105D/59

Note: *AAF type; **AAF drawing; †Navy type; ††Navy drawing.



GUN SOLENOIDS ARMAMENT—GUNNERY



SOLENOID—GUN ARMY TYPE G-13

NAMES: Gun solenoid
Gun firing solenoid
Firing solenoid
Solenoid

DESCRIPTION: The Army type G-13 solenoid, used for electrical trigger control of a remotely placed 37 mm automatic cannon, is mounted on a bracket at the rear of the gun. A movable plunger in the solenoid is linked to the firing mechanism. When the solenoid is energized by pressing a firing switch, magnetic forces in the core of the solenoid coil attract the plunger, release the sear, and fire the gun. Release of the firing switch opens the circuit and a spring returns the plunger to its original position, causing the gun to cease firing.

The electrical connector is the single pin screw-on type.

CHARACTERISTICS:

Dimensions approximately 5⁵/₁₆ by 2¹/₄ by 2¹/₄ inches.
Weight approximately 2¹/₂ pounds.
Operating voltage 24 volts direct current.
Current drain 10 amperes.
Plunger stroke 0.250 inches.
Electrical connector Army part number 41A9227 (identical to AN3102-10S-2P).

RELATIONSHIP OF PARTS: Used with:
37 mm M4 automatic gun, A. E. Reference Number 93-1280.

ARMY

A. E. REFERENCE NUMBER: 52-6360

SPECIFICATIONS:

Detail 24754

A. A. F. DRAWING NUMBER: 42B7343

TYPE DESIGNATION: G-13

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Not under procurement for initial installation. Superseded by Army type G-15, A. E. Reference Number 52-6370.

SHIPPING DATA: Shipped as a complete unit.

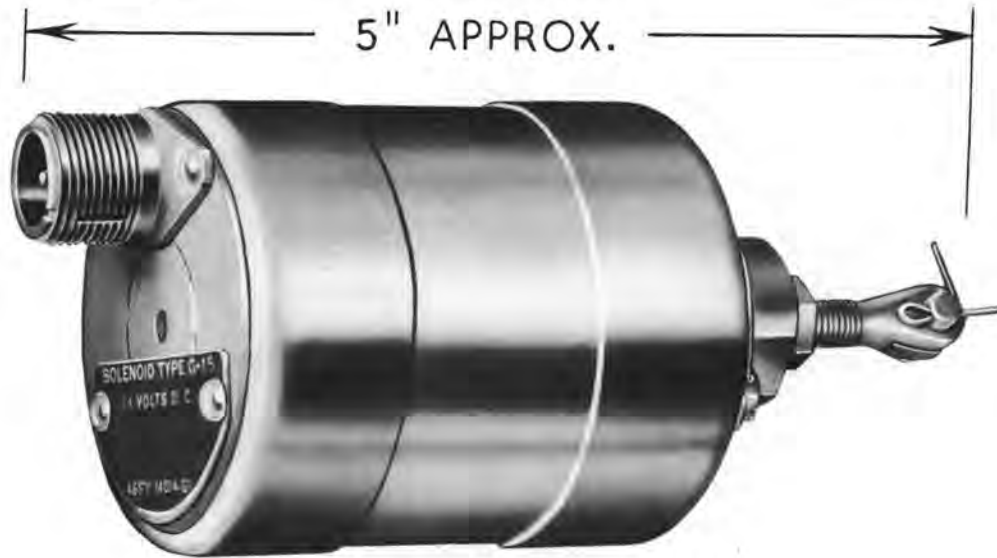
NAVY

There is no Navy equivalent for the Army item.

MODELS BELOW ARE INTERCHANGEABLE Models are used in services as noted in column 4 A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number
Webster Electric Company	*G-13	**42B7343	A-B	5200752870	11-1-30	105D/196
Magnavox Company, Incorporated	*G-15	14D14G1	A-B	5200752890	11-1-30	105D/91

Note: *AAF type; **AAF drawing.



SOLENOID—GUN
ARMY TYPE G-15

NAMES: Gun solenoid
Gun firing solenoid
Firing solenoid
Solenoid

DESCRIPTION: The Army type G-15 solenoid is used for electrical trigger control of a remote 37 mm automatic gun. The solenoid is mounted on a bracket at the rear of the cannon. When the solenoid is energized by depressing a firing switch, magnetic forces in the core of the coil attract a movable plunger, release the sear, and fire the gun. Release of the firing switch opens the solenoid circuit and a spring returns the plunger to its original position, causing the gun to cease firing.

The electrical connector is a single pin screw-on type.

CHARACTERISTICS:

Dimensions.....	approximately 5 by 2¼ by 2¼ inches.
Weight.....	approximately 2½ pounds.
Operating voltage.....	24 volts, direct current.
Current drain.....	10 amperes.
Plunger stroke.....	5/16 inch.
Electrical connector.....	AN3102-10S-2P.

RELATIONSHIP OF PARTS: Used with:
37 mm M4 automatic gun, A. E. Reference Number 93-1280.

ARMY

A. E. REFERENCE NUMBER: 52-6370

SPECIFICATIONS:

Detail.....	93-24764
Superseded.....	24764

A. A. F. DRAWING NUMBER: Detail specification 93-24764

TYPE DESIGNATION: G-15

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number
Magnavox Company, Incorporated	*G-15	.14D14G1	A-B	5200752890	11-1-30	105D/91
Webster Electric Company	*G-13	**42B7343	A-B	5200752870	11-1-30	105D/196

Note: *AAF type; **AAF drawing.

GUN SOLENOIDS ARMAMENT—GUNNERY



TRIGGER—ELECTRIC AN-M1

FORMER ARMY TYPE G-17 FORMER NAVY MARK 6, MOD. 1

NAMES: Electric trigger Gun solenoid Electric trigger control (Navy)
Solenoid—cannon Gun firing solenoid

DESCRIPTION: The Ordnance AN-M1 electric trigger, used for electrically controlling the fire of a 20-mm cannon, is mounted on a bracket on the bottom of the gun. The solenoid body is mounted perpendicular to a sear cover plate by means of a snap latch. A movable plunger protruding through the cover plate operates the sear of the gun trigger mechanism. When the solenoid is energized by pressing a firing switch, magnetic forces, in the core of the solenoid coil, attract the plunger, release the sear, and fire the gun. Release of the firing switch opens the circuit and a spring returns the plunger to its original position, causing the gun to cease firing.

The sear cover plate assembly and the solenoid body comprise the complete AN-M1 electric trigger, which was formerly known as the Army type G-17 gun firing solenoid, and the Navy Mark 6, Mod. 1 electric trigger control. The electrical connector is the single pin screw-on type.

CHARACTERISTICS:

Dimensions..... approximately 8³/₈ by 2³/₄ by 2⁷/₈ inches.
Weight..... approximately 5¹/₄ pounds.
Operating voltage..... 24 volts direct current.
Current drain..... 10 amperes.
Plunger stroke..... 5⁵/₁₆ inch.
Electrical connector..... AN3102-10S-2P.

RELATIONSHIP OF PARTS: Used with: M1 or AN-M2 20-mm automatic gun.

ARMY

A. E. REFERENCE NUMBER: 52-6380

SPECIFICATIONS:

Detail..... 24808 (type G-17)

A. A. F. DRAWING NUMBER: H43G10990

TYPE DESIGNATION: AN-M1

FORMER ARMY TYPE: G-17

PRODUCTION STATUS: Under procurement by Ordnance Office, War Department.

SHIPPING DATA: Normally shipped as an integral part of 20-mm gun (see A. E. Reference Number 93-1351 to 93-1355). Formerly shipped as a separate unit.

NAVY

TYPE DESIGNATION: AN-M1 (Formerly Mark 6 Mod. 1)

BU. ORD. DRAWING NUMBER: SK 99028

AVIATION ORDNANCE STOCK LIST NUMBER: Refer to chart.

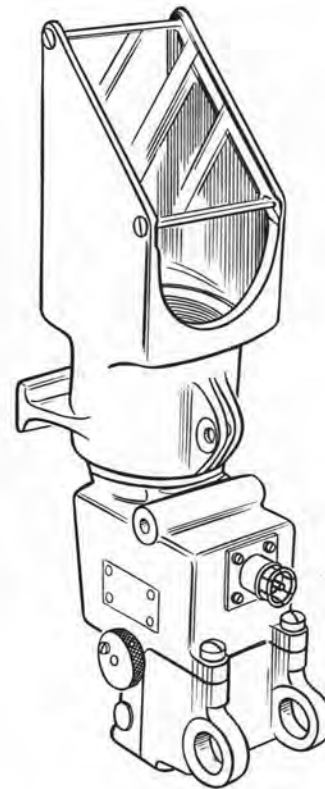
ORDNANCE PAMPHLET NUMBER: 865

PROCUREMENT STATUS: Under procurement.

ALL MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number	Aviation Ordnance Stock List Number	Remarks
Ordnance Office War Department	†AN-M1	C70766	A-N-B			105D/13	1-T-2890	
Magnavox Company, Incorporated	*G-17	14D22G3	A-N-B			105D/13	1-C-5460-75	
	*G-8	14D2G1	A-B	5200752845	11-1-30 11-1-37	105D/36		§
	‡Mark 6, Mod. 1 (AN-M1)	14D22G3	N				1-C-5460-5	

Note: §Only when height of this solenoid does not interfere with airplane structure; †Army-Navy standard type; *AAF type; ‡Navy type.



SUPPORT—GUN SIGHT IMAGE REFLECTOR ARMY DRAWING NUMBER 41D4892

NAMES: Gun sight image reflector support
Gun sight reflector support
Reflector support

DESCRIPTION: The gun sight image reflector support, used with the N-3A fixed gun sight, fits directly around the main housing of the sight and is locked to it by two ears which are clamped together by a bolt and nut. This support provides a rigid mount for the gun sight image reflector, and allows replacement of the glass without disassembly of the entire sight. Cork gaskets prevent cracking of the reflector due to extremes of temperature and vibration.

CHARACTERISTICS:

Dimensions.....approximately 7³/₁₆ by 3¹/₂ by 3⁵/₈ inches.
Weight.....approximately 1 pound.

RELATIONSHIP OF PARTS: Used with:

Army type N-3A fixed gun sight, A. E. Reference Number 52-4400, or Army type N-3B, fixed gun sight, A. E. Reference Number 52-4425.

ARMY

A. E. REFERENCE NUMBER: 52-6400

SPECIFICATIONS:

Detail.....93-24659B
Superseded.....93-24659A

A. A. F. DRAWING NUMBER: 41D4892

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit, less reflector glass.

NAVY

There is no Navy equivalent for the Army item.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number
Ohio Pattern Works	*N-3A	**41D4892	A-B	5200858170	11-35-5	108B/63
	*N-5	**41D3024	A-B	5200858150		108B/79

Note: *For Sight AAF type; **AAF drawing.



SUPPORT—GUN SIGHT IMAGE REFLECTOR

ARMY DRAWING NUMBER 41D3024

NAMES: Gun sight image reflector support

DESCRIPTION: This gun sight image reflector support used with the N-3A fixed gun sight, fits directly around the main housing of the sight and is locked to it by two ears which are clamped together by a bolt and nut.

This support provides a rigid mount for the gun sight image reflector and allows replacement of the glass without disassembly of the entire sight. Cork gaskets prevent cracking of the reflector due to extreme temperature or vibration.

This support is the same as Army Drawing Number 41D4892 support used with the N-3A gunsight, except that it is 1 3/4 inches shorter.

CHARACTERISTICS:

Dimensions..... approximately 5 1/2 by 3 5/8 by 3 3/8 inches.
Weight..... approximately 7/8 pound.

RELATIONSHIP OF PARTS: Used with:

Army type N-3A fixed gun sight, A. E. Reference Number 52-4400, or Army type N-3B fixed gun sight, A. E. Reference Number 52-4425.

ARMY

A. E. REFERENCE NUMBER: 52-6450

SPECIFICATIONS:

Detail..... 93-24687
Superseded..... 24687

A. A. F. DRAWING NUMBER: 41D3024

A. S. C. STOCK NUMBER: Refer to chart.

TECHNICAL ORDER NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	Army Technical Order Number	British Reference Number	Remarks
Ohio Pattern Works	*N-5	**41D3024	A-B	5200858150		108B/79	
	*N-3A	**41D4892	A-B	5200858170	11-35-5	108B/63	1 3/4 inches higher than type N-5 support

Note: *For sight AAF type; **AAF drawing.



RHEOSTAT—VARIABLE RESISTANCE
ARMY TYPE D-1 NAVY—SEE BELOW

NAMES: Variable resistance rheostat
 Control rheostat
 Rheostat
 Aircraft power rheostat

DESCRIPTION: This rheostat is a coil of resistance wire, so arranged that, when a knob handle is turned, an internal slider moves over the coil and varies the resistance, depending upon the portion still remaining in the circuit. This rheostat offers maximum resistance in the first ON position and gradually decreases the resistance with further movement of the knob.

CHARACTERISTICS:
 Dimensions.....approximately 2³/₈ by 2³/₁₆ by 1⁵/₈ inches.
 Weight.....approximately 5 ounces.
 Rating.....25 watts.
 Resistance (maximum).....50 ohms.

RELATIONSHIP OF PARTS: Used with:
 Army type N-6 and N-6A flexible gun sights, A. E. Reference Numbers 52-4500 and 52-4525.

ARMY

A. E. REFERENCE NUMBER: 52-4150

SPECIFICATIONS:

General.....94-32008A
 Detail.....94-32010B
 Superseded.....94-32010A

TYPE DESIGNATION: D-1

A. S. C. STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement. Future procurement will be in accord with specification AN-R-14. This covers superseding rheostat AN3155.

SHIPPING DATA: Shipped as a complete unit.

NAVY

N. A. F. DRAWING NUMBER: Refer to chart.

F. S. S. C. NUMBER: R-17-R-7110

PROCUREMENT STATUS: Under procurement.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number
Clarostat Manufacturing Company	*D-1	56-41A	A-B	4200613500	10C/40
Naval Aircraft Factory		††1099-25-50	N		

Note: *AAF type; ††Navy drawing.



SWITCHES ARMAMENT—GUNNERY



SWITCH—CONTROL STICK GUN ARMY TYPE B-1A

NAMES: Control stick gun switch
Gun control switch
Gun control stick switch
Control stick switch

DESCRIPTION: The Army type B-1A gun control switch, mounted on the control stick of an airplane, is used to electrically control the gun-firing solenoids of one or more synchronized or free firing machine guns. The switch consists of a rubber coated pistol grip handle and a trigger operated internal spring switch. When the switch is closed by pressing the trigger, the guns commence firing. When the trigger is released, the spring switch opens the electrical circuit and the guns stop firing.

CHARACTERISTICS:

Dimensions..... approximately 4½ by 2¼ by 3¾ inches.
Weight..... approximately 1 pound.

RELATIONSHIP OF PARTS:

Installed on the pilot's control stick, which is contractor furnished equipment.

ARMY

A. E. REFERENCE NUMBER: 52-6475

SPECIFICATIONS:

Detail..... 93-24591
Superseded..... 24591

A. A. F. DRAWING NUMBER: 0169221 (Supersedes Army Drawing Number 0153322)

TYPE DESIGNATION: B-1A

A. S. C. STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Not under procurement for initial installation. Superseded by Army type B-5 control stick gun switch, A. E. Reference Number 52-6600.

SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.

ALL MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number	Manufacturer's Specification	Remarks
Guardian Electric Manufacturing Company	*B-1A	**0169221	A-B	5200875500	105D/72		
	*B-5	US-220	A-N-B	5200875350	105D/75	G-29990	§
Aerial Machine and Tool Company	*B-1A	**0169221	A-B	5200875500	105D/72		
Air Associates, Incorporated	*B-1A	**0169221	A-B	5200875500	105D/72		
Cutler-Hammer Incorporated		‡‡NAF1173-2	N			8985	§

Note: §Has additional button for bomb release switch; *AAF type; **AAF drawing; ‡‡Navy drawing.



4 3/4"
APPROX.

SWITCH—CONTROL STICK GUN
ARMY TYPE B-5 NAVY—SEE BELOW

NAMES: Control stick gun switch Switch, trigger gun firing and
Gun control switch bomb release (Navy)
Control stick switch

DESCRIPTION: This gun control switch, mounted on the control stick of an airplane, is used to electrically control the gun firing solenoids of one or more synchronized or free-firing machine guns, and to release bombs. The control handle is of moulded plastic and has two spring switches inside it,—a trigger switch operated by the forefinger for firing guns, and a push button switch, operated by the thumb, for release of bombs.

CHARACTERISTICS:
Dimensions.....approximately 4 3/4 by 2 1/4 by 3 3/4 inches.
Weight.....approximately 3/4 pound.

RELATIONSHIP OF PARTS:
Installed on pilot's control stick, which is contractor furnished equipment.

ARMY

A. E. REFERENCE NUMBER: 52-6600

SPECIFICATIONS:

Detail.....93-24708
Superseded.....24708

A. A. F. DRAWING NUMBER: 41B8946

TYPE DESIGNATION: B-5

A. S. C. STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

NAVY

N. A. F. DRAWING NUMBER: 1173-2

F. S. S. C. STOCK NUMBER: R-17-S-35510

PROCUREMENT STATUS: Under procurement.

MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4
A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number	Manufacturer's Specification	Remarks
Guardian Electric Manufacturing Company	*B-5	**41B8946	A-N-B	5200875350	105D/75	G-29990	
	*B-1A	**0169221	A-B	5200875500	105D/72		§
Cutler-Hammer, Incorporated		‡‡NAF1173-2	N			8895	
Aerial Machine and Tool Company	*B-1A	**0169221	A-B	5200875500	105D/72		§
Air Associates, Incorporated	*B-1A	**0169221	A-B	5200875500	105D/72		§

Note: §Has no bomb release control switch; *AAF type; **AAF drawing; ‡‡Navy drawing.



SWITCHES ARMAMENT—GUNNERY



SWITCH—SINGLE POLE TOGGLE AN PART NUMBER AN3022-2

NAMES: Single pole toggle switch
Toggle switch
Switch
Switch—three hole mounting single pole toggle

DESCRIPTION: The AN3022-2 single-pole, single-throw toggle switch is used in 12 and 24 volt airplane electrical systems. Positive snap action of a compression spring provides contact pressure when the switch is closed. When pushed to the open or off position, the same spring insures positive opening of the contacts.

This switch is supplied with a luminous tip lever upon special order; this is known as part number AN3022-2B.

CHARACTERISTICS:

Dimensions..... approximately 2 by 2 by 3/4 inches.
Weight..... approximately 2 ounces.

ARMY

A. E. REFERENCE NUMBER: 52-6650

SPECIFICATIONS:

General..... AN-S-20

AN DRAWING NUMBER: AN3022

AN PART NUMBER: AN3022-2

A. S. C STOCK NUMBER: Refer to chart.

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

NAVY

SPECIFICATIONS:

General..... AN-S-20

AN DRAWING NUMBER: AN3022

AN PART NUMBER: AN3022-2

A. S. O. STOCK NUMBER: Refer to chart.

PROCUREMENT STATUS: Under procurement.

MODELS BELOW ARE INTERCHANGEABLE Models are used in services as noted in column 4 A-Army, N-Navy, B-British

Manufacturer	Manufacturer's Model Identification	Manufacturer's Drawing Number	Used By	Air Service Command Stock Number	British Reference Number	A. S. O. Stock Number	Remarks
Cutler-Hammer, Incorporated		**AN3022-2	A-N-B	4200894750	105C/146	R17-S-28266-22	Non-luminous tip. Threaded mounting holes.
	*B-5A	**AN3015	A-N	42578201K4		R17-S-28260	Luminous tip.
Air Associates, Incorporated		**AN3022-2	A-N-B	4200894750	105C/146	R17-S-28266-22	Non-luminous tip. Threaded mounting holes.

Note: *AAF type; **Army-Navy standard drawing.



TRIGGER—MANUAL
ARMY TYPE A-1

NAMES: Manual trigger
Trigger assembly—gun firing

DESCRIPTION: This Army type A-1 trigger fits over the buffer tube of a .50 caliber M2 machine gun mounted in a turret, and is for emergency operation of the gun. In the event of power failure it operates the plunger of a type G-11 solenoid, enabling the gunner to fire the gun manually.

CHARACTERISTICS:

Dimensions..... approximately 2¼ by 3¼ by 1⅞ inches.
Weight..... approximately ¾ pound.

RELATIONSHIP OF PARTS: Used with:

Army type G-11 solenoid, A. E. Reference Number 52-6350, when used on a .50 caliber M2 machine gun, A. E. Reference Number 93-1560.

ARMY

A. E. REFERENCE NUMBER: 52-7075

SPECIFICATIONS:

Detail..... 24823

MANUFACTURER: Magnavox Company, Incorporated

MANUFACTURER'S DRAWING NUMBER: 14D8

A. A. F. DRAWING NUMBER: 43A15180

TYPE DESIGNATION: A-1

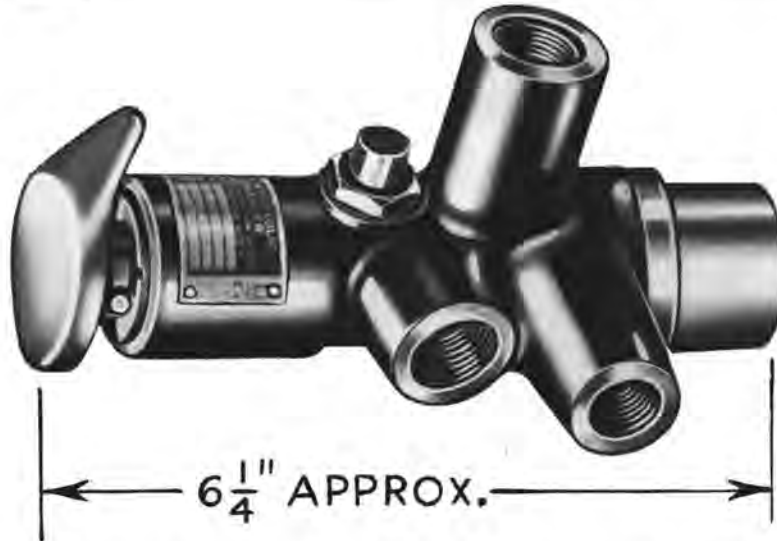
A. S. C. STOCK NUMBER: 5200934150

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.



VALVE—HYDRAULIC GUN CHARGING

ARMY TYPE A-1 NAVY—SEE BELOW

NAMES: Hydraulic gun charging valve
Gun charger valve
Charging valve
Valve

DESCRIPTION: The Army type A-1 hydraulic gun charging valve controls that pressure from the airplane hydraulic system which is used to charge machine guns located in a part of the airplane remote from the gunner. The valve can be used with .30 or .50 caliber M2 machine guns, or with the 20-mm M1 or AN-M2 guns. A safety device, incorporated in the valve, makes it impossible to fire the gun should the firing switch be accidentally closed after the gun is charged.

CHARACTERISTICS:

Dimensions..... approximately 6 1/4 by 4 1/4 by 3 inches.
Weight..... approximately 1 1/8 pounds.

RELATIONSHIP OF PARTS: Used with:

Bendix model F, 20-mm hydraulic gun charging cylinder, A. E. Reference Number 52-2300; Bendix model H, .30 caliber hydraulic gun charging cylinder, A. E. Reference Number 52-2400 or Bendix model C, .50 caliber hydraulic gun charging cylinder, A. E. Reference Number 52-2500.

ARMY

A. E. REFERENCE NUMBER: 52-8450

SPECIFICATIONS:

Detail..... 95-24739
Superseded..... 24739

MANUFACTURER: Bendix Products Division of Bendix Aviation Corporation.

MANUFACTURER'S DRAWING AND PART NUMBER: 76861

MANUFACTURER'S MODEL IDENTIFICATION: I

A. A. F. DRAWING NUMBER: H41B5344

TYPE DESIGNATION: A-1

A. S. C. STOCK NUMBER: 5200965700

TECHNICAL ORDER NUMBER: 11-1-14

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

NAVY

BU. ORD. DRAWING NUMBER: Assembly 332357, Installation 300202

AVIATION ORDNANCE STOCK LIST NUMBER: 1-V-430

ORDNANCE PAMPHLET NUMBER: 827

PROCUREMENT STATUS: Under procurement.

BRITISH

REFERENCE NUMBER: 108A/20



YOKE—GUN MOUNT ADAPTER

ARMY DRAWING NUMBER 41D6865

NAMES: Gun mount adapter yoke

Yoke

Adapter yoke

DESCRIPTION: This yoke provides an universal mounting for an Army type E-8 adapter carrying a .50 caliber, M2 machine gun. It consists of a steel "U" shaped frame welded to a hollow cylindrical stem having a peripheral groove. Two bushings are brazed on either leg of the "U" for receiving the bolt which connects the yoke to the adapter. Locking balls in a socket mounted in the airplane structure engage the groove and prevent the gun from being lifted out of the mount until properly released.

CHARACTERISTICS:

Dimensions.....approximately 10⁹/₃₂ by 3¹/₁₆ by 2¹/₂ inches.

Weight.....approximately 2³/₄ pounds.

RELATIONSHIP OF PARTS: Used with:

Army type E-8 gun mount adapter, A. E. Reference Number 52-1100.

ARMY

A. E. REFERENCE NUMBER: 52-9000

MANUFACTURER: Miller, Debrul, and Peters, Incorporated.

A. A. F. DRAWING NUMBER: 41D6865

A. S. C. STOCK NUMBER: 5200992900

PRODUCTION STATUS: Under procurement.

SHIPPING DATA: Shipped as a complete unit.

NAVY

There is no Navy equivalent for the Army item.