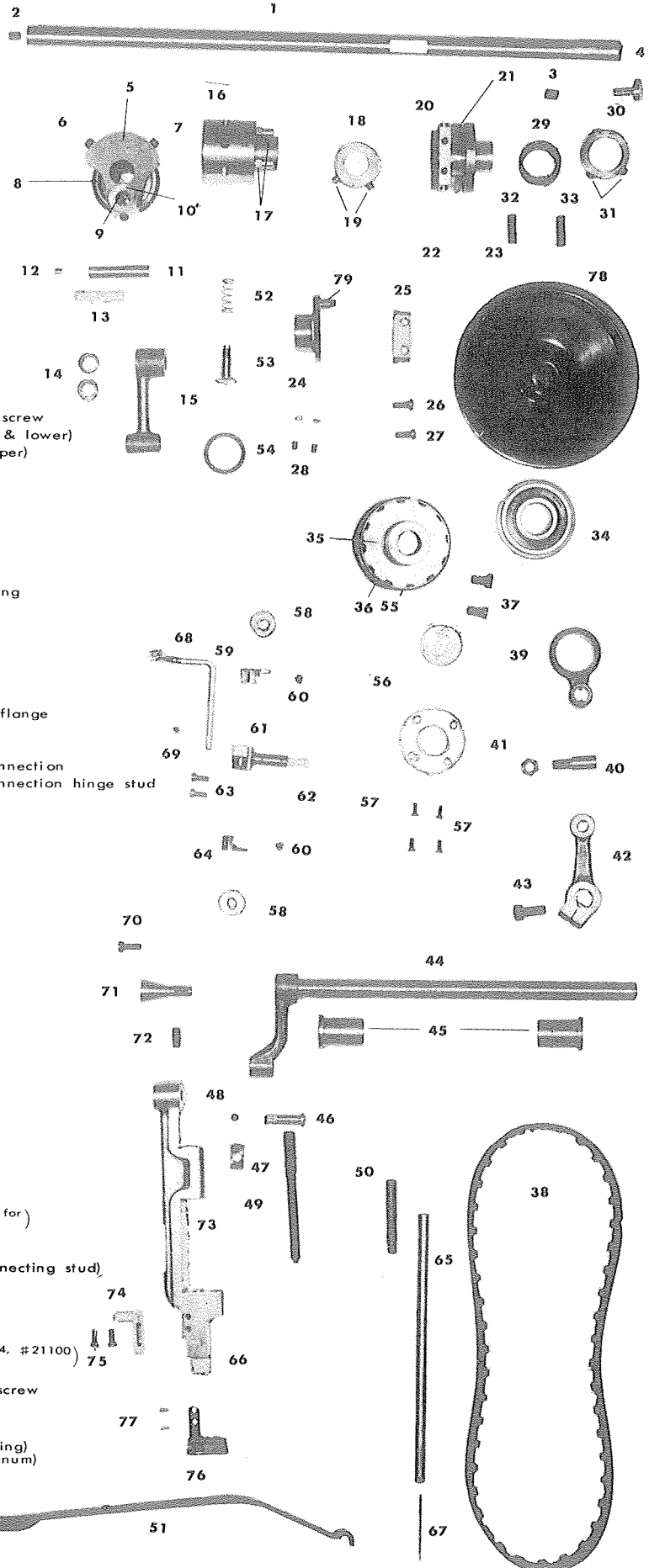


ARM SHAFT' UPPER FEED DRIVING, NEEDLE BAR group.

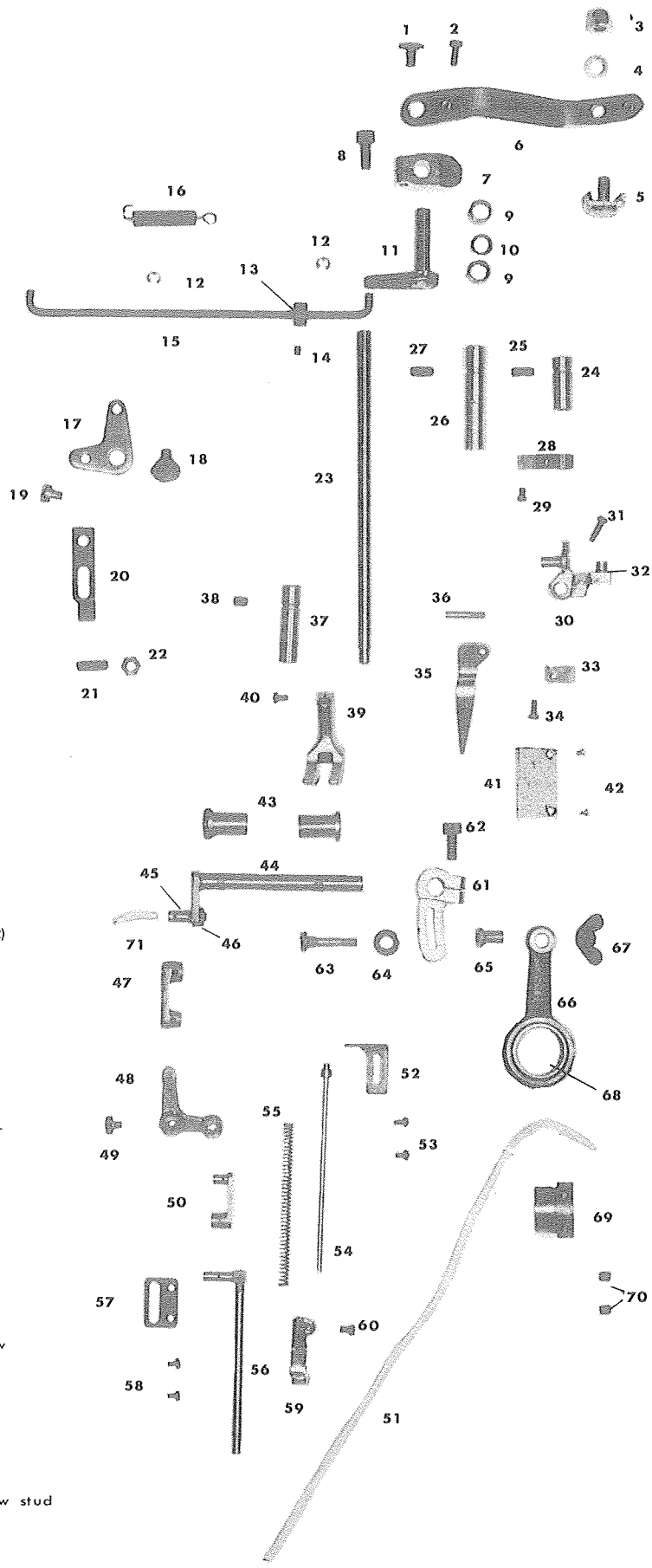
No.	Parts No.	Quantity	Name
1	20066	1	Arm shaft
2	20067	1	Arm shaft oil packing
3	6042	1	Arm shaft oil packing stop screw
4	6047	1	Balance wheel adjusting screw
5	20070	1	Needle bar crank
6	10522	1	Needle crank position set screw(B)
7	10521	1	Needle crank position screw(A)
8	20069	1	Arm shaft ball bearing (front)
9	10764	1	Set screw for #20106 (B)
10	10524	1	Set screw for #20106 (A)
11	20106	1	Needle bar connecting link stud
12	11068	1	Oil stop rubber packing
13	10726	2	Oiling felt for 20106
14	20105	2	Needle bar connecting link bearing
15	20104	1	Needle bar connecting link
16	20068	1	Arm shaft bushing (middle)
17	20074	2	Vinyl tube holder
18	20077	1	Upper feed driving eccentric stop collar
19	10581	2	Upper feed driving eccentric stop collar screw
20	20075	1	Flange for feed driving eccentric (upper & lower)
21	20076	1	Feed driving eccentric adjusting disc (upper)
22	11093	1	Set screw for #20075 (A)
23	11094	1	Set screw for #20075 (B)
24	11090	1	Feed driving eccentric (upper)
25	11095	1	Feed driving eccentric friction plate
26	11096	2	Set screw for #11095
27	11097	2	Set screw packing (brass)
28	2067	4	Set screw for #11095
29	11099	1	Feed driving eccentric adjusting disc spring
30	11100	1	Collar for #11099
31	10566	2	Set screw for #11100
32	10576	1	Balance wheel set pin (A)
33	10579	1	Balance wheel set pin (B)
34	11031	1	Arm shaft ball bearing (rear)
35	20078	1	Arm shaft connecting belt pulley
36	10574	2	Arm shaft connecting belt pulley spring flange
37	10612	2	Screw for #10574
38	20079	1	Arm shaft connecting belt
39	20093	1	Upper needle bar rock frame driving connection
40	20284	1	Upper needle bar rock frame driving connection hinge stud
41	8105	1	Set screw for #20284
42	20094	1	Needle bar rock frame rock shaft
43	10519	1	Screw for #20094
44	20091	1	Needle bar rock frame rock crank shaft
45	20092	2	Bushings for #20091
46	20096	1	Needle bar rock frame slide block stud
47	20095	1	Needle bar rock frame slide block
48	13085	1	Set screw for #20095
49	20143	1	Presser bar spring regulating screw
50	20142	1	Presser bar spring regulating pin
51	20141	1	Presser bar spring
52	12383	1	Spring for #20164
53	20164	1	Oil controlling screw
54	20162	1	Oil seal packing
55	20161	1	Oil level indicator
56	20163	1	Presser plate for #20161
57	11044	4	Set screw for #20163
58	20110	2	Needle bar rock frame felt
59	20111	1	Needle bar oiling felt holder (upper)
60	10597	1	Set screw for #20111 & #20112
61	20107	1	Needle bar connecting stud
62	10726	1	Oil felt for #20107 (#61)
63	10532	2	Needle bar connecting stud screw
64	20112	1	Needle bar oiling felt holder (lower)
65 *	20101 or 20500	1	Needle bar (#20101 for 301 & 321, #20500 for 302-304, 322-324)
66	10535	1	Needle set screw
67	20115	1	Needle (DV x 59 #22)
68	20108	1	Needle thread guide (on needle bar connecting stud)
69	8042	1	Set screw for #20108
70	6025	1	Screw for #20103
71	20103	1	Needle bar rock frame hinged stud
72	10525	1	Set screw for #20103
73 *	20102 or 21100	1	Needle bar rock frame (#20102 for 321-324, #21100 for 301-304)
74	20113	1	Needle bar rock frame position bracket
75	10532	2	Needle bar rock frame position bracket screw
76	20109	1	Needle bar rock frame thread guide
77	10685	2	Set screw for #20109
78	20080	1	Balance wheel (Small) { 20080 small 20081 large (casting) 20085 " (aluminum)
79	10634	1	Feed driving eccentric pin



Remarks: Parts marked * change by the model as above.

LIFTING ROCK SHAFT, FOOT LIFTER group

Fig. No.	Parts No.	Quantity	Name
1	10577	1	Knee lifter lifting lever presser screw
2	6025	1	Knee lifter lifting lever set screw
3	20190	1	Cap nut for #20189
4	20191	1	Spring rock washer for #20189
5	20189	1	Wire rope fastening clasp
6	20175	1	Foot lifter lever
7	20176	1	Bracket for #20175
8	10754	1	Set screw for #20176
9	20179	2	Needle bearing for #20177
10	20180	1	Oil seal for #20177
11	20177	1	Foot lifter lever shaft
12	20182	2	Foot lifter lever rod retaining ring
13	20151	1	Collar for #20181
14	2067	1	Set screw for #20151
15	20181	1	Foot lifter lever rod
16	20184	1	Foot lifter lever spring
17	20144	1	Foot lifter bell crank
18	20146	1	Hinge screw for #20144
19	20149	1	Hinge screw for #20183
20	20183	1	Foot lifter lifting link
21	10571	1	Stop screw for #20183
22	10636	1	Nut for #10571
23	20121	1	Presser bar
24	10538	1	Presser bushing (upper)
25	10522	1	Presser bushing screw (upper)
26	10543	1	Presser bar position guide
27	10522	1	Presser bar position guide screw
28	10541	1	Presser bar position guide bracket
29	10532	1	Set screw for #10541
30	20122	1	Presser bar lifting bracket
31	10545	1	Set screw for #20122
32	20148	1	Lifting pin for #20183
33	10549	1	Presser bar spring bracket
34	10532	1	Presser bar pinch screw
35	20120	1	Presser bar lifter
36	10660	1	Hinge screw for #20120
37	10539	1	Presser bar bushing (lower)
38	10761	1	Set screw for #10539
39	* 20130	1	Lifting presser foot
40	† 10561	1	Lifting presser foot screw
41	† 20062	1	Arm side cover
42	† 8111	2	Set screw for arm side cover (#20062)
43	† 10514	2	Lifting rock shaft bushing
44	† 10515	1	Lifting rock shaft
45	† 15053	1	Lifting bell crank link screw stud
46	† 10517	1	Lifting bell crank link nut
47	† 20125	1	Lifting bell crank link
48	† 20123	1	Lifting bell crank
49	† 10559	1	Lifting bell crank set screw
50	† 20124	1	Vibrating presser bar connecting link
51	† 20133	1	Vibrating presser bar oil felt
52	† 20128	1	Vibrating presser bar extension stopper
53	† 10650	2	Set screw for #20128
54	† 20127	1	Vibrating presser bar extension
55	† 10554	1	Vibrating presser bar extension spring
56	† 20126	1	Vibrating presser bar
57	† 20132	1	Vibrating presser bar guide plate
58	† 10650	2	Set screw for #20132
59	† 20129	1	Vibrating presser foot
60	† 10662	1	Presser foot pinch screw
61	† 20136	1	Lifting eccentric connecting crank
62	† 10754	1	Set screw for #20136
63	† 10775	1	Lifting eccentric connection hinge screw
64	† 10703	1	Washer for #10775
65	† 10774	1	Lifting eccentric connection collar
66	† 20072	1	Lifting eccentric connection
67	† 10776	1	Lifting eccentric connection wing nut
68	† 20073	1	Bearing for #20072
69	† 20071	1	Lifting eccentric
70	† 10566	2	Screw for #20071
71	† 10728	1	Oil felt for lifting bell crank link screw stud



Remarks: Part marked * changes by the model.
Parts marked † are not used for 301-304.

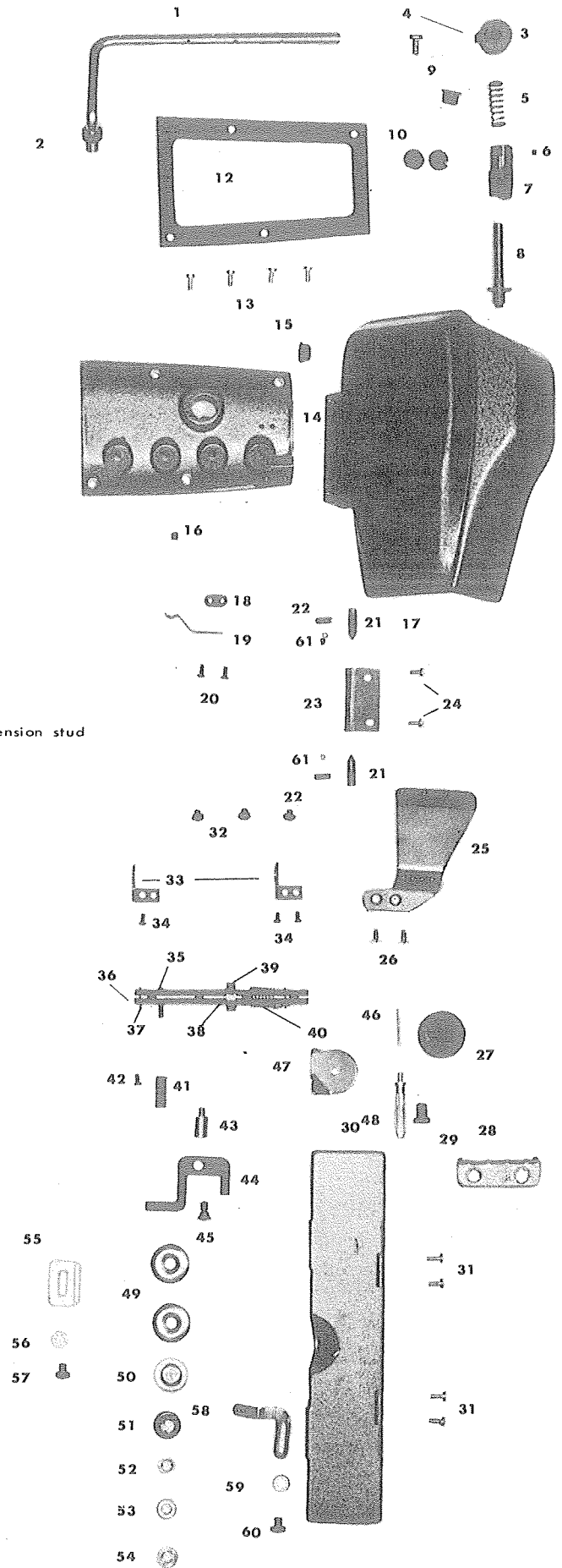
NEEDLE THREAD TENSION group

Fig. No. Parts No. Quantity

Name

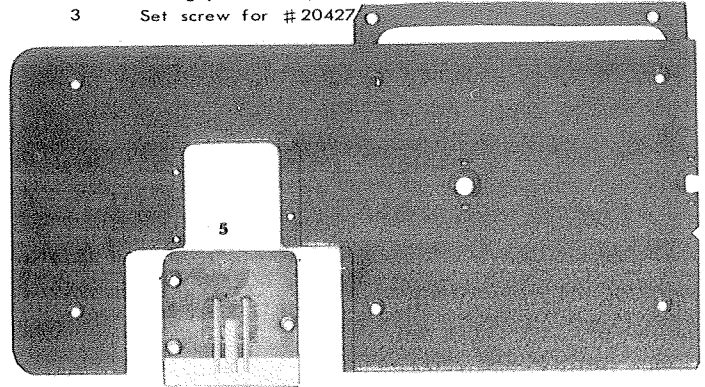
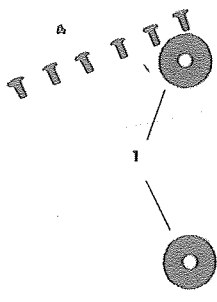
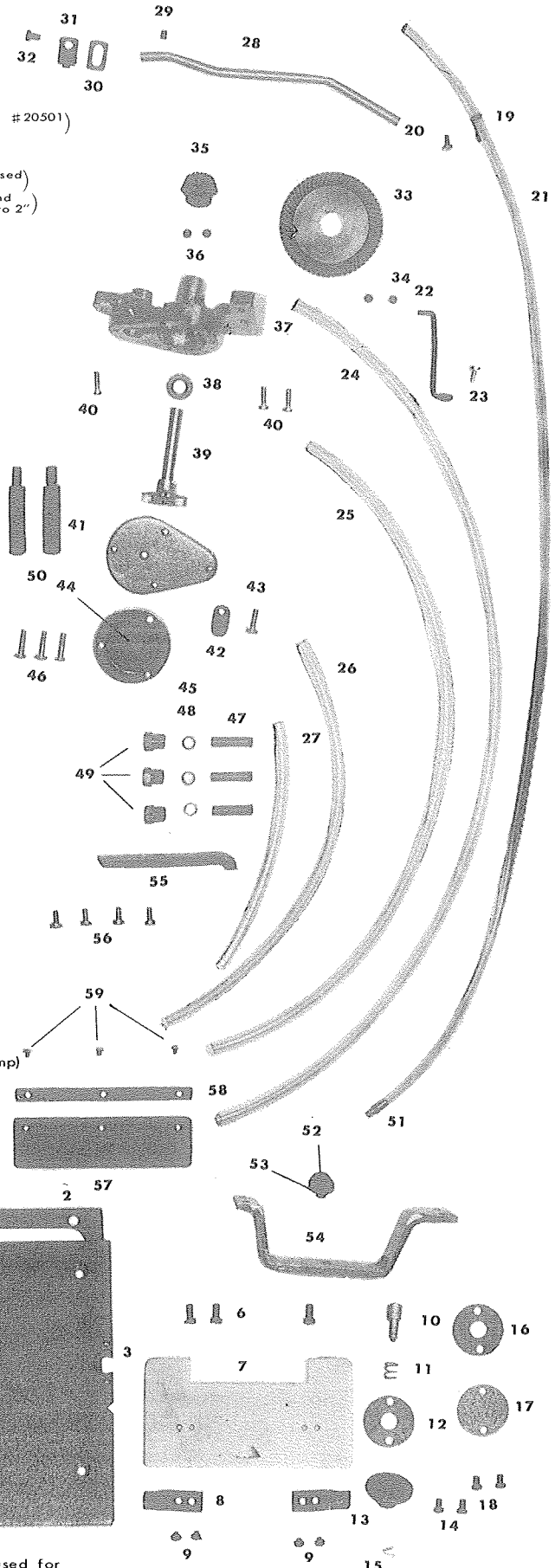
1	20050	1	Top arm thread guide
2	50154	1	Nut for #20050
3	20040	1	Needle bar rock frame regulating stud cap
4	8097	1	Set screw for #20040
5	20039	1	Needle bar rock frame regulating stud spring
6	8103	1	Set screw for #20038
7	20038	1	Needle bar rock frame regulating stud sleeve
8	20037	1	Needle bar rock frame regulating stud
9	20171	1	Rubber plug (B)
10	20138	2	Rubber plug
11	20172	1	Rubber plug (C)
12	20017	1	Arm top gasket
13	8040	4	Set screw for arm top
14	20016	1	Arm top cover
15	20171	1	Rubber plug (B)
16	15038	1	Face plate rubber
17	20004	1	Face plate
18	20008	1	Supporting plate for face plate spring
19	20007	1	Face plate spring
20	11044	2	Set screw for #20007 & #20008
21	20011	2	Face plate hinge pin screw
22	8101-10	2	Set screw for #20006
23	20005	1	Holder for face plate
24	8040	2	Set screw for #20005
25	20054	1	Looper thread guide (upper)
26	6031	2	Set screw for #20054
27	20170	1	Rubber plug (A)
28	20055	1	Looper thread guide (middle)
29	6031	2	Set screw for #20055
30	20056	1	Cover for thread guide
31	8040	4	Set screw for hinge of #20056
32	8064	3	Plug screw for spare screw hole of needle thread tension stud
33	20030	2	Bracket for #20026
34	8044	3	Set screw for #20030
35	20026	1	Tension release rod
36	4514	2	Retaining ring for #20026
37	20027	1	Tapered pin for #20026
38	4098	2	Set screw for #20036
39	20036	1	Collar for #20035
40	20035	1	Spring for #20026
41	20033	1	Tension release rod lever stopper
42	20034	1	Set screw for #20033
43	20032	1	Stud for 13323
44	20031	1	Tension release rod lever
45	13323	1	Hinge screw for #20031
46 *	20029	1	Needle thread tension releasing pin
47 *	20025	1	Needle thread tension thread guide
48 *	20018	1	Thread controller stud
49 *	20019	2	Thread disc
50 *	20020	1	Needle thread tension release disc
51 *	20024	1	Tension release spring (for thick thread)
52 *	20023	1	Washer for #20024 (#51)
53 *	20021	1	Tension thumb nut (A)
54 *	20022	1	Tension thumb nut (B)
55	20052	1	Needle thread guide (on side of arm) (2)
56	20053	1	Washer for #12446 screw
57	20048	1	Set screw for #20052
58	20051	1	Needle thread guide (on side of arm) (1)
59	20053	1	Washer for #12446 screw
60	20048	1	Set screw for #20051
61	11097	2	Liner for #20011

Remarks: Parts marked * increase in proportion to number of needle.



BED PLATE, OILING group

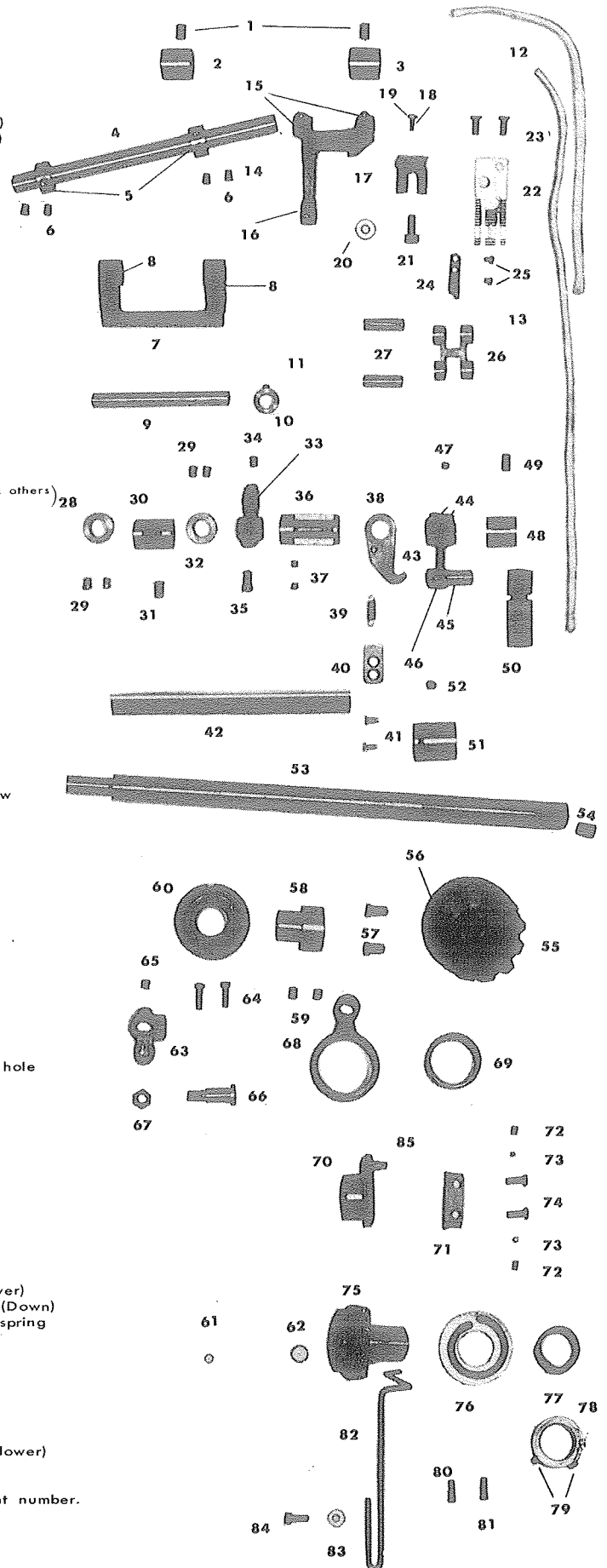
Fig. No.	Part No.	Qty.	Description
1	20206	2	Packing for bed plate (B)
2	20205	1	Gasket for bed plate (A)
3 †	20204 or 20501	1	Bed plate (#20204 is available up to 1 3/4" and #20501 is for gauges over 1 3/4" to 2")
4	12418	6	Set screw for bed plate
5 *	20275	1	Throat plate
6	20276	3	Set screw for #20275 (4 pcs. of #20276 are used for #20501)
7 †	20207 or 20502	1	Bed plate slide (#20207 is available up to 1 3/4" and #20502 is for gauges over 1 3/4" to 2")
8	20209	2	Bed plate slide spring
9	10597	4	Set screw for #20209
10	20211	1	Feed regulating stud
11	20213	1	Feed regulating stud spring
12	20215	1	Packing for #20210
13	20210	1	Feed regulating stud socket
14	10561	2	Set screw for #20210
15	20212	1	Feed regulating stud retaining spring
16	20215	1	Packing
17	20216	1	Washer
18	10561	2	Set screw for #20210
19	4221	1	Oil suction tube holder
20	8040	1	Set screw for #4221
21	20168	1	Oil suction tube (3)
22	20165	1	Guard for vinyl tubes
23	8040	1	Set screw for #20165
24	20166	1	Vinyl oil tube (1)
25	20167	1	Vinyl oil tube (2)
26	20415	1	Vinyl oil tube (5)
27	20414	1	Vinyl oil tube (4)
28	20406	1	Oil suppling tube (brass)
29	12421	1	Screw for #20406
30	20411	1	Oil stopper packing
31	20410	1	Oil stopper (On side of arm)
32	6341	1	Set screw for oil stopper
33	20403	1	Gear for oil suppling pump (large)
34	13805	2	Screw for #20403
35	20404	1	Gear for oil suppling pump (small)
36	13085	2	Screw for #20404
37	20394	1	Oil suppling pump main body
38	20409	1	Washer for #20408
39	20408	1	Oil suppling pump rotor
40	6604	3	Set screw for #20394
41	20397	1	Cover for oil suppling pump
42	20412	1	Oil controlling plate
43	20407	1	Screw for #20412
44	20398	1	Oil filter
45	20399	1	Frame for #20398
46	20407	3	Screws for #20397
47	20405	3	Oil suppling tube (brass) (lower)
48	20402	3	Packing for #20405
49	20401	3	Connecting screw for #20405
50	20424	2	Bed supporting bolt
51	20400	1	Vinyl oil suppling tube connector (to oil pump)
52	20432	1	Set screw for #20431
53	10703	1	Spring washer for #20432
54	20430	1	Guarding plate for oil pump
55	20431	1	Supporting plate for oil pump
56	8040	4	Set screw for #20430
57	20426	1	Dust protecting cover
58	20427	1	Fixing plate for #20426
59	8111	3	Set screw for #20427



Remarks: Part marked * is used for only 321 and different parts numbers are used for other models.
 Parts marked † are used for needle gauges up to 1 3/4" and different part number is used as above for other gauges.

BED SHAFT, FEED DRIVING group

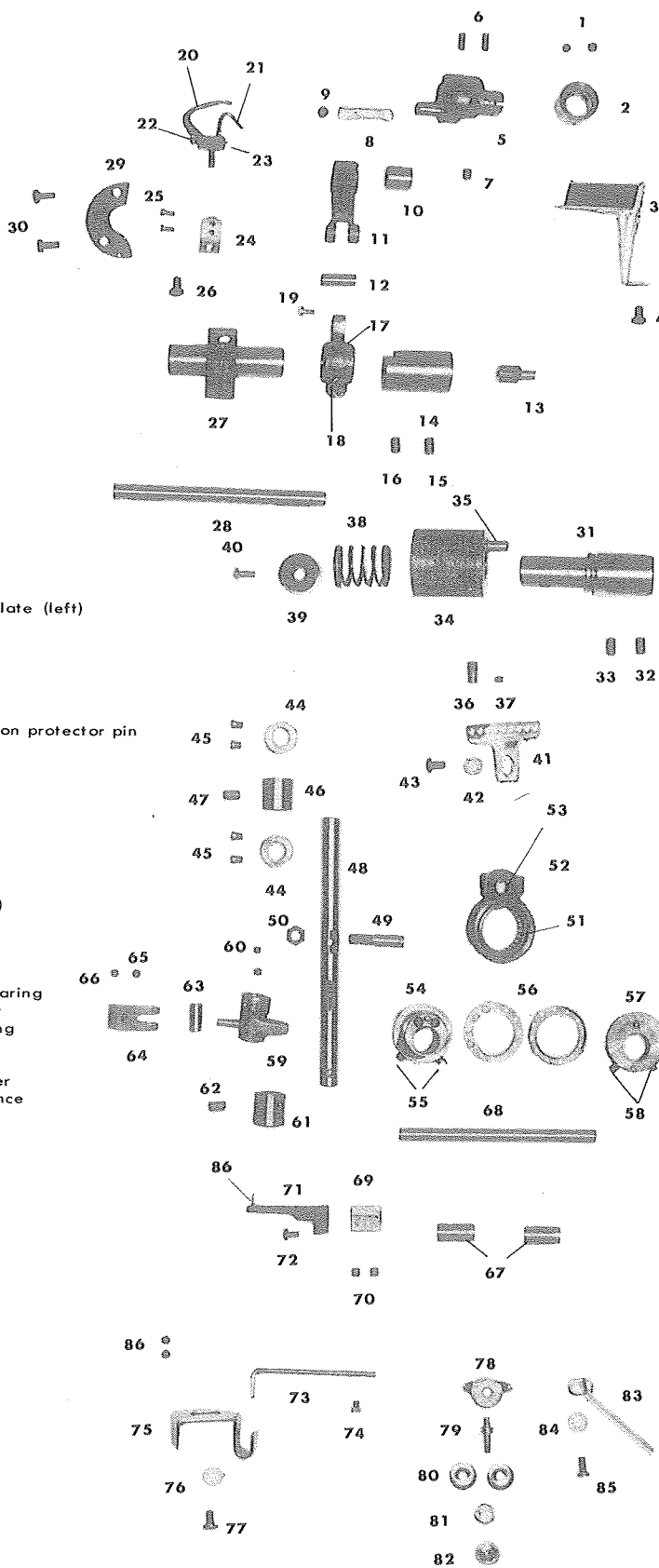
Fig. No.	Parts No.	Quantity	Name
1	10765	2	Set screw #20252 & #20253
2	20252	1	Feed driving rock shaft bushing (front)
3	20253	1	Feed driving rock shaft bushing (rear)
4	20251	1	Feed driving rock shaft
5	20254	2	Feed driving rock shaft collar
6	13033	4	Set screw for #20254
7	20258	1	Feed driving rock frame
8	10765	2	Set screw for #20258
9	20259	1	Feed bar hinge pin
10	20261	1	Collar for feed bar hinge pin
11	12421	1	Set screw for #20261
12	20260	1	Oiling wick for #20259
13	20417	1	Oiling wick for #20278
14	20265	1	Feed bar
15	11176	2	Set screw for #20265
16	11176	1	Set screw for #20279
17	20266	1	Feed dog shank
18	20271	1	Feed dog shank adjusting screw
19	20272	1	Lock nut for #20271
20	13235	1	Washer for #13078
21	13078	1	Feed dog shank screw
22 *	20268	1	Feed dog (for only 321, others use)
23	20276	2	Set screw for feed dog (different number)
24 *	20273 or 20505	1	Loop deflector (#20273 for 321, others)
25 *	10597 or 20506	2	Set screw for #20273 (#10597 for 321, others)
26	20278	1	Feed lifting link
27	20279	2	Feed lifting link hinge pin
28	20254	1	Feed lifting rock shaft bushing collar
29	13033	4	Set screw for #20254
30	20282	1	Feed lifting rock shaft bushing (long)
31	10765	1	Set screw for #20282
32	20254	1	Feed lifting rock shaft bushing collar
33	20281	1	Feed lifting crank
34	11176	1	Feed lifting link hinge pin set screw
35	10612	1	Set screw for #20281
36	20319	1	Looper throw-out safety latch collar
37	13085	2	Set screw for #20319
38	20320	1	Looper throw-out safety latch
39	20321	1	Looper throw-out safety latch spring
40	20322	1	Bracket for #20321
41	6031	2	Set screw for #20322
42	20280	1	Feed lifting rock shaft
43	20283	1	Feed lifting rock shaft crank
44	11073	2	Feed lifting rock shaft crank set screw
45	20284	1	Feed lifting connection hinge stud
46	8105	1	Rock nut for #20284
47	13085	1	Set screw for #20283
48	20253	1	Feed lifting rock shaft bushing (short)
49	10765	1	Set screw for #20253
50	20285	1	Feed lifting connection
51	20237	1	Bed shaft bushing
52	10566	1	Set screw for #20237
53	20236	1	Bed shaft
54	20067	1	Bed shaft oil stop rubber plug
55	20239	1	Bed shaft connection belt pulley
56	10574	1	Spring flange for #20239
57	10612	2	Set screw for #20239
58	20238	1	Collar for #11031
59	10566	2	Set screw for #20238
60	11031	1	Bed shaft ball bearing
61	20218	1	Rubber plug for bed clutch mounting hole
62	20170	2	Rubber plug (A)
63	20257	1	Feed driving rock shaft crank
64	11073	2	Set screw for #20257
65	13085	1	Screw for #20257
66	20256	1	Feed driving connection rod screw
67	8105	1	Lock nut for #20256
68	20255	1	Feed driving connection
69	20073	1	Needle bearing for #20255
70	20244	1	Feed driving eccentric (lower)
71	11095	1	Friction plate
72	2067	2	Set screw for #11095
73	11097	2	Set screw packing (brass)
74	11096	2	Set screw for #11095
75	20075	1	Flange for feed driving eccentric (lower)
76	20245	1	Feed driving eccentric adjusting disc (Down)
77	11099	1	Feed driving eccentric adjusting disc spring
78	11100	1	Collar for #11099
79	10566	2	Set screw for #11100
80	11093	1	Set screw for #20075 (A)
81	11094	1	Set screw for #20075 (B)
82	20413	1	Guard for oil supplying vinyl tube
83	16287	1	Washer for #20413
84	6025	1	Screw for #20413
85	10634	2	Feed driving eccentric pin (upper & lower)



Remarks: Parts marked * are used for only 321 and others use different number.

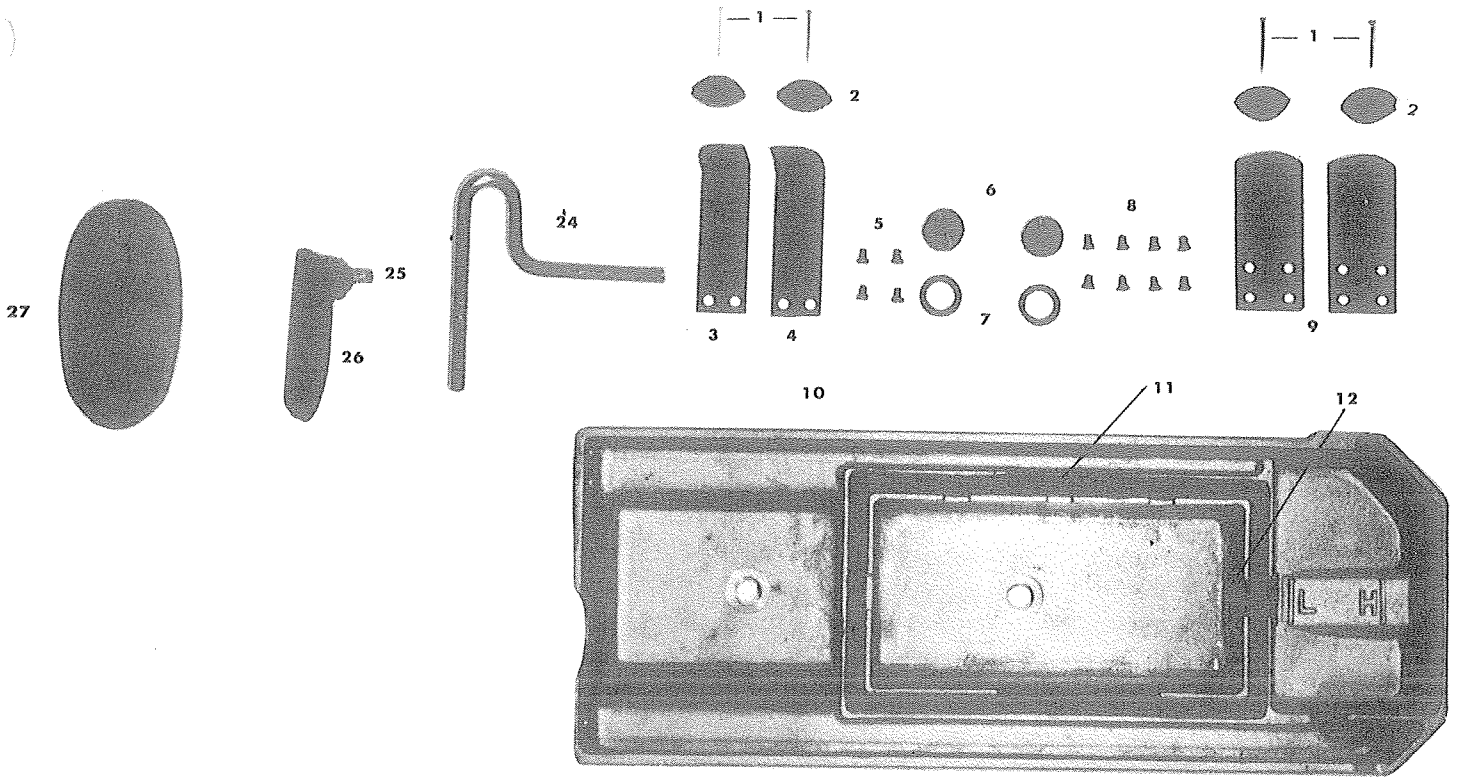
LOOPER, SPREADER group

Fig. No.	Parts No.	Quantity	Name
1	13085	2	Set screw for feed lifting eccentric
1	20286	1	Feed lifting eccentric
3	20323	1	Oil guard for looper driving crank
4	12418	1	Screw for #20323
5	20313	1	Looper driving crank
6	20314	2	Looper driving crank position screw
7	10639	1	Set screw for #20313
8	10726	1	Oil wick
9	11068	1	Looper driving crank oil stopper
10	20316	1	Looper carrier needle bearing
11	20315	1	Looper driving connection
12	20317	1	Looper carrier crank hinge pin
13	20420	1	Vinyl suppling tube connector
14	20310	1	Looper carrier shaft bushing (right)
15	10765	1	Set screw for #20310 (B)
16	10628	1	Set screw for #20310 (A)
17	20318	1	Looper carrier crank (B)
18	10754	1	Set screw for #20318 (large)
19	6604	1	Set screw for #20318 (small)
20	† 20301	1	Looper
21	† 20303	1	Needle guard
22	20304	1	Screw for #20303
23	† 20305	1	Set screw for #20303
24	* 20307	1	Looper holder
25	† 20302	2	Looper set screw
26	20306	1	Looper holder screw
27	20308	1	Looper carrier
28	20309	1	Looper carrier shaft
29	20312	1	Looper carrier shaft bushing position plate (left)
30	8089	2	Set screw for #20312
31	20311	1	Looper carrier shaft bushing (left)
32	10765	1	Set screw for #20311 (B)
33	10628	1	Set screw for #20311 (A)
34	20325	1	Looper throw-out rack rod lever
35	20327	1	Looper throw-out gear locking pin
36	20326	1	Looper throw-out rack rod lever deflection protector pin
37	50230	1	Set screw for #20326
38	20329	1	Coil spring for #20325
39	20328	1	Supporting plate for #20329
40	13330-4	1	Set screw for #20328
41	20228	1	Looper thread guide
42	20053	1	Washer for #20228
43	12418	1	Set screw for #20228
44	20254	2	Spreader driving rock shaft collar
45	13033	4	Set screw for #20254
46	20252	1	Spreader driving rock shaft bushing (A)
47	10766	1	Set screw for #20252
48	20349	1	Spreader driving rock shaft
49	20352	1	Spreader driving rock shaft screw stud
50	8105	1	Lock nut for #20352
51	20355	1	Spreader driving connection needle bearing
52	20354	1	Spreader driving connection with screw
53	20353	1	Spreader driving connection ball bearing
54	20240	1	Spreader driving eccentric
55	10581	2	Set screw for #20240
56	20243	2	Spreader driving eccentric thrust washer
57	20242	1	Spreader driving eccentric counterbalance
58	10581	2	Screw for #20242
59	20356	1	Spreader driving crank
60	11176	2	Screw for #20356
61	20350	1	Spreader driving rock shaft bushing (B)
62	10766	1	Set screw for #20350
63	20348	1	Spreader driving pin
64	20347	1	Spreader driving
65	2067	1	Set screw for #20347 (long)
66	8103	1	Set screw for #20347 (short)
67	20346	2	Spreader bar bushing
68	20345	1	Spreader bar
69	20344	1	Spreader holder
70	12421	2	Screw for #20344
71	* 20341	1	Spreader
72	† 10561	1	Set screw for #20341
73	20351	1	Looper thread take-up rod
74	12740	1	Screw for #20351
75	20227	1	Looper thread guide (large)
76	20053	1	Looper thread guide washer (large)
77	12418	1	Set screw for #20227
78	† 20229	1	Looper thread tension thread guide
79	† 20223	1	Looper thread tension stud
80	† 20224	2	Looper thread tension disc
81	† 20226	1	Looper thread tension spring
82	† 20225	1	Looper thread tension thumb nut
83	20221	1	Looper thread guide (lower)
84	20222	1	Washer for #20221
85	6025	1	Set screw for #20221
86	13085	2	Screw
87	20343	1	Spreader point**



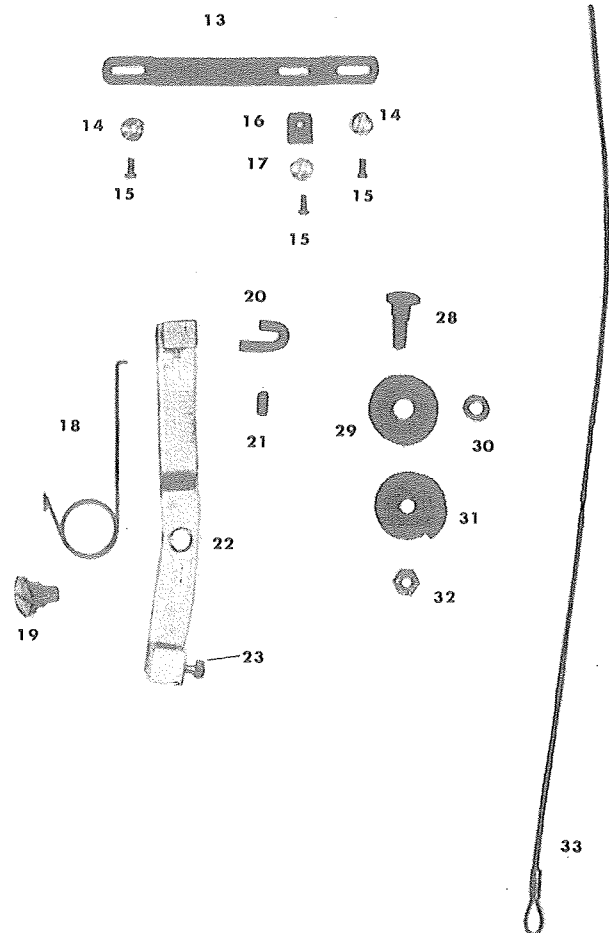
Remarks: Parts marked * are used for only 301 & 321 and different parts numbers are used for other models.

Parts marked † increase in proportion to number of needle.



OIL TANK, KNEE LIFTER group

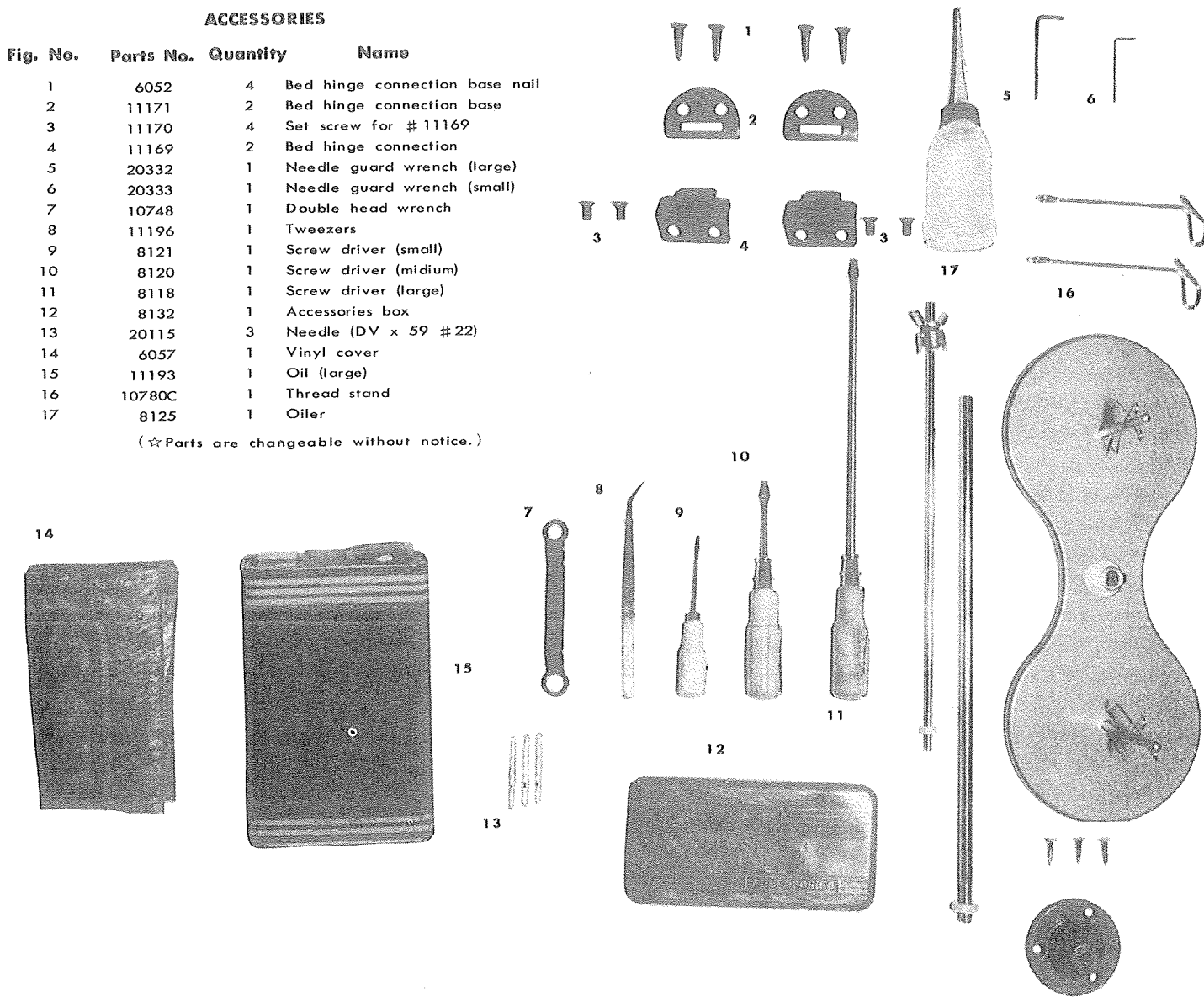
Fig. No.	Part No.	Quantity	Name
1	6055	4	Nail for #20387, #20388 & #20389
2	20429	4	Felt cushion for bed
3	20388	1	Oil tank supporting clasp (B)
4	20389	1	Oil tank supporting clasp (C)
5	4139	4	Set screw for #20388 & #20389
6	20384	2	Oil tank drain plug screw
7	20385	2	Packing for #20384
8	4139	8	Set screw for #20387
9	20387	2	Oil tank supporting clasp (A)
10	20386	1	Oil tank
11	20390	1	Oil tank gasket
12	20391	1	Oil filter
13	20369	1	Guide plate for knee lifter lever
14	50254	2	Washer for #20369
15	10559	3	Set screw for #20369 & #20377
16	20377	1	Knee lifter lever stopper
17	50254	1	Set screw for #20377
18	20370	1	Knee lifter lever spring
19	20367	1	Screw for #20366
20	20371	1	Knee lifter lifting trigger
21	4011	1	Set screw for #20371
22	20366	1	Knee lifter lever
23	4192	1	Set screw for #20368
24	20368	1	Knee lifter rod
25	4192	1	Set screw for #4191
26	4191	1	Knee lifter pad supporter
27	4193	1	Knee lifter pad
28	20375	1	Set screw for #20372
29	20372	1	Pully for #20188
30	20373	1	Collar for #20372
31	20374	1	Pulley, cover
32	20376	1	Nut for #20375
33	20188	1	Knee lifter pull wire



ACCESSORIES

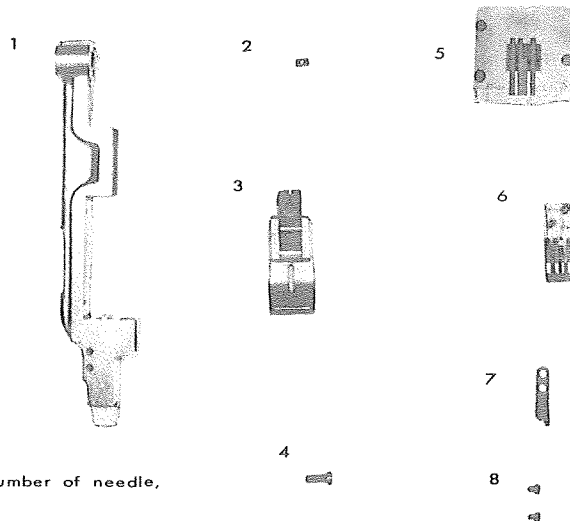
Fig. No.	Parts No.	Quantity	Name
1	6052	4	Bed hinge connection base nail
2	11171	2	Bed hinge connection base
3	11170	4	Set screw for #11169
4	11169	2	Bed hinge connection
5	20332	1	Needle guard wrench (large)
6	20333	1	Needle guard wrench (small)
7	10748	1	Double head wrench
8	11196	1	Tweezers
9	8121	1	Screw driver (small)
10	8120	1	Screw driver (midium)
11	8118	1	Screw driver (large)
12	8132	1	Accessories box
13	20115	3	Needle (DV x 59 #22)
14	6057	1	Vinyl cover
15	11193	1	Oil (large)
16	10780C	1	Thread stand
17	8125	1	Oiler

(☆Parts are changeable without notice.)



SPECIAL PARTS FOR MODELS 301, 302, 303, 304

Fig. No.	Parts No.	Quantity	Name
1	21100	1	Needle bar rock frame
2	21101	1	Arm shaft oil packing
3	* 21191	1	Presser foot
4	21104	1	Presser foot set screw
5	* 21108	1	Needle plate
6	* 21109	1	Feed dog
7	20505	1	Loop deflector
8	20506	2	Loop deflector set screw



Remarks: Parts marked * are used for only 301 and other models differ by number of needle, and needle gauges.