Toy Sewing **Machines**

The GRAIN Machine

A toy sewing machine might be an interesting and useful Christmas present for a little girl. So we investigated seven models-including all the brands we could find-to discover how safe and convenient they were to use; what they would do; how reliable and robust they were; and how good the instructions.

The seven models fell into two groups. The more expensive (f,3 8s. to f,5 13s. 9d.) consisted of the GRAIN, the SINGER 20 and the ESSEX MINIATURE. These could be used for serious sewing. The second group (£1 5s. 6d. to f,2 9s. 6d.) consisted of the LITTLE BETTY SENIOR W3, the VULCAN MINOR, SUPER COMET and VULCAN SENIOR. These were less robust and adaptable, only suitable for very simple tasks.

All the machines differ essentially from grown-up models in making a chain-stitch (which can pull out until the last stitch has been secured by hand) instead of a locked stitch. The more expensive machines make three stitches instead of one with each turn of the handwheel. They sew a range of stitch-sizes instead of only the one rather large stitch of the other group. And they make the stitch by a different method, securing it by a propeller worked by a gear system linked to the driving wheel. In the cheaper models the stitch is secured by twin hooks which pass on each side of the descending needle.

Little girls vary in dexterity, power of concentration, experience and enthusiasm for sewing. We have given, in the table and the text, as many details as possible to help the presentgiver to choose the right model for the child. In assessing Value for Money we have taken the two groups separately.

The importance of most of the details which we have given in the table is self-explanatory. It may be necessary to explain open area to right of needle and lever arm of winding handle. The first gives an idea of the width of the material which can be passed through the middle of the machine, and hence of the maximum distance from the edge of the material which it is possible to sew; the larger this figure is, the better. The second gives the size of the radius of the circle the hand turning the handle has to rotate. Within limits, the larger this is the more comfortable the machine is to use.

Some of the tests were carried out in an engineering laboratory. Others-to decide on convenience, clarity of instructions and so onby a group of 11 year old girls, and an advanced, adult needlework class.

Safety

Provided that only one child at a time uses any machine, so that it is not being driven whilst attempts are made to free tangled cotton, to guide the work or merely to explore, they are all reasonably safe. But all, except the ESSEX, SUPER COMET and the VULCANS could trap fingers with the needle either on top of or beneath the sewing platform. And in all, except the SUPER COMET, fingers could also be trapped either in the gears of the driving wheel or in the driving wheel itself.

Would it not be possible for all manufacturers to guard the underside of the sewing platform? (The ESSEX, both VULCANS and SUPER COMET are already safe in this respect.) And could not the foot always be turned over (as it is in the SINGER and GRAIN) so as to prevent fingers getting caught by the needle on top of the platform? And surely the gears could be at least partly enclosed, and the driving wheel made solid?

A minor point was that the needle-clamping screw of the LITTLE BETTY SENIOR W3 protruded in such a way that it tended to bruise the hand guiding the cloth, and that the machine had sharp edges.

None of the paint used on any machine was toxic.

Convenience

The lack of a clamp to fix the machine on to the table for the GRAIN and a washer which interfered with the adjustment of stitch-length were considered minor disadvantages.

The LITTLE BETTY SENIOR W₃ and VULCAN MINOR were considered difficult to work with because they were so small. The platform area of the SINGER was also considered too small, that of the SUPER COMET rather flimsy.

Otherwise, the machines were convenient and easy to use.

Range of Materials

The GRAIN and SINGER machines both sewed satisfactorily double thicknesses of all of thirteen different materials, ranging from nylon taffeta to cotton needlecord. The ESSEX and the VULCAN MINOR dealt with all except 'Celanese' and brushed nylon, with which it either missed stitches or failed to stitch at all.

			SEWING	SEWING PLATFORM		Lener	CLAMPIN	CLAMPING DEVICE	Spirehae	SAFETY (I	SAFETY (IN ACTION)			
Machine (in descending order of price)	4	Price	Type	Size (sq. inz.)	Open area to right of needle (sq. ins.)	arm of tornding handle (ins.)	Type	Limits of table thickness (ins.)	per in. (in gingham with No. 40 cotton)	Above sewing platform	Below sewing platform	Weight (fb.)	Needle type (Singer)	Main Colour
MINIATURE	300	5. d	9 Flat	41	18.3	1.60	Rubber	Not applicable	8.5—13	Good except handle and	Good	7.4	15×1	Silver
SINGER 20	4	0	3 Raised table	12	4.6	1.25	G-clamp	0.06-2.0	11.5-17	Good except	Fair	1.7	24×1	Various
GRAIN	en	00	o Raised, wooden extension table	36	9.9	1.20	Rubber	Not applicable	8—I8	gears Good except handle and gears	Poor, with sharp propeller	1.4	15 × 1	Green
SUPER COMBT	11	a	6 Raised, metal extension	77	1.6	I-IO	G-clamp	0.5-1.6	*9	Good	Good	en en	1×91	Red
VULCAN SENIOR	н	00	3 Raised, metal extension	44	6.3	1.25	G-clamp	0.4—1.3	*5.9	Good except handle	Good if extension table in use	9. 2.	206×13 or 15×1	Maroon
VULCAN MINOR	н	1 9	T Flat	6.9	3.3	0.82	G-clamp	2.1-1.0	7*	Good except	Good	1.3	206×13	Red
SENIOR W3	н	vs.	6 Raised table	6.3	1.5	96.0	Spring wire clamp	9.4—1.0	*	Good except handle	Fair, but some sharp edges	E.1	88×17	Red and cream



Schoolgirls carrying out some of the user tests for C.A. Usually, the class uses normal adult machines.

The VULCAN SENIOR sewed everything, but tended to miss stitches on cotton seersucker, cotton sailcloth and needlecord across the ribs. Both the SUPER COMET and the LITTLE BETTY SENIOR W3 showed sad records of missed stitches, coping successfully only with rayon taffeta, winceyette and needlecord, and rayon crêpe-de-Chine (LITTLE BETTY SENIOR W3 only) and brushed rayon and dressweight wool (SUPER COMET only).

Results of Endurance Test

The results of endurance tests up to 72 hours' running with the hand wheel turning at about 265 revolutions per minute, showed that the geared-wheel machines, ESSEX, GRAIN and SINGER, lasted much longer than the other group and had sewn three times the number of stitches in the same time—about 3,000,000.

The machines were oiled at intervals, if the makers' instructions called for it; this was only so with the more expensive machines.

Some of the machines which were stiff at first improved with running in. The exception was the SUPER COMET, whose sewing ability on gingham went from bad to worse, with frequent jamming of the stitching mechanism, and after 15 hours had developed a severely worn winding wheel bearing. The LITTLE BETTY SENIOR W3 failed after 23½ hours because the pin which held the winding wheel broke away from its mounting. In any case it was becoming increasingly difficult to sew with because of wear.

The other machines all ran the full 72 hours, the GRAIN and SINGER with no apparent wear, and the ESSEX with some wear of the handwheel bearing; the VULCAN MINOR showed some wear of the handwheel bearing and looseness of the feed-plate, and the VULCAN SENIOR some wear of the handwheel bearing and of the link movement.

Finishing of Machines

This was very poor. At the very least, some screws had to be tightened or loosened or some oil applied (after partial dismantling) to all the machines before they could be used.

In one GRAIN machine, the extension table needed considerable force to fit on. One SIN-GER bought unexamined and one LITTLE BETTY W3 could not be made to work without returning them to the manufacturer, and two other SINGERS, bought in sealed boxes, were covered with oil mixed with the powder used to spray the underside of the base.

The VULCANS had stiff, inaccessible bearings or joints which needed oiling before use.

Instructions

These were quite clear for the two VULCAN models and the ESSEX, although the VUL-CANS did not mention maintenance. Instructions for the SUPER COMET and LITTLE BETTY SENIOR W3 also failed to mention maintenance, and were not clear about removing work and finishing off. Nor did the LITTLE BETTY give suitable needle type. SINGER instructions, in general, were good but both schoolgirls and adults in the needlework class thought it would be better to have headings to the pictures. And the instructions for removing work and finishing off were complicated even for adults. The method described in the GRAIN leaflet for the finishing off was not perfect, as it left too little thread.

CONCLUSIONS

All the machines were reasonably safe—though considerable improvements could be made. The best, from this point of view, in the first group was the ESSEX MINIATURE; in the second, the LITTLE BETTY was least good.

The machines in the first group were much better, and more versatile in performance than the second group. The two best were GRAIN and SINGER.

The first group were all robust, all more so than the second group. In the second, the two VULCANS came out best.

Instructions for the ESSEX and SINGER

and VULCANS were good on the whole.

The second group were suitable as toys. The first could be considered as a present for a child interested in sewing. It would be a good idea to make sure first that she would not prefer to use Mother's grown-up machine.

VALUE FOR MONEY

In the first, more expensive group of machines, the BEST BUY was the

GRAIN

£3 8s. od.

In performance, it was as good as the SIN-GER and better than the ESSEX, had no major disadvantages and was the cheapest of the three.

Of the cheaper machines, suitable as toys, the BEST BUY was

VULCAN MINOR

£1 6s. 11d.

This might, however, be considered too small for some children, in which case the VULCAN SENIOR at £2 8s. 3d. would be better. Both were safe.

Advice to Mothers and Aunts

Always try out a machine thoroughly in the shop. Most machines are provided with a piece of material about 3 inches square to practise on; this is not enough for a fair test and CA's advice would be to use at least 18 inches length of doubled cotton material. If you cannot sew this length without either missing a stitch or 'knitting' on the underside, don't buy. If it seems stiff to turn in the shop and the assistant suggests that oiling would help, do not buy it until it has been oiled and works smoothly.

Remember that the range of adjustments which can be made to any of the machines (particularly the cheaper group) by a child, or even by a technically-minded adult, is very limited and an intermittent missing of stitches can only be remedied by the manufacturer, if at all.

CORRECTION

In the 'Detergents for Dishwashing' table on p. 125 of the October issue of Which? the average cost of active detergent in DRONSAN should have been 208 pence per pint (equivalent to 167 pence per lb.). This does not affect the order of brands in the table.