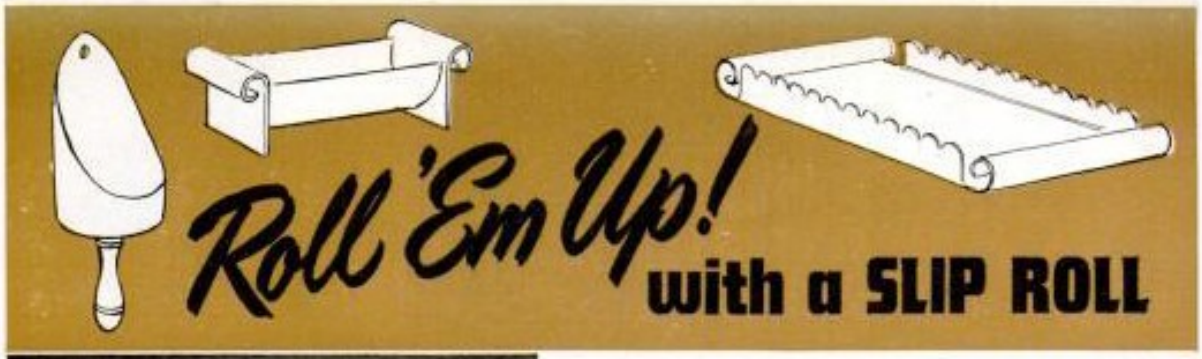


Roll 'Em Up! with a SLIP ROLL

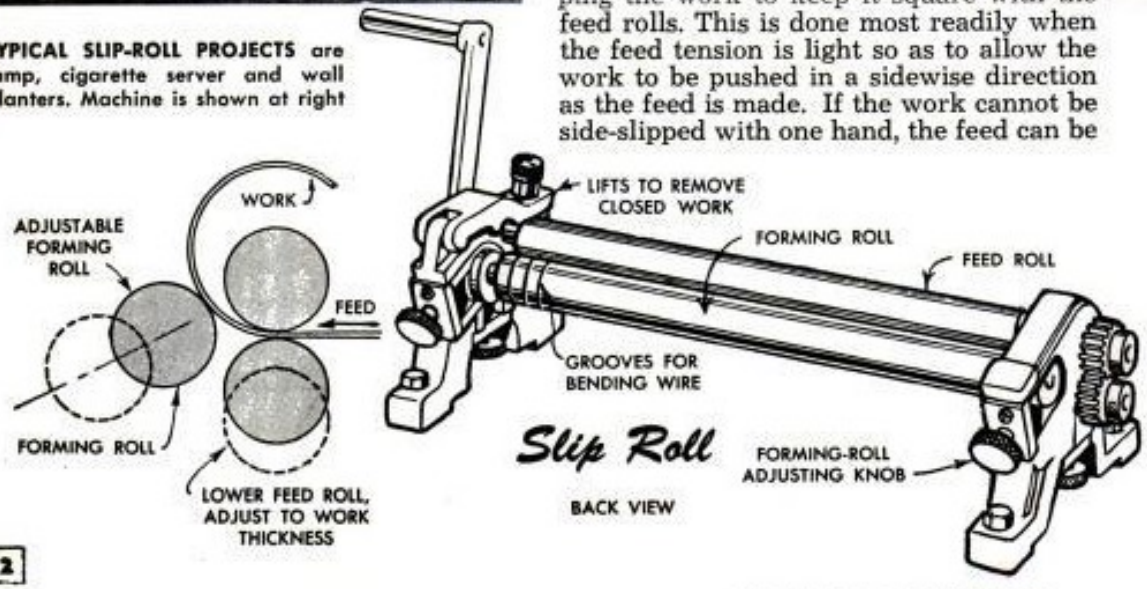
TYPICAL SLIP-ROLL PROJECTS are lamp, cigarette server and wall planters. Machine is shown at right

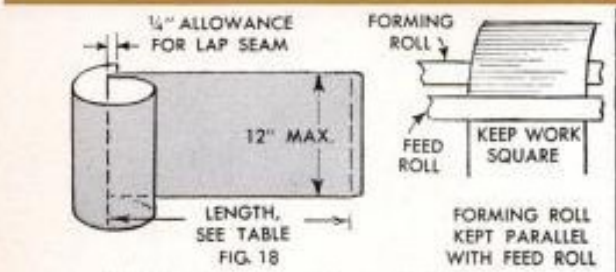
By Sam Brown

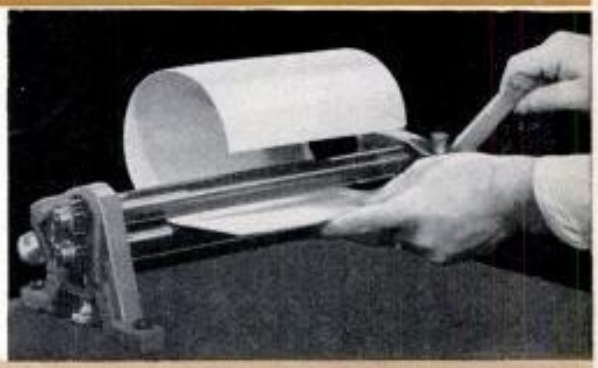
MANY PROJECTS in sheet metal require cylindrical and conical shapes, which often present a difficult problem to the beginner in sheet-metal work. The slip roll, Fig. 2, simplifies forming these shapes from flat sheets and, as it also will handle strap stock and wire, the project possibilities of the tool are almost unlimited. The table lamp pictured in Fig. 1 is a typical example.

A study of the drawing below and the various work pictures makes it apparent how the tool is used. There are two feed rolls which grip and feed the flat work against a single forming roll. If the forming roll is close to the feed rolls, the sheet, strap or wire work will be rolled into a cylindrical shape with a minimum diameter of about 1⅛ in. Larger cylinders are formed with the forming roll positioned a greater distance from the feed rolls. In ordinary practice, the work first is rolled to a greater diameter than required and then gradually reduced by advancing the forming roll for successive passes of the work.

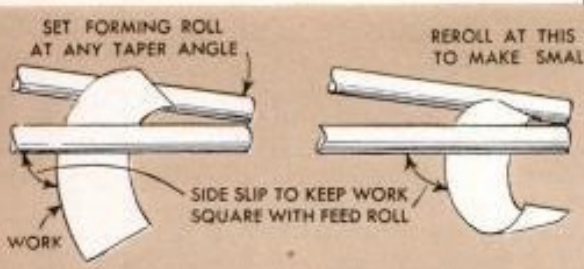
Figs. 3 to 9 show standard slip-roll shapes. The cone shape, Fig. 4, requires side-slipping the work to keep it square with the feed rolls. This is done most readily when the feed tension is light so as to allow the work to be pushed in a sidewise direction as the feed is made. If the work cannot be side-slipped with one hand, the feed can be

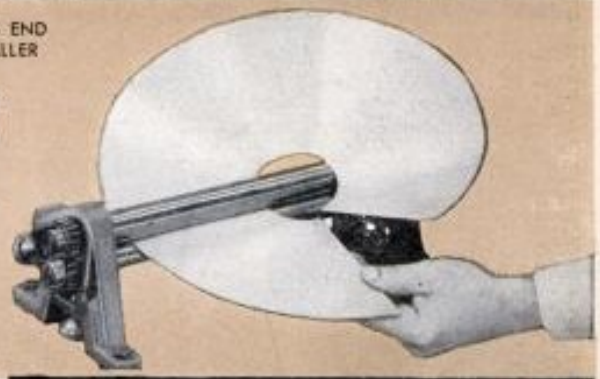




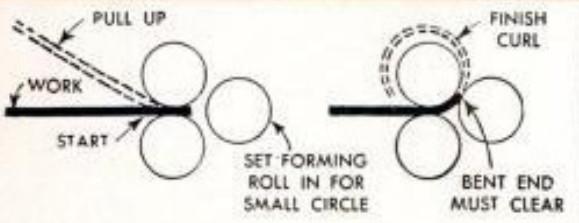


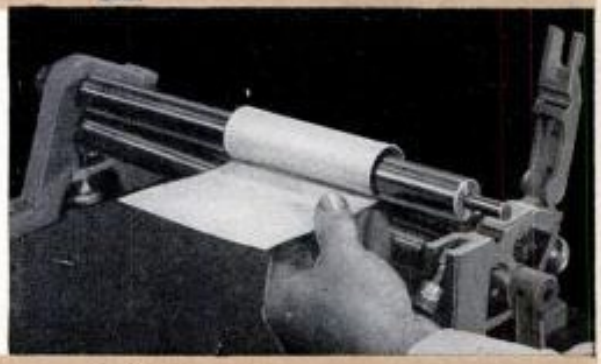
3 **CYLINDER** is easiest roll-up job. Minimum forming dia. is 1⅛ in. Use table to find length



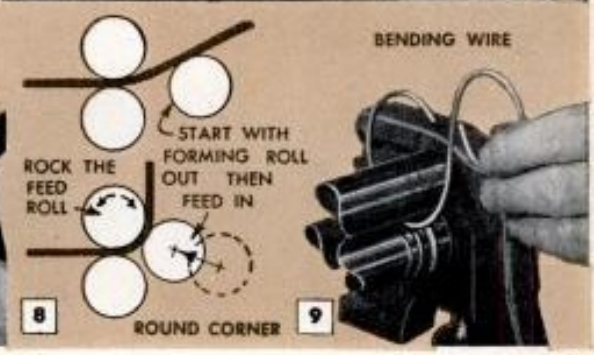


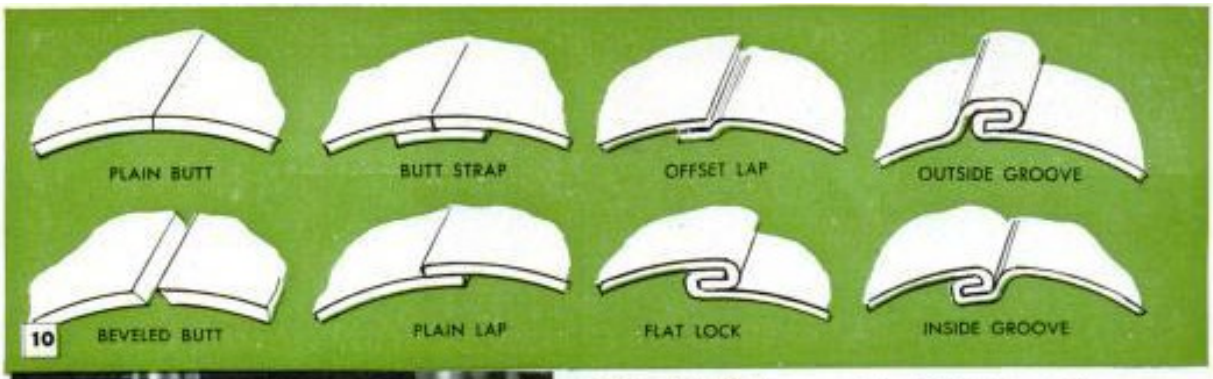
4 **CONE** must be side-slipped to remain parallel with the roll. Slip rolls will not form full cone as 1⅛-in. opening is required to clear the rolls



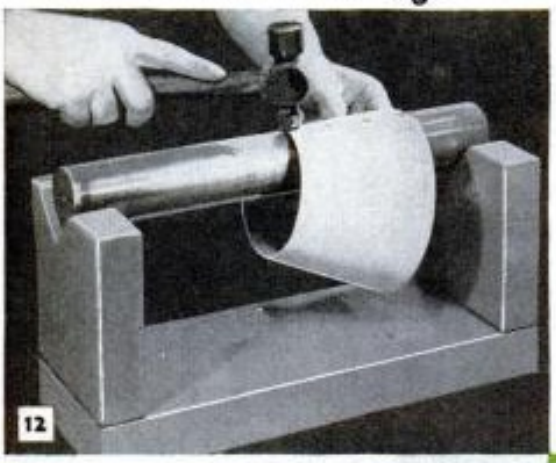


5 **END CURL** has numerous applications. Top feed roll is released to move work as at right. Below, double curl and reverse bends are two variations

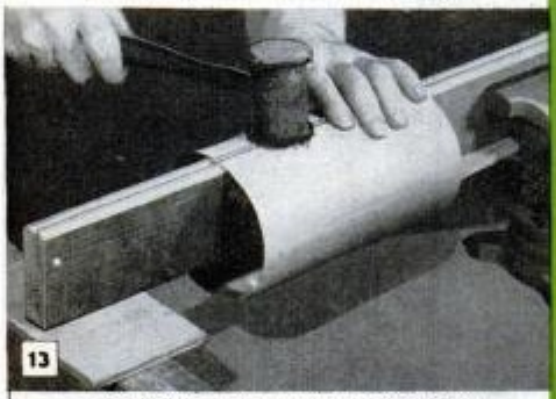




DRILLING holes for seams is done easily with work supported on bolt fitted in end of wooden block clamped to the drill-press table



RIVETING IS DONE ON SIMPLE BAR ANVIL



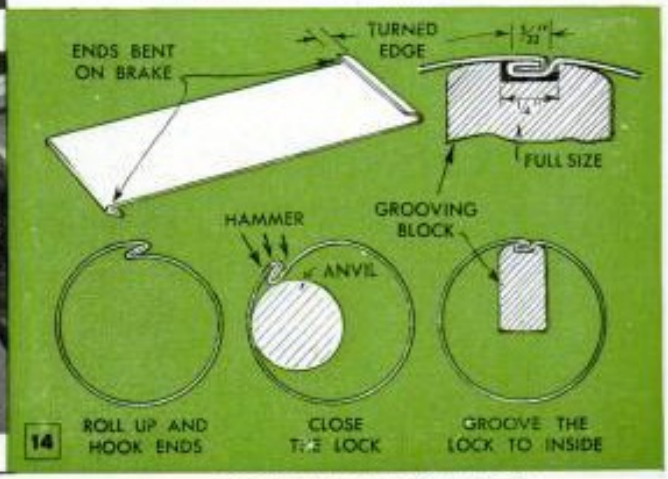
GROOVING MAKES A NEAT LOCKED SEAM

Eight Ways to Make Seams

made in short steps of about 1 in. each, squaring the work with two hands after each advance. The useful round corner, Fig. 8, is made without advancing the work. It is a plain pressure operation done by advancing the forming roll as the work is rocked backward and forward slightly.

After rolling a cylinder or cone, you have the job of securing the seam. Fig. 10 shows eight ways of doing this. The **simple lap joint is most popular with beginners, using either rivets or small bolts for fastening. Holes for rivets or bolts are easy to drill if the seam is clamped with two small C-clamps and then drilled, as** shown in Fig. 11. Fig. 12 is a simple, practical setup for riveting. If you have a brake and can make the necessary bends for a lock seam, you can do a neater job by "grooving" the lock to the inside, as shown in Figs. 13 and 14. For occasional work, a hardwood grooving block is satisfactory for soft metals to 22 ga.

An attractive beginning project to try on the slip roll is the teapot lamp shown in Figs. 17 and 19. The bottom alone makes a neat planter, Fig. 15. A variation of the lamp is pictured in Fig. 16, using a standard socket with clip-on shade. The planter, Fig. 15, is of 22-ga. stainless steel with ball-peen texture hammered on the sheet. ★ ★ ★



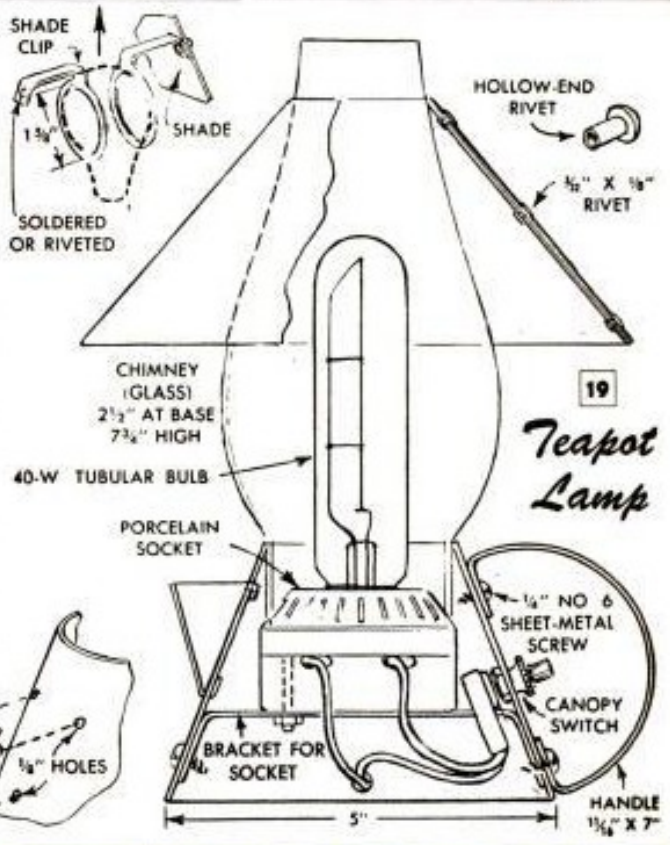
15

16

17

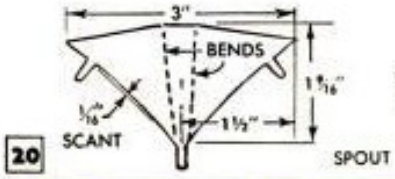
18 CIRCUMFERENCE OF CIRCLES

Dia.	Circ.	Dia.	Circ.
1	3.14	6¼	19.63
1½	4.71	6½	20.42
1¾	5.50	6¾	21.21
2	6.28	7	22.00
2¼	7.07	7½	23.56
2½	7.85	8	25.13
2¾	8.64	8½	26.70
3	9.42	9	28.27
3¼	10.21	9½	29.84
3½	11.00	10	31.42
3¾	11.78	10½	32.99
4	12.57	11	34.56
4¼	13.35	11½	36.13
4½	14.14	12	37.70
4¾	14.92	12½	39.27
5	15.71	13	40.84
5¼	16.49	13½	42.41
5½	17.28	14	43.98
5¾	18.06	14½	45.55
6	18.85	15	47.12



19

Teapot Lamp



SPOUT

20

How to Make Stretchout of Cone

21