

large worm-gear and worm, to impart an upward and downward motion to the table, the motion of the table also giving a lateral or draw cut to the knife-bar as it rises upward in the operation of cutting. Secured to the table is an arched or curved yoke, fitted with pistons which have an upward and downward movement in cylinders secured to the paper clamps on its rear side, the clamp resting on pins slightly below the cutting edge of the knife. The knife is arranged to traverse to the right and left between rollers in the housings, having neither upward nor downward movement, and, by a new and improved device, it is made adjustable, by simply turning a screw at the end of the knife-bar, it being so arranged that the knife is moved downward, and at the same time kept perfectly parallel with the cutting strip, as well as making it easy and quick of adjustment.

In working the machine, the operator pulls toward him the lever seen at the right hand side of the machine, which throws in gear a clutch, starting in motion the large crank worm-gear, which imparts an upward motion to the table, carrying with it the paper against the clamp, the clamp being pressed down firmly against its seat by the air pressure between the pistons and bottoms of the two air cylinders, the same movement of the lever which started the clutch having at the same time admitted air through a suitable valve to the two cylinders and underneath their pistons, and also at the same time to the cylinder on top of the machine. All the pressure entering the upper cylinder assists in pulling upward on the table by means of the connecting rod attached to the tongue on the yoke, and helping the gearing to force the paper against the cutting edge of the knife, thus aiding in cutting the paper, whilst at the same time the two cylinders on the clamp are holding it firmly in position to be cut.

To make the process of clamping and cutting still more plain, it may be stated that the air-clamp being pressed down firmly against its seat by the compressed air, the upward movement of the table carries the paper against the clamp. It, of course, cannot move the clamp till the paper is pressed upward firmly against the clamp, and securely clamped, after which the clamp, cylinders, yoke and table, all move upward together until the end of the stroke is reached and the cut made, when they again move downward together until the lower end of the stroke is reached and the cut is made, when the clutch is automatically unshipped and the valve opened, releasing the air from their respective cylinders, and loosening the paper from the clamp.

This machine is provided with metallic indicator, gauge, squares, and all the conveniences of other paper cutting machines, and is sold at prices no higher than any other first-class cutting machines.

FEISTER'S SELF-CLAMPING CORNER-ROUNDING MACHINE.

The accompanying engraving shows a very unique and simple machine, invented by Mr. Feister : and one in which bookbinders, manufacturers of cards, photographers and others, are supplied with a much needed want, for the rounding of the corners of books, cards, etc.

The cost of this machine is very small, and the work is done with great rapidity and uniformity, the paper being partly self-adjustable. The engraving does not require an elaborate explanation any more than to say that different sizes of corners can be cut without removing the knife from the machine. It is claimed that, with one machine, a boy can round the corners of a million cards a day. Rex & Bockius, 614 Filbert street, Philadelphia, Pa., are the manufacturers.

