No. 680,674. Patented Aug. 13, 1901.

J. FRANCK.

PRICKING MACHINE.

(Application filed Mar. 12, 1900.)

(No Model.)

Fig. 1.

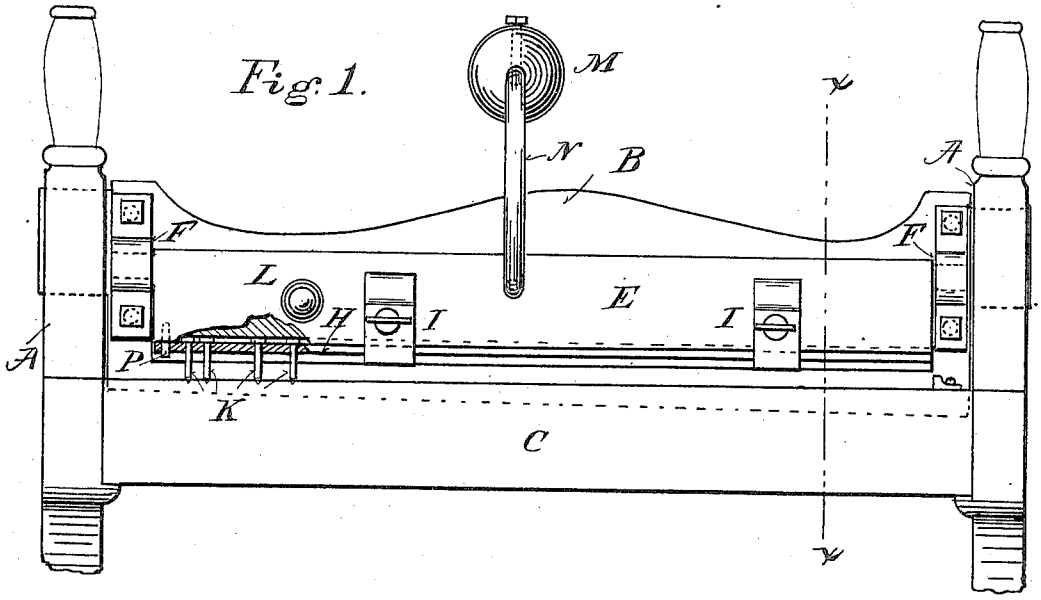


Fig. 4.

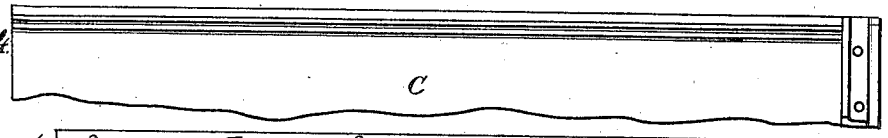


Fig. 3.

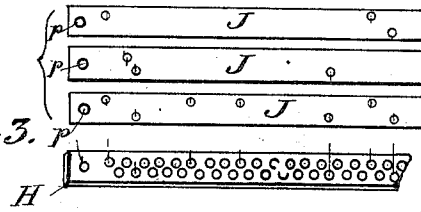
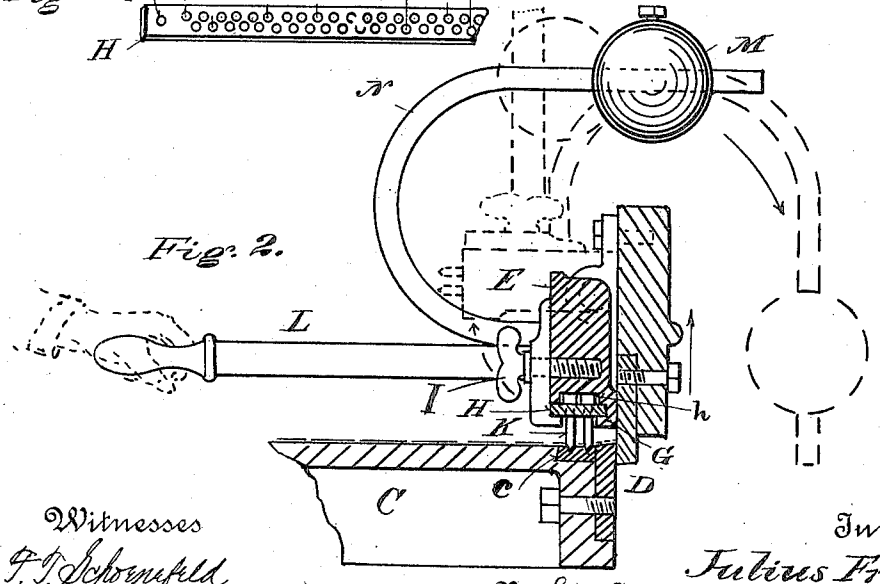


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

JULIUS FRANCK, OF ST. LOUIS, MISSOURI.

PRICKING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 680,674, dated August 13, 1901.

Application filed March 12, 1900. Serial No. 8,273. (No model.)

To all whom it may concern:

Be it known that I, JULIUS FRANCK, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Pricking-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in pricking-machines, the peculiarities of which will be hereinafter fully described and claimed.

The object of my improvements is to provide a simple and effective device which may be used alone, but preferably as an attachment to a shear or other suitable machine having a vertically-moving head adapted to carry this attachment, whereby the attachment may be used conjointly with the shear or other machine, so that both will operate at the same time, or the attachment may be thrown out of operative position, so that the machine which carries it may be used for its own proper purpose without the attachment interfering therewith.

To this end my improvements have reference to a bar provided with prick-pins, which bar is mounted on the head of the shear, for instance; have reference to certain peculiarities of engagement and disengagement of the attachment, whereby it may be thrown into and out of operative position; have reference to peculiarities of the bar and a perforated strip in which said pins are mounted, and have reference to other points hereinafter described and claimed.

In the accompanying drawings, on which like reference-letters indicate corresponding parts, Figure 1 represents a front view of my attachment mounted upon the head of a shear and its supporting-guides; Fig. 2, a vertical transverse section on the line x x, Fig. 1; Fig. 3, a detail showing a portion of the perforated strip for the pins and several templets for locating the latter at predetermined distance apart therein; Fig. 4, a plan view of a portion of the bed, showing the grooves for the pins to enter.

The letters A A designate the guides of a shear, for instance, in which is mounted the head B, adapted for vertical movement by the ordinary foot-treadle by which it is operated or other suitable means. (Not shown.) C is the bed on which the sheet metal (indicated by dotted line) rests when under operation. The shear-blades are shown at D. Upon this movable head is mounted a bar E, preferably adapted to swing or partly rotate in the bearings F, secured to said head. In the outer edge of the bar is a slotted hook G, in which is slipped one edge of a perforated strip H, (shown in detail in Fig. 3,) which is held in position at the other edge by clamps I, screwed to said bar, or by other suitable fastening means. The strip H has a series of holes staggered along its length, as shown in Fig. 3, whereby the predetermined distances, according to the templets J, are found for the insertion of the pointed pins K, which act upon the sheet metal in the downward movement of the head and the bar E, which it carries.

It will be seen in Fig. 2 that the bar E opposite the middle of the strip H is grooved to receive the heads of the pins, which are thus held in place when the clamps are secured, and are backed up by the bar in their operation upon the sheet metal.

To provide for the entrance of the pin-points, corresponding grooves are made in the bed C, in a strip c inserted therein, or such grooves or depressions may be made directly in the bed itself. The prick-marks are made a suitable distance (one-half to three-quarters of an inch) back of the cutting edges of the blades D.

A handle L projects from the bar E, by which the latter is retained in its lower position, as shown in the figures, for the operation of the prick-pins. On the upward stroke of the head carrying the bar the hand retains its position, as indicated by dotted lines, unless it be desired to operate the shear alone. In this case the hand releases the handle L, and a weight M, carried on the other side of the axis of the bar by means of a bent rod N or otherwise, throws the bar upward and the pins to horizontal position, as shown by the dotted lines and direction of the arrow in Fig. 2. The shear may now be used independently.

By moving the weight M to the left along its supporting-bar N, so that it acts upon the other side of the vertical plane through the axis of the bar, the latter will retain its lower operative position without the action of the

hand upon the handle L. It is then adjusted for continuous operation of the pricking attachment, either for marking only or for marking and at the same time cutting the surplus sheet metal extending beyond the blades E.

In cornice-work where a large number of accurate measurements is required to be multiplied in sheet metal the advantage of this arrangement is very evident. The measurements are first laid off upon the strips J, before mentioned, and by these templets the corresponding distances are found with sufficient accuracy in the rows of holes in the distance-strip H. The pointed pins are quickly inserted in the strip H, the latter is slipped sidewise into the hook G, and the clamps I secure the opposite edge and bring the heads of the pins against the top of the slot *h* in the bar E, thereby holding them rigid. The strip H is prevented from sliding lengthwise by a stud-pin P, which fits a matching hole *p* in the said strip, as shown in Figs. 1 and 3. The templets J have a similar hole, and the distances are laid off on the templets with respect thereto. These are kept in stock for use at any future time. Thus it is evident that any set of distances laid off on the respective templet may be readily transferred to the perforated strip H, the pins inserted, the strip slipped into the slotted bar and clamped, and the liability to error reduced to a minimum. Furthermore, the absolute uniformity of the prick-marks, the speed of operation, and the unskilled labor that may be employed are among the practical advantages of my invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a shear or other machine having a vertically-movable head and opposing bed, of a swing-bar mounted on said head, a perforated strip secured to said bar, prick-pins variably mounted in said strip, means to hold said pins opposite said bed, and means to swing said bar upward automatically to direct said pins away from the bed.

2. The combination with a shear or other machine having a vertically-movable head, and opposing bed having grooves or depressions, of a rotatable bar mounted in bearings on said head, pins carried on one face of said bar, a handle to hold the bar and pins downward to operative position, and a weight to throw them out of said position when the handle is released.

3. The combination with a vertically-movable head and opposing bed, of a swing-bar mounted on said head, having a slotted hook in its outer face, clamps opposite said hook, a perforated strip held by said hook and clamps, prick-pins loosely mounted in said strip, having their heads secured in a middle groove in said bar, and means to secure said bar in upper and lower position respectively.

In testimony whereof I affix my signature in presence of two witnesses.

JULIUS FRANCK.

Witnesses:
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H. M. PLAISTED.