O. SNOW.

Metal Punch.

No. 62,897. Patented March 12, 1867.

Fig. 1

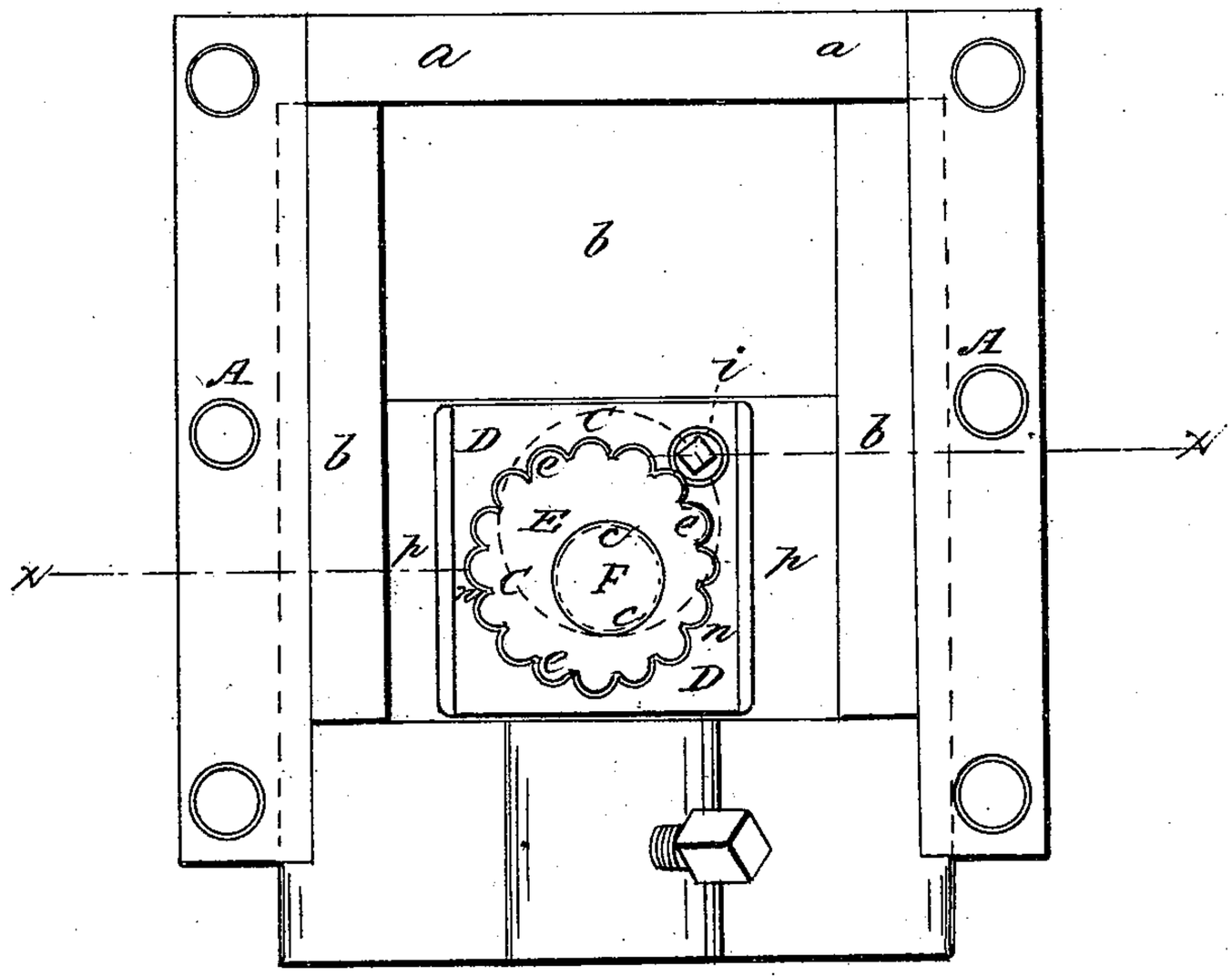
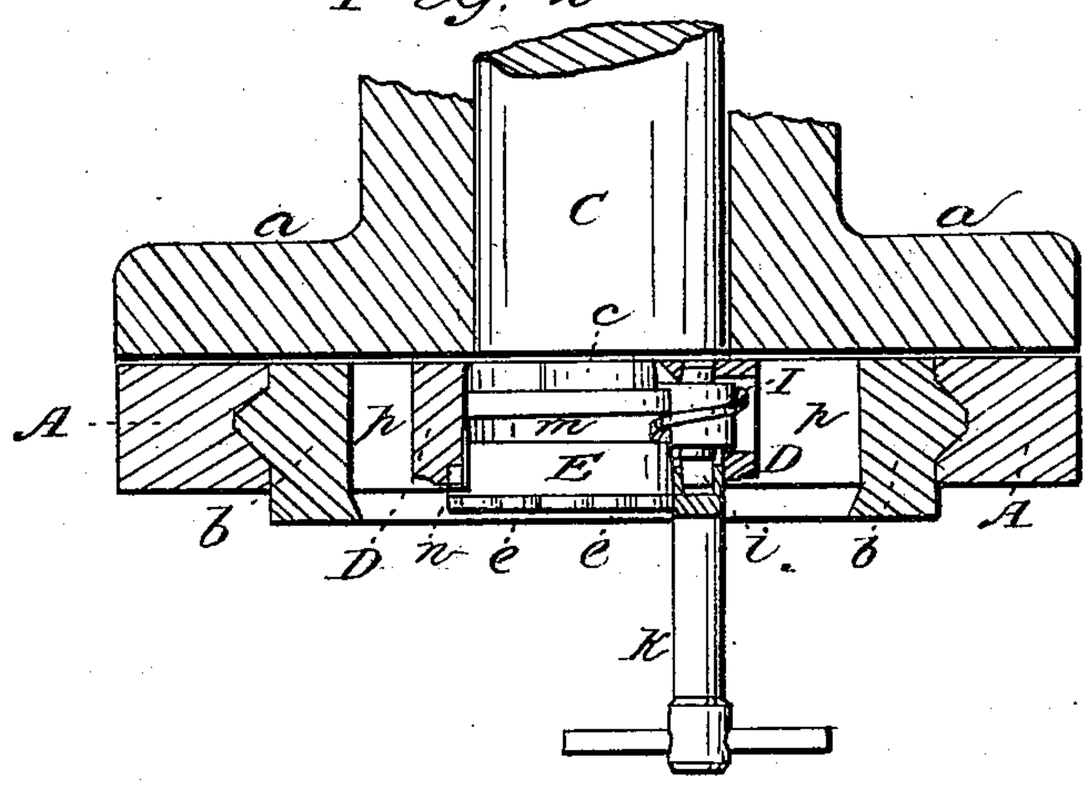


Fig. 2



Witnesses

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per Munn & Co

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OLIVER SNOW, OF WEST MERIDEN, CONNECTICUT, ASSIGNOR TO MERIDEN MANUFACTURING COMPANY, OF SAME PLACE.

Letters Patent No. 62,897, *dated March* 12, 1867.

IMPROVEMENT IN PUNCHING MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, OLIVER SNOW, of West Meriden, in the county of New Haven, and State of Connecticut, have invented new and useful improvements in Punching Press; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The punch of a punching press becomes worn and dull with use, so that it has occasionally to be ground up and resharpened, and such grindings soon shorten the tool so that it cannot reach its work properly; and without some provision is made for adjusting the tool anew in the machine, so as to compensate for such wear, the tool becomes useless and is condemned. The object of this invention is to provide a means whereby the tool-holding socket of the machine may be adjusted nearer to the punching table or anvil, so as to give the tool the same reach or depth of stroke always with relation to the table, until it is quite worn out, in a strong and ready manner.

My invention consists in a novel construction of wrist-box, for the wrist or driving crank that drives the tool-carrying slide or socket, and whereby the distance between the driving wrist and tool socket is varied at will, as hereinafter fully set forth.

Having described the nature of my invention, I will proceed to describe its construction and operation.

Figure 1, in the accompanying drawing, is a front view of my improved wrist box, with some of the adjacent parts of the press shown in red outline; and

Figure 2 is a horizontal section of the same, taken in the line *x x*, fig. 1.

Similar letters of reference in the different figures indicate corresponding parts.

A A are the guides, which are fixed on the front of the machine, and in which travels a vertical moving slide, *b b b* B, the portion B being the tool-holding socket; this slide is driven by a horizontal shaft, C, with a wrist or crank, *c*, which connects with the tool slide *b* B, by means of a wrist box, D D, the said wrist box sliding laterally in a horizontal slot, *p p*, fig. 1, in the slide *b* B, to accommodate the lateral motion of the driving wrist while the vertical motion of the wrist is accommodated by the vertical throw of the slide *b* B. The wrist box D D is constructed with a movable centre-piece, E, in its centre, and the said centre-piece E having a hole, F, fig. 1, placed eccentrically therein for receiving the driving wrist *c*. By turning the centre-piece E, in the wrist box D, and securing it in a new position, the wrist-hole F, owing to its eccentricity in E, takes up a new position with relation to the wrist box, so that the wrist box and slide *b* B are thereby raised or lowered with relation to the driving wrist and punching table, and provision made for accommodating the parts to variations in length of tool or punch. The centre-piece E is secured firmly in position by having projections, *e e*, which fit into corresponding indentations, *n*, fig. 2, in D, and when the position of E is to be changed in D, then E is partially withdrawn from D, as shown by fig. 2, so that the projections *e e* are removed from the cavities *n*, and then when E has been turned into the position desired, it is returned to D, so that the projections *e e* again engage with the cavities or depressions *n n*, and secure the eccentrically-placed wrist hole in position in a strong and reliable manner. The centre-piece E is thrown out for adjustment, as shown by fig. 2, by an endless screw, I, fig. 2, which engages with a groove, *m*, in E. The screw I is operated to throw E out and into its seat in D, by a key, K, fig. 2. By these means I provide *a* tool-adjusting movement for compensating for the wear of the tool, which is compact, very strong and durable, and which is easily operated.

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

I claim the combination of the wrist box D, adjustable centre-piece E, and endless screw I, operating substantially in the manner and for the purpose specified.

The above specification of my invention signed by me this 21st day of February, 1866.

OLIVER SNOW.

Witnesses:

ALBERT W. BROWN,

M. M. LIVINGSTON.