I. Manning,

Shoe-Sole Machine,

No. 68,094, Patented Aug. 27, 1867.

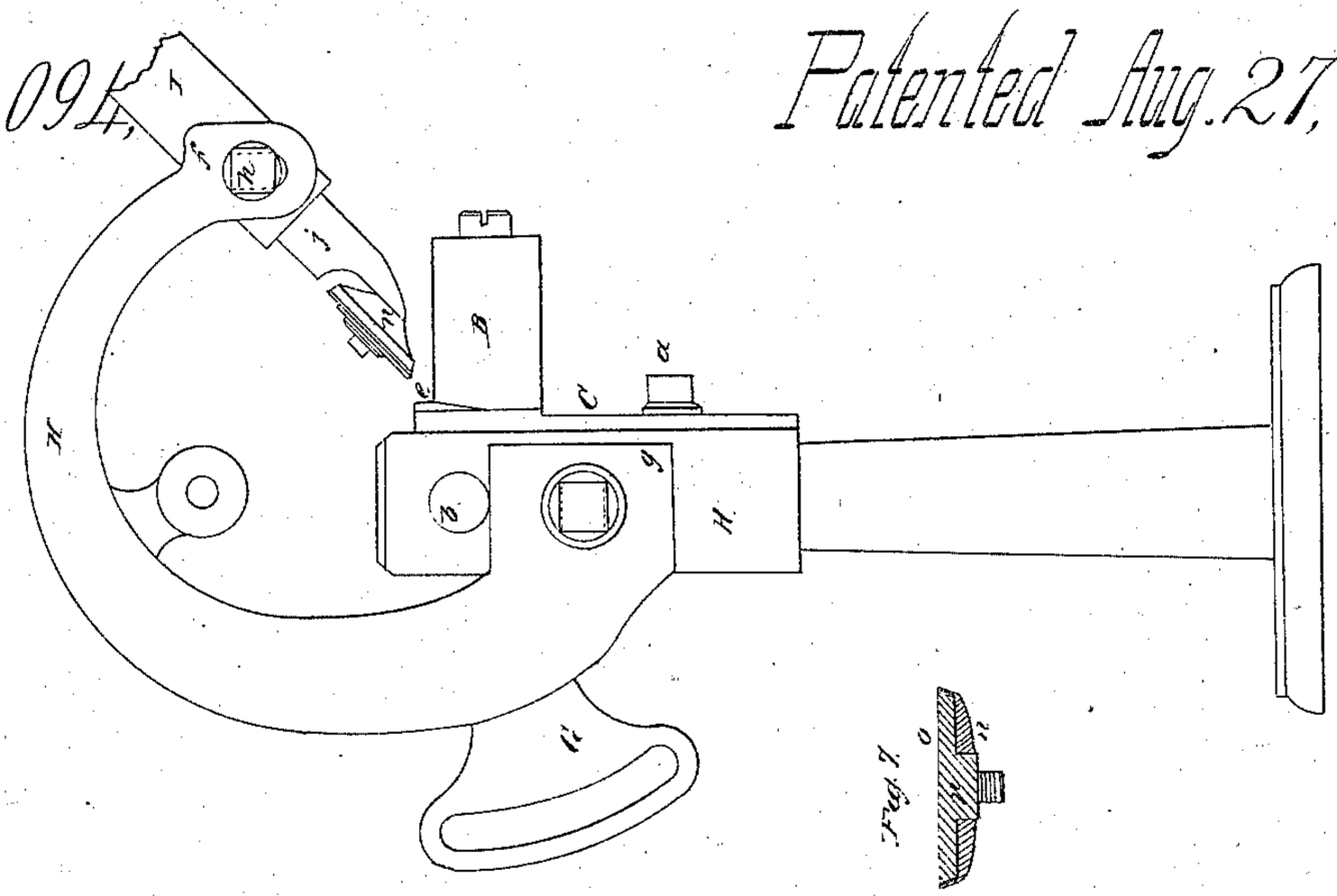

Fig. 2.

Fig. 7.

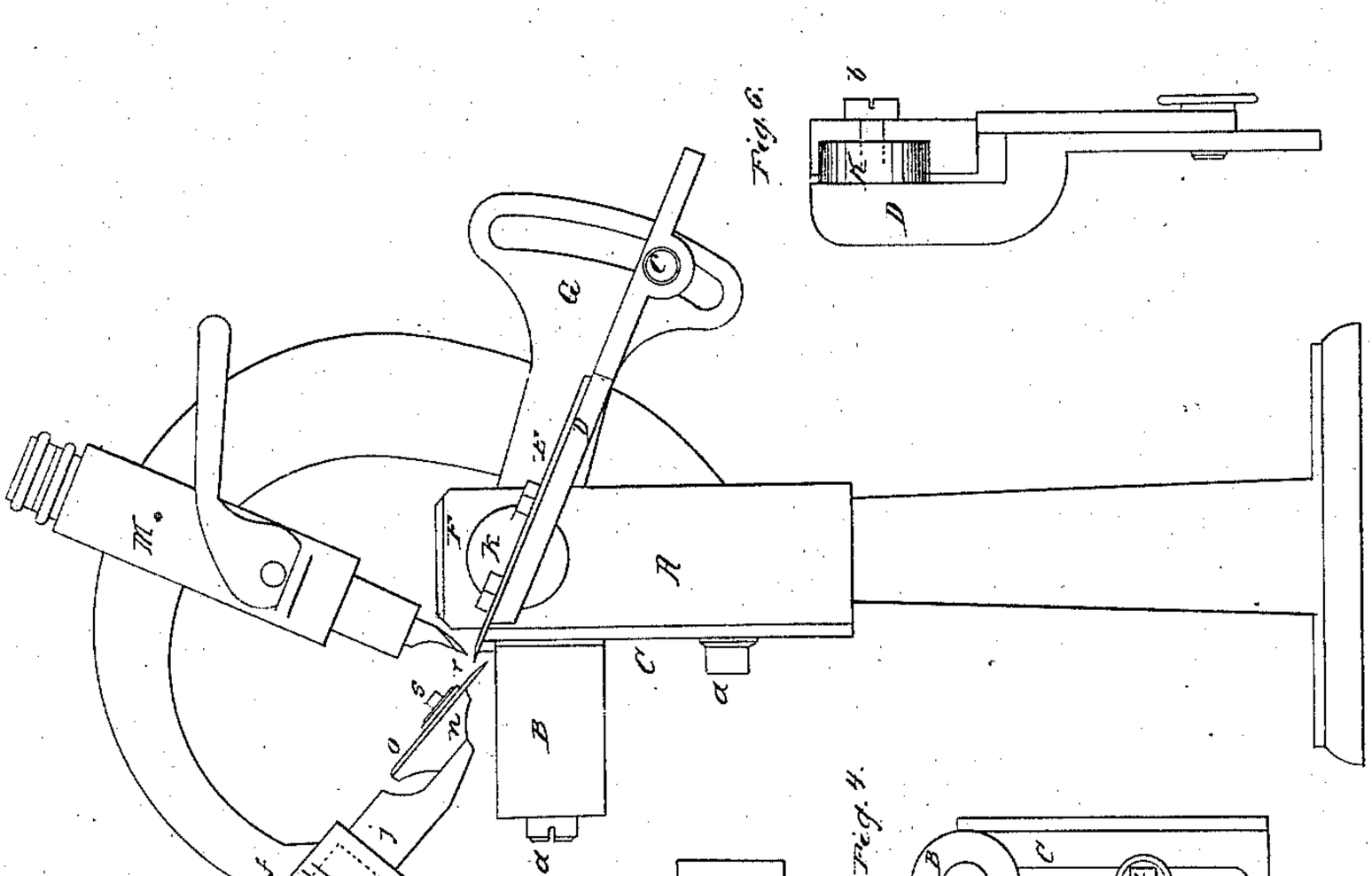

Fig. 1.

Fig. 6.

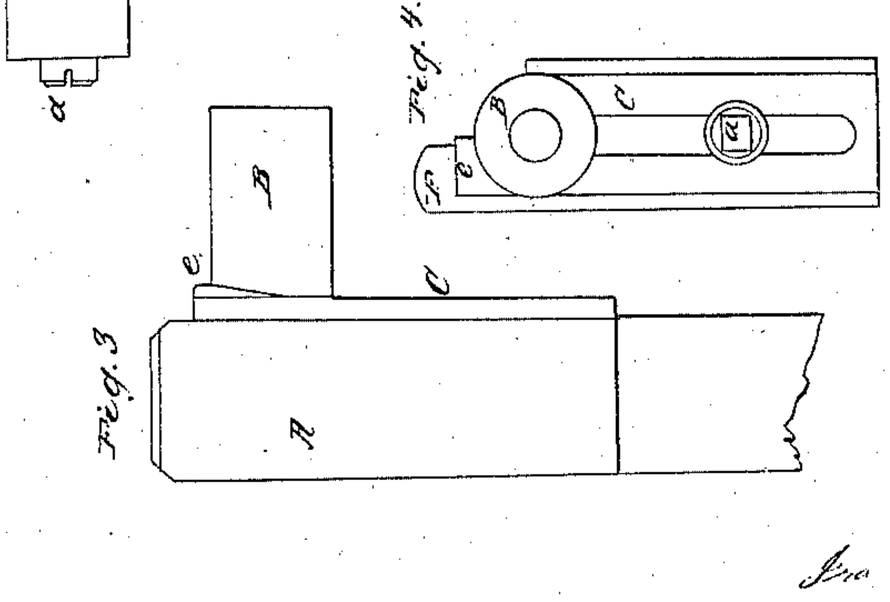

Fig. 4.

Fig. 3.

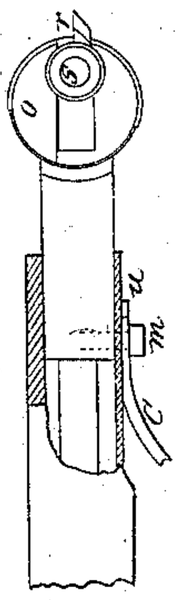

Fig. 5

Witnesses:
Frank Gardé
Francis D Pastenis

Inventor
Jno Manning

United States Patent Office.

IRA MANNING, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 68,094, *dated August* 27, 1867.

IMPROVED CHANNELLING AND BEVELLING MACHINE.

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, IRA MANNING, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and improved Machine by which the Soles of Boots and Shoes are Channelled and Bevelled at one and the same operation; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

My invention has reference to channelling and bevelling the soles of boots and shoes and other leather work at one and the same operation, which is effected by a tool or machine in which the knives are capable of adjusting, so as to properly gauge the depth and inclination of the channel, and give the required bevel to the edge of the sole. In case the bevel be not wanted, the bevelling-knife can be removed by turning it on its centre.

On reference to the accompanying drawing making part of this specification—

Figure 1 is a side elevation.

Figure 2 is also a side elevation, showing the circular arm II.

Figure 3 is a side view of the column A, showing the roller B, the adjusting-plate C, and the guide *e*.

Figure 4 is a front view of the same.

Figure 5 is a plan view of the cutter-head *n*, presser-roller *m*, and the barrel I.

Figure 6 is a plan view of the bevelling-knife bed E, and the arc G; and

Figure 7 is a sectional view of the cutter-head *n* and the presser-roller *m*.

Similar letters refer to similar parts in the several views.

A is a column or stand, to the front of which an adjusting-plate, C, carrying the friction-roller B, is attached by the bolt *a*, which is contained in a slot in the said plate, permitting it to raise and lower when the bolt is slackened. D is a bed or knife-plate, rotating on a hub, *k*, fixed to its edge, which takes into a corresponding opening in the extension F of the stand. A screw, *b*, serving for a centre, keeps it in place. The bevelling-knife E is fixed to the plate D by bolts, which, by taking into the slots formed in it, permit it to be adjusted in the direction of its length. G is a slotted arc fixed to the back of the stand, adjacent to the plate, so that its tightening bolt *c* takes into the slot. The end of the vibrating plate D is raised or lowered until the knife acquires the requisite inclination relative to the sole for giving the proper bevel. By loosening the holding-down bolts the knife can be adjusted in the direction of its length, for bevelling soles of all thicknesses. H is a curved arm, fixed to the side of the column; its end *f* extends beyond and above the roller B. A slot is formed in its end *g*, so that the distance of the end *f* from the stand can be regulated. I is a barrel, fixed to the end *f* of the arm H, by a bolt, *h*, passing through a slot in it. By means of the said bolt and slot its position relative to the roller B is adjusted. The barrel carries the channelling-knife, and regulates the inclination and depth of the channel made by it, and is constructed substantially as follows: *j* is a spindle contained in the said barrel; it is reduced in diameter at a point near the lower end of the barrel, forming a shoulder. The upper end of the reduced portion has a screw cut on it, on which take the nuts *k k'*. A spiral spring, J, takes over the spindle between its shoulder and the screw-stopper *l*. L is a lifting lever, fixed to the larger diameter of the spindle by the bolt *m*, which moves in the opening formed for that purpose in the side of the barrel. Upon the lower end of the spindle *j*, which is flattened, is a presser-roller, *n*, and a knife-head or holder, *o*, which are constructed and arranged as follows, fig. 7: *o* is a circular flat plate, on a hub, *p*, fixed to the flattened portion of the spindle. A wedge-shaped groove is cut in its face, for containing the channelling-knife *r*, which retains its place by means of a bolt, *s*, passing through a slot in it, for adjusting it. *n* is a presser-roller, encircling the plate *o*, and revolves freely on its hub *p*. An additional barrel, M, for channelling the outside of soles, which requires that the channel be formed at an inclination contrary to that made by the barrel I, is attached to the arm H, as shown. It is precisely similar to the barrel I in its construction and operation, with the exception that the knife-head and presser-roller are dispensed with, the knife being bolted directly to the spindle. A curved guide, *e*, as shown, is fixed to the adjusting-plate C; it projects above the roller B, and extends to the vertical plane of its diameter, terminating abruptly; it is for guiding a sole while being channelled and bevelled at its inwardly-curving edges.

To channel and bevel a sole, adjust the spindle *j* by the nuts *k k'*, so that the presser-roller M bears upon the sole upon the friction-roller B, the barrel I having been previously set to the required inclination. Regu-

late the knife *r*, making the distance from its point to the rim of the presser-roller equal to the depth of the required channel, and set the bevelling-knife E at the required angle, by depressing or elevating the knife-plate. Press the sole forward against the knives, keeping its edge firmly against the guide *e*, and upon the friction-roller B, which revolves in the direction in which it moves, thereby reducing the friction. As the sole moves against the knives, they channel and bevel it at one and the same time. Particular attention must be given to the inwardly-curving parts of the sole, which require to be skillfully manipulated. When the knives have traversed the entire edge of the sole, the channelling-knife is cleared, by rotating the lever L until its swell takes on the projection *u* of the barrel, which causes the spindle to take into the barrel, when the sole can be removed. There are two nuts *k k'* on the spindle *j*, as shown; one is a jam-nut, which can readily be dispensed with, it being merely to prevent its attendant adjusting-nut from turning.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination and arrangement of a channelling-knife and a bevelling-knife in the same machine, whereby a sole is channelled and bevelled at the same time, as shown.

2. Arranging the channelling and bevelling-knives so that either can be removed, whereby a sole can either be channelled or bevelled, as shown.

3. The barrel I, when constructed, arranged, and operating substantially as shown and described.

4. The adjusting-plate C, the friction-roller B, and the guide *e*, as shown and described.

5. The knife-holder D and the arc G, as shown and described.

In testimony whereof I hereunto sign my name to this specification in presence of two subscribing witnesses.

IRA MANNING.

Witnesses:

FRANCIS D. PASTORIUS,

DAVID BEITLER.