

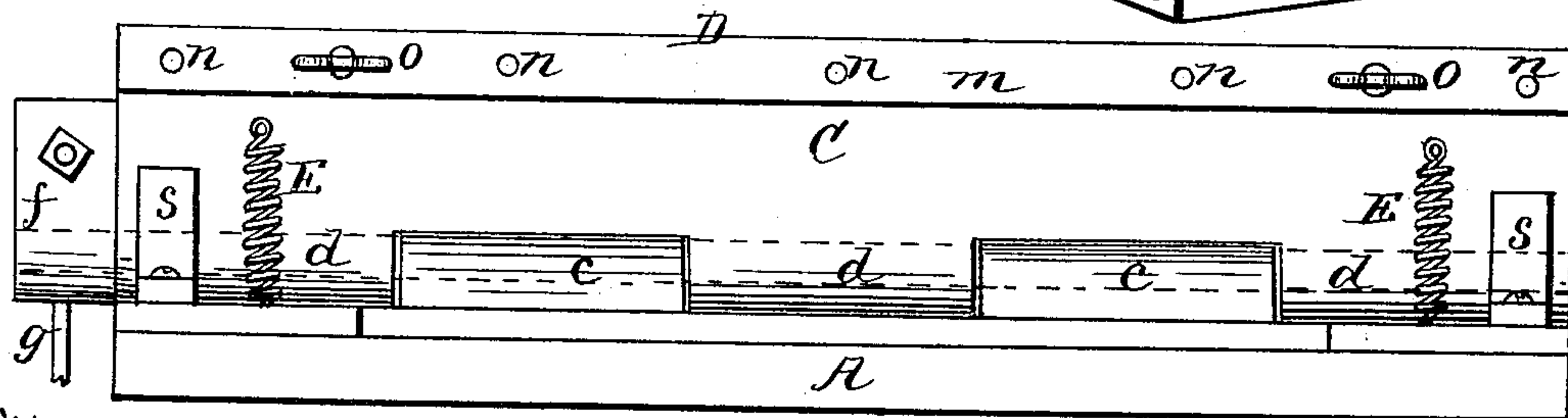
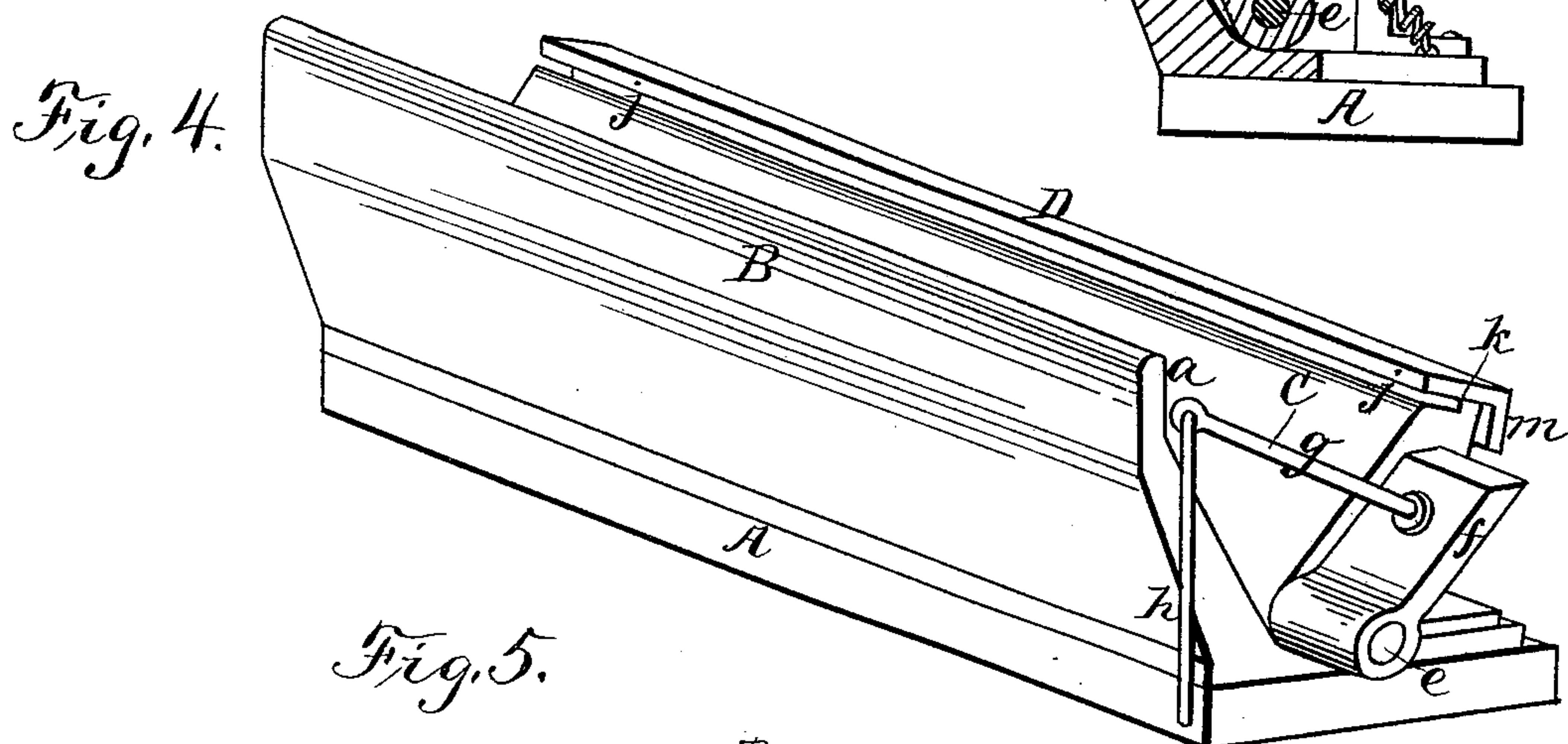
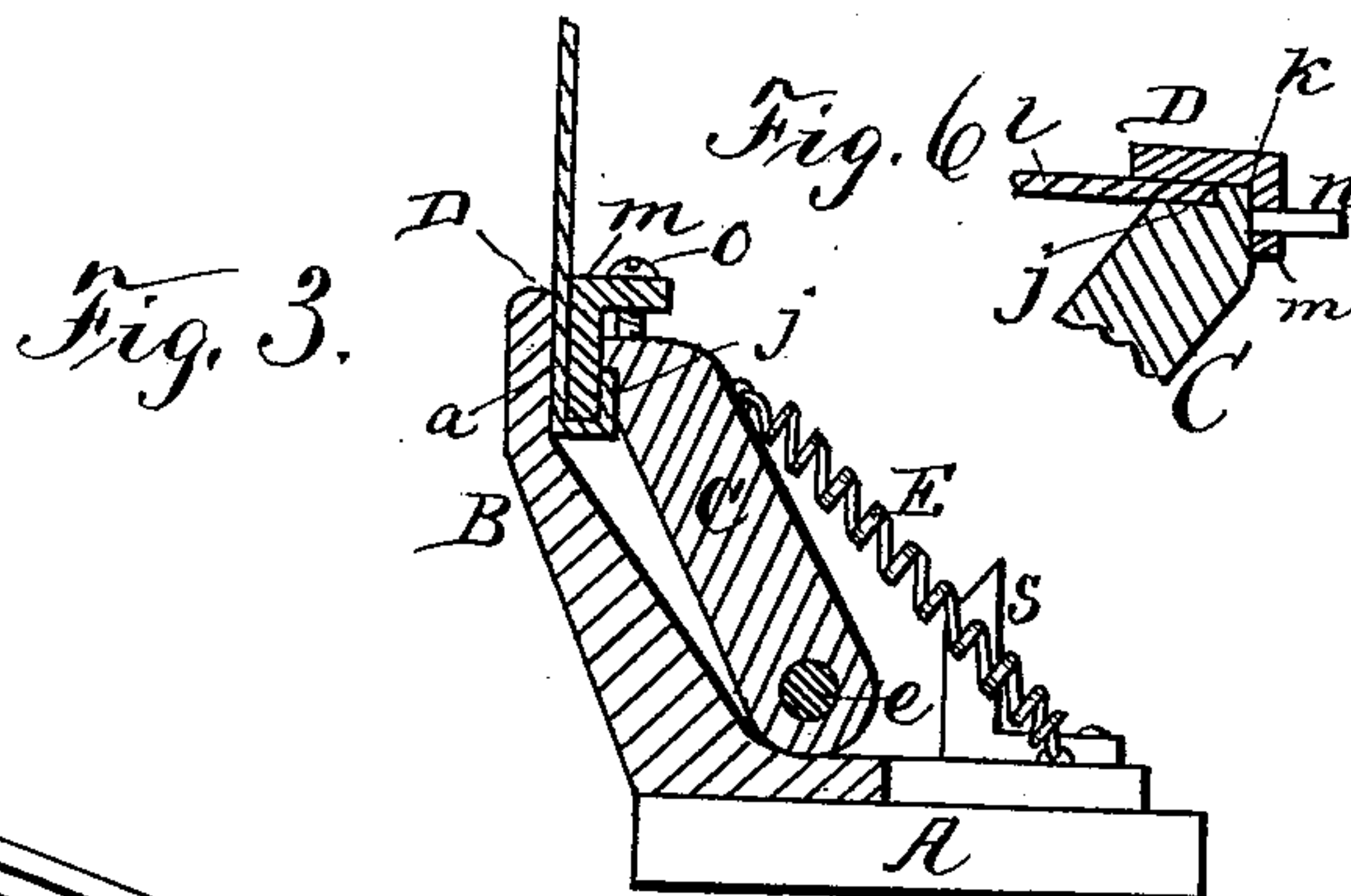
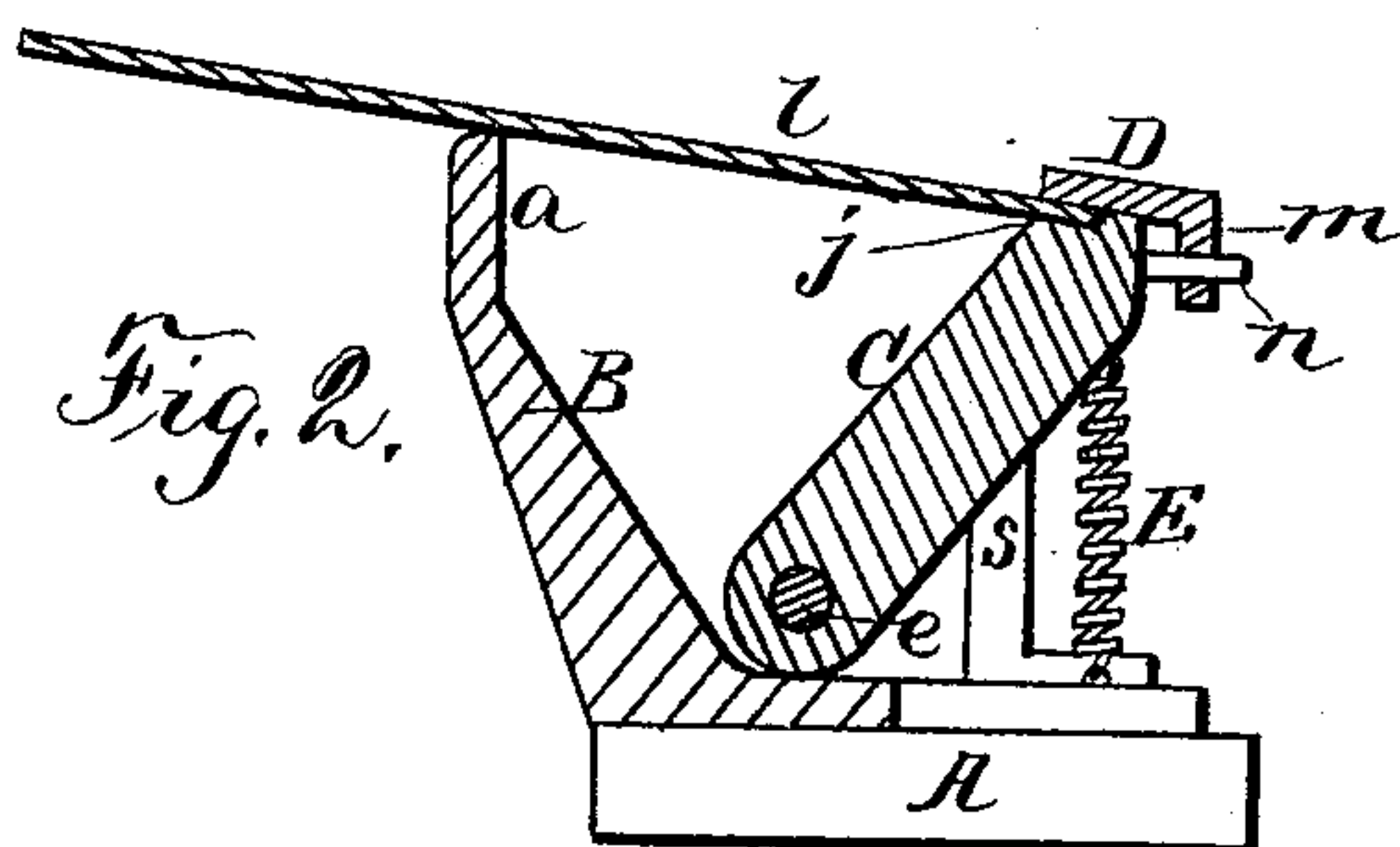
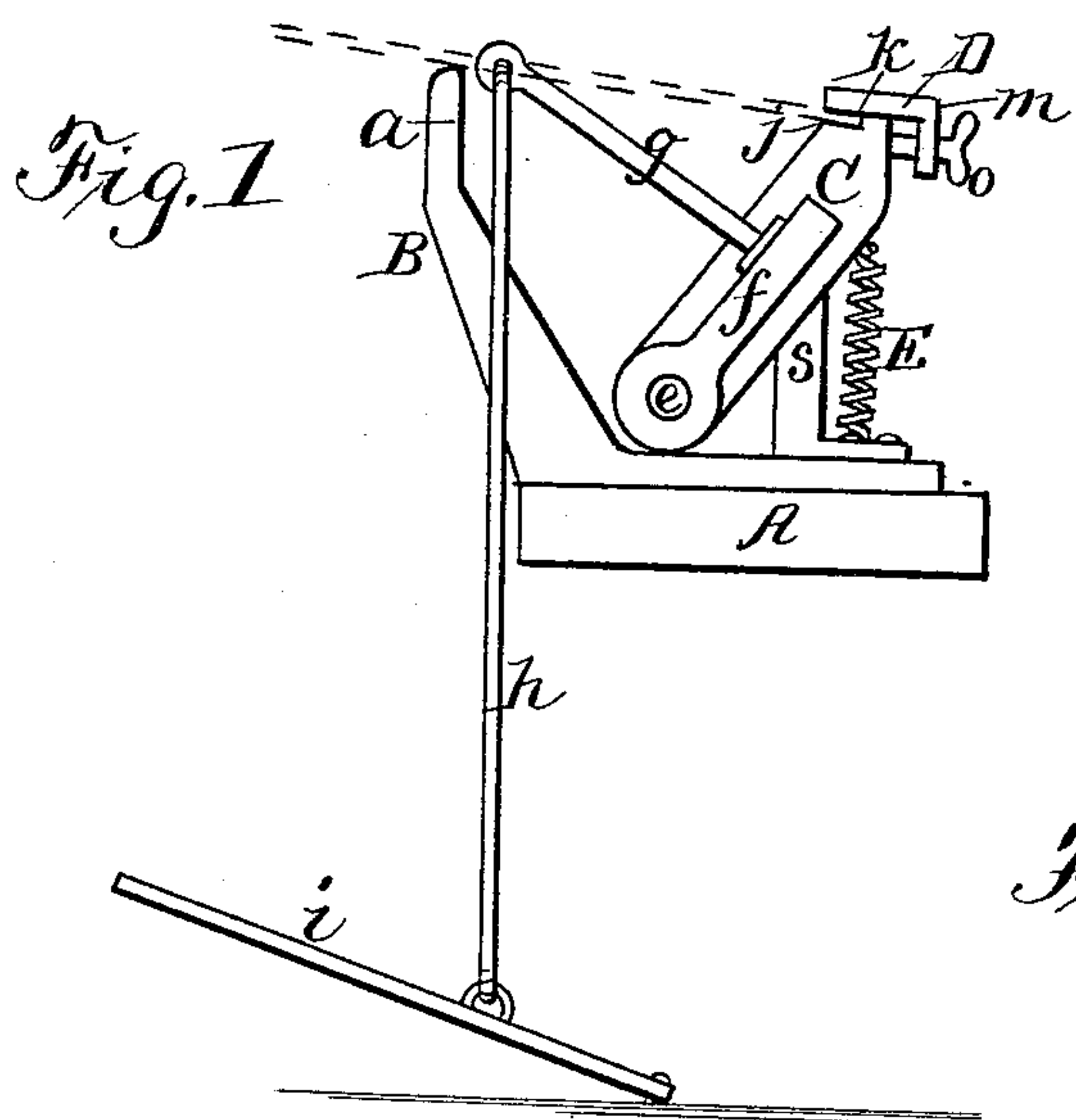
(No Model.)

E. R. STASCH.

# MACHINE FOR BENDING SHEET METAL.

No. 377,336.

Patented Jan. 31, 1888.



Witnesses

Ella S. Johnson.  
 Open L. Macbrille.

Inventor

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By his Attorneys

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# UNITED STATES PATENT OFFICE.

EMIL R. STASCH, OF CORNING, NEW YORK, ASSIGNOR TO VICTOR HAISCHER  
AND BERTHA STASCH, BOTH OF SAME PLACE.

## MACHINE FOR BENDING SHEET METAL.

SPECIFICATION forming part of Letters Patent No. 377,336, dated January 31, 1888.

Application filed April 13, 1887. Serial No. 234,655. (No model.)

*To all whom it may concern:*

Be it known that I, EMIL R. STASCH, a citizen of the United States, residing at Corning, in the county of Steuben and State of New York, have invented new and useful Improvements in Machines for Bending Sheet Metal, of which the following is a specification.

This invention relates to improvements in machines for bending or flanging the edges of sheet metal; and the improvements consist in the construction, arrangement, and combinations, as will hereinafter be more particularly described, and pointed out in the claims.

The machine comprises in its organization a stationary bending-jaw, a movable bending-jaw co-operating with said stationary jaw in effecting the bending or flanging of the sheet metal, means for operating said movable jaw, and means for automatically restoring the same to its receiving position on release of the operative force, and an adjustable bending-gage for regulating the extent or degree of width of the bend or flange, all as will more fully appear from the description hereinafter following, when taken in connection with the accompanying drawings, wherein—

Figure 1 is an end elevation of a sheet-metal-bending machine embodying my improvements; and Fig. 2 is a cross sectional view thereof, showing the movable jaw at the extent of its outward limit and representing the manner of inserting the edge of the sheet metal between the upper longitudinally-recessed surface of said jaw and the adjusting-gage. Fig. 3 is a similar view to Fig. 2, showing the movable jaw as forced or moved up into juxtaposition to the stationary jaw for effecting the bend of the metal. Fig. 4 is a view in perspective of the machine. Fig. 5 is a longitudinal side elevation taken from the opposite side to Fig. 4, and Fig. 6 is a sectional detail.

Reference being had to the several parts by the letters marked thereon, A represents the bed-plate, on which is rigidly supported the stationary jaw B, extending longitudinally thereof for its whole length, the said jaw being formed on its inner face or surface with a straight portion, *a*, arranged relatively to the movable jaw in the position shown. The bed has lon-

gitudinal tubular bearings *c c*, to receive the movable jaw C, which has corresponding tubular bearings, *d d*, alternating with and fitting between the bed-bearings to receive a hinge-rod, *e*, to which the movable jaw is fixed. On one end of the hinge-rod a crank, *f*, is fixed, to which is attached the connecting-rod *g*, having the pitman *h* depending therefrom and secured to the treadle *i*. The upper edge or surface of the movable jaw is recessed, as at *j*, forming a shoulder or backing, *k*, for the edge of the sheet-metal strip *l* when properly inserted.

An angle-gage, D, rests upon the shouldered edge of the jaw C and depends over the rear side of the same, as at *m*. This gage is movably supported upon the shouldered top of the jaw by means of guide-pins *n*, projecting from the rear side of said jaw and passing through openings in the gage, while suitable adjusting screws, *o o*, are employed for causing the upper portion of the gage to extend inward over the recessed top of the jaw to a greater or less extent, and thereby permit of the formation of flanges of varying widths.

E E represent springs having one end secured to the base and the other to the movable jaw, and the tendency of which is to hold this jaw outward, as shown in Figs. 1 and 2, it being apparent that the said springs will act to restore the jaw on release of the power exerted to bring it to the position shown in Fig. 3.

In the open position of the movable jaw it is supported against the tension of the retracting-springs by stops *s*, rising from the bed in position to be struck by the rear side of the jaw in its opening movement.

The operation is as follows: The edge of the sheet metal to be bent is inserted into the longitudinal recess formed between the gage-plate and the upper recessed surface of the movable jaw, the gage having been first adjusted to set the flange or bend to the desired width, whereupon the foot-treadle *i* is depressed and the jaw C is caused to move up to the jaw B in the manner indicated at Fig. 3, thereby bending the metal in the manner represented. I desire to here state that by reason of the contour of the space formed between the straight portion *a* of the jaw B and the recess



*j* and gage I am enabled to get a double right-angled bend or flange, which is very desirable in many instances in which the joining together of two or more sheets of metal is desired to be effected by interlocking.

After the metal is bent, the treadle is released and the springs will open the jaw C in the manner already explained.

I claim—

1. In a machine for bending or flanging sheet metal, the combination, with the stationary jaw having straight surface *a* and the movable jaw recessed, as at *j*, of the angle-gage D, fitting over the upper edge of this latter jaw, the guide-pins *n*, and adjusting-screws by which said gage is regulated, substantially as described.

2. In a machine for bending or flanging sheet metal, the combination of the stationary jaw B, having the vertical face *a*, the movable jaw C, having means for tilting it toward the stationary jaw and for automatically withdrawing it from the same, and provided with the recess *j*, parallel with face *a* when brought against it and with the shoulder *k*, and gage D, having its inner side parallel to the face of the recess *j*, and provided with set-screws for adjusting the degree of its overlapping the recess, as and for the purpose shown and set forth.

3. In a machine for bending or flanging sheet metal, the combination of the stationary jaw having tubular longitudinal bearings at its base, the movable jaw having tubular longitudinal bearings at its lower edge fitting between the bearings of the stationary jaw, the hinge-rod inserted through the bearings and rigidly secured to the bearings of the movable jaw and provided with a crank at one end, the connecting-rod secured to the crank, the pitman pivoted to the connecting-rod at its upper end, the treadle having the lower end of the pitman pivoted to it, the springs secured to the movable jaw and to the bed of the stationary jaw, serving to withdraw the movable jaw from the stationary jaw, and the stops upon the bed-plate of the stationary jaw, having inclined upper faces for supporting the movable jaw when drawn back by the springs, as and for the purpose shown and set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

EMIL R. STASCH.

Witnesses:

A. E. H. JOHNSON,  
WM. R. MACKRILLE.