

(No Model.)

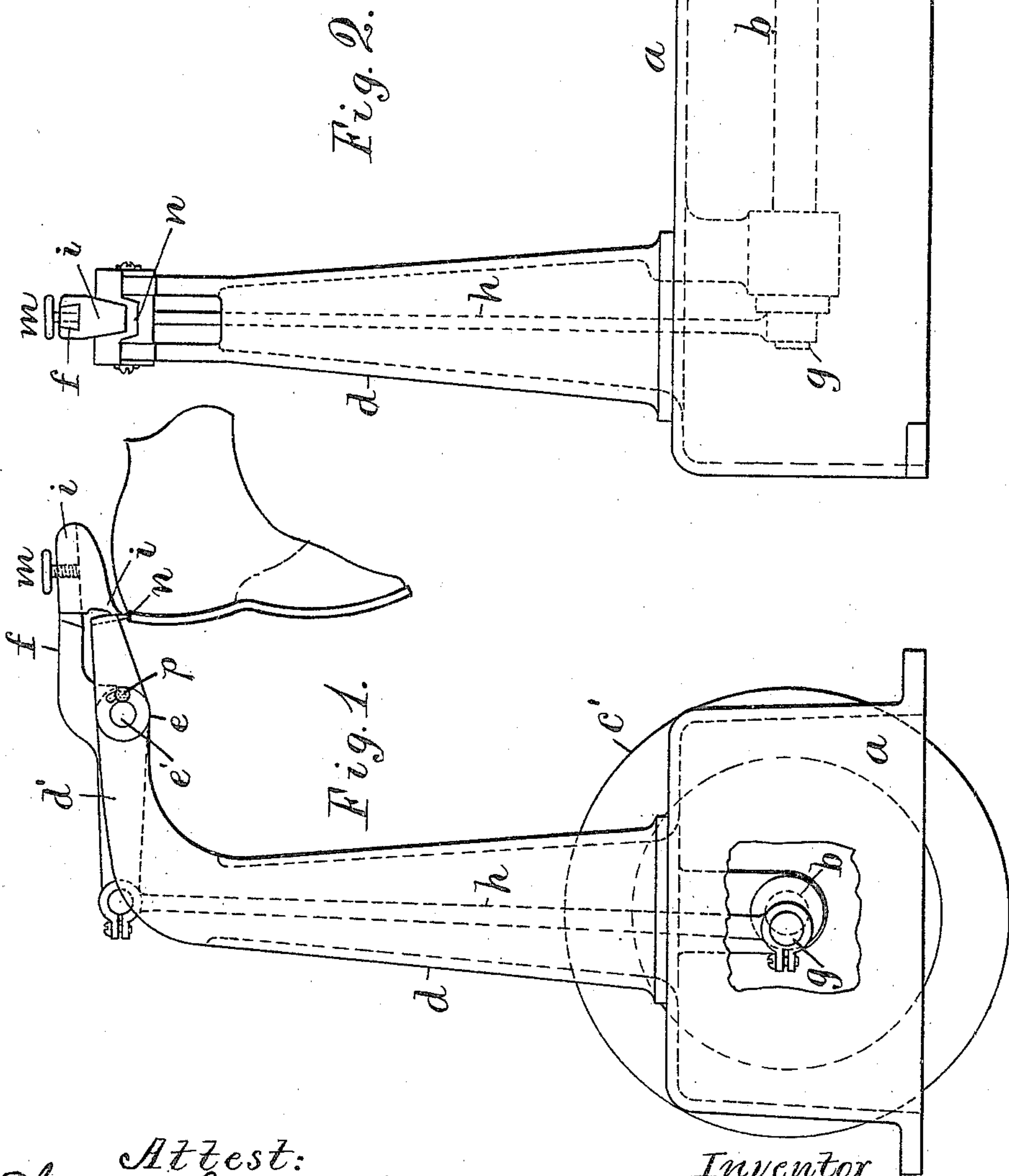
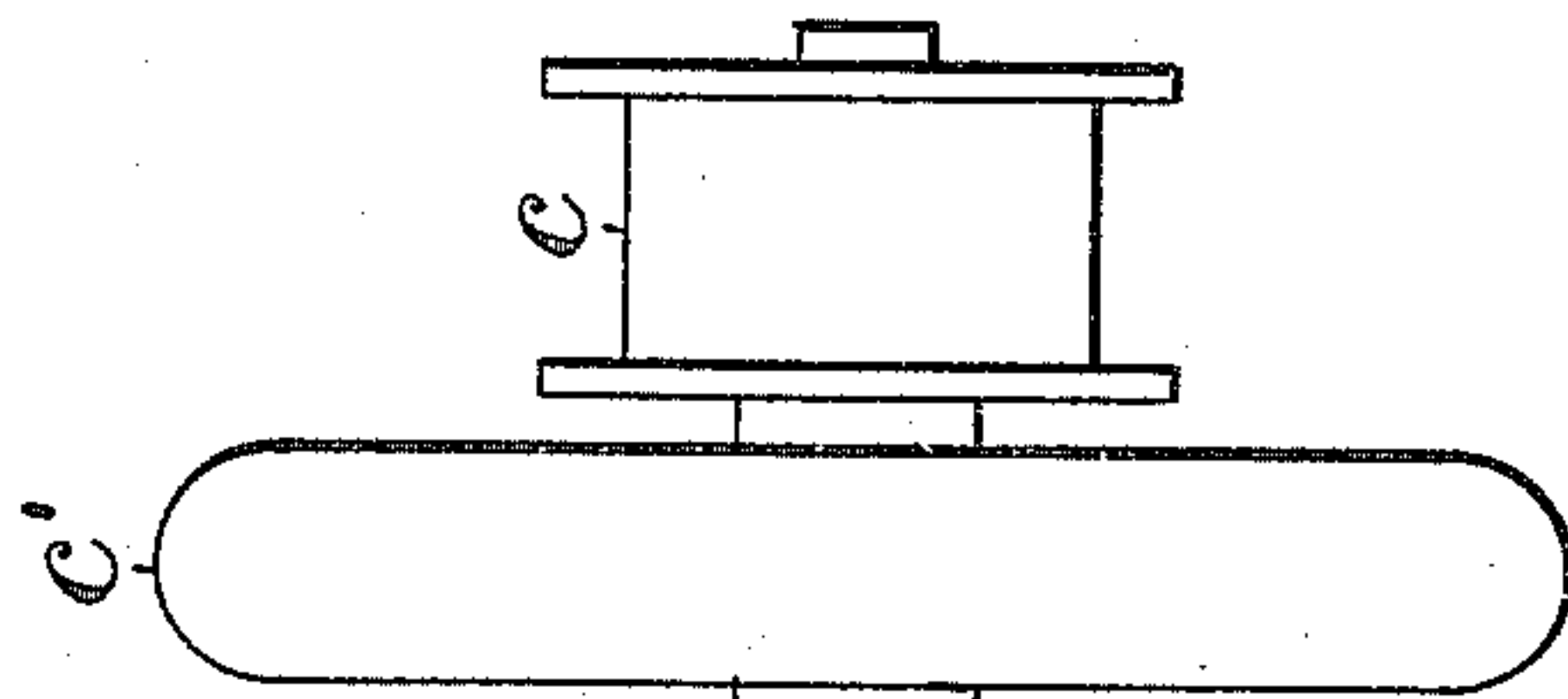
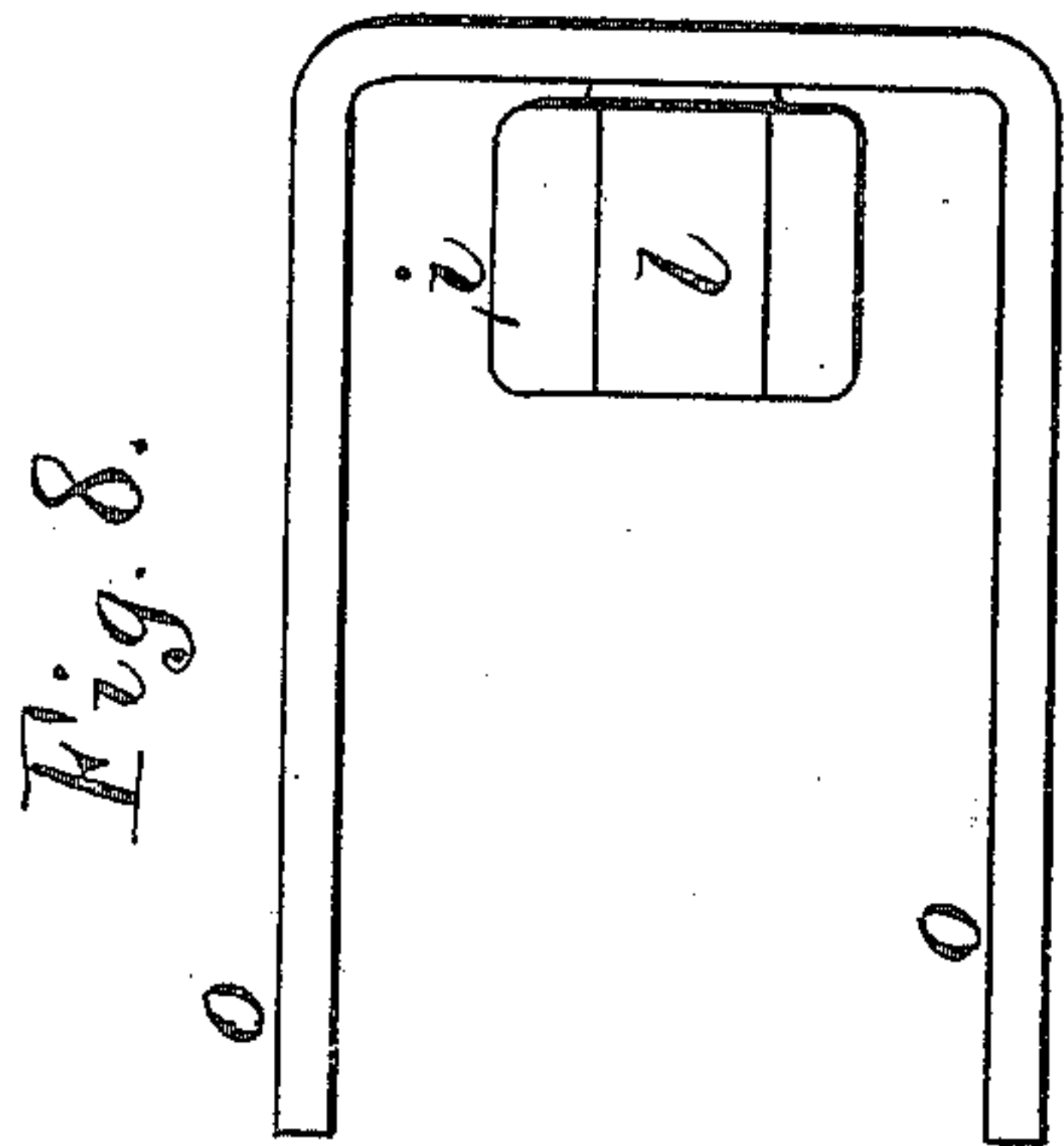
2 Sheets—Sheet 1.

M. L. WRIGHT.

HEEL SEAT FORMING AND EDGE SETTING MACHINE.

No. 446,399.

Patented Feb. 10, 1891.



Attest:
Cladish Okerthick
Francis H. Langre

Inventor.
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(No Model.)

2 Sheets—Sheet 2.

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Fig. 6.

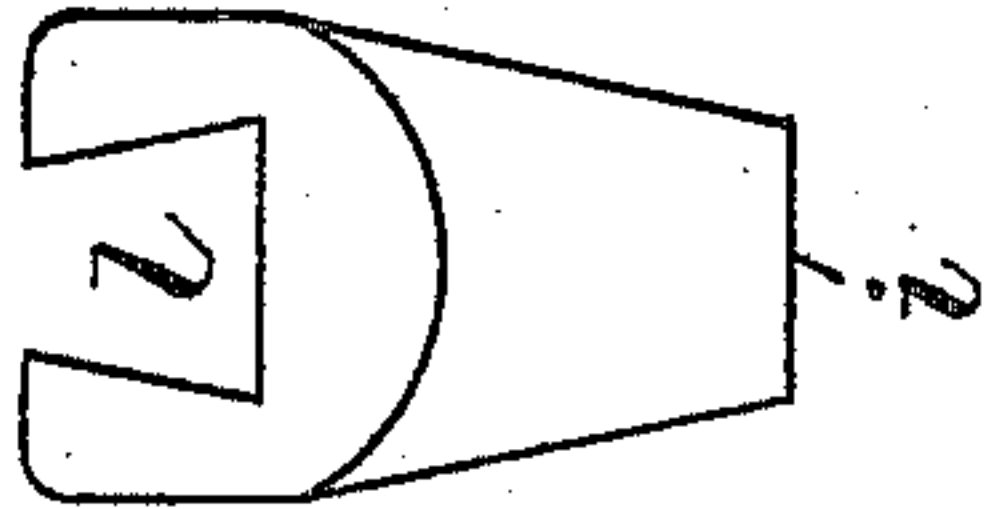


Fig. 7.

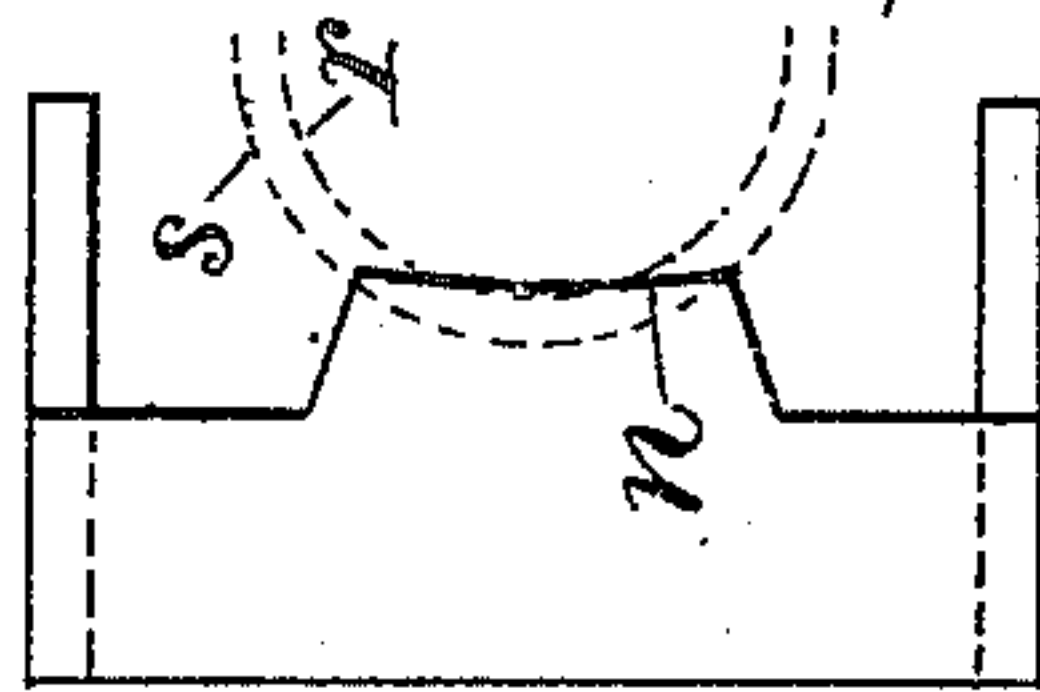


Fig. 4.

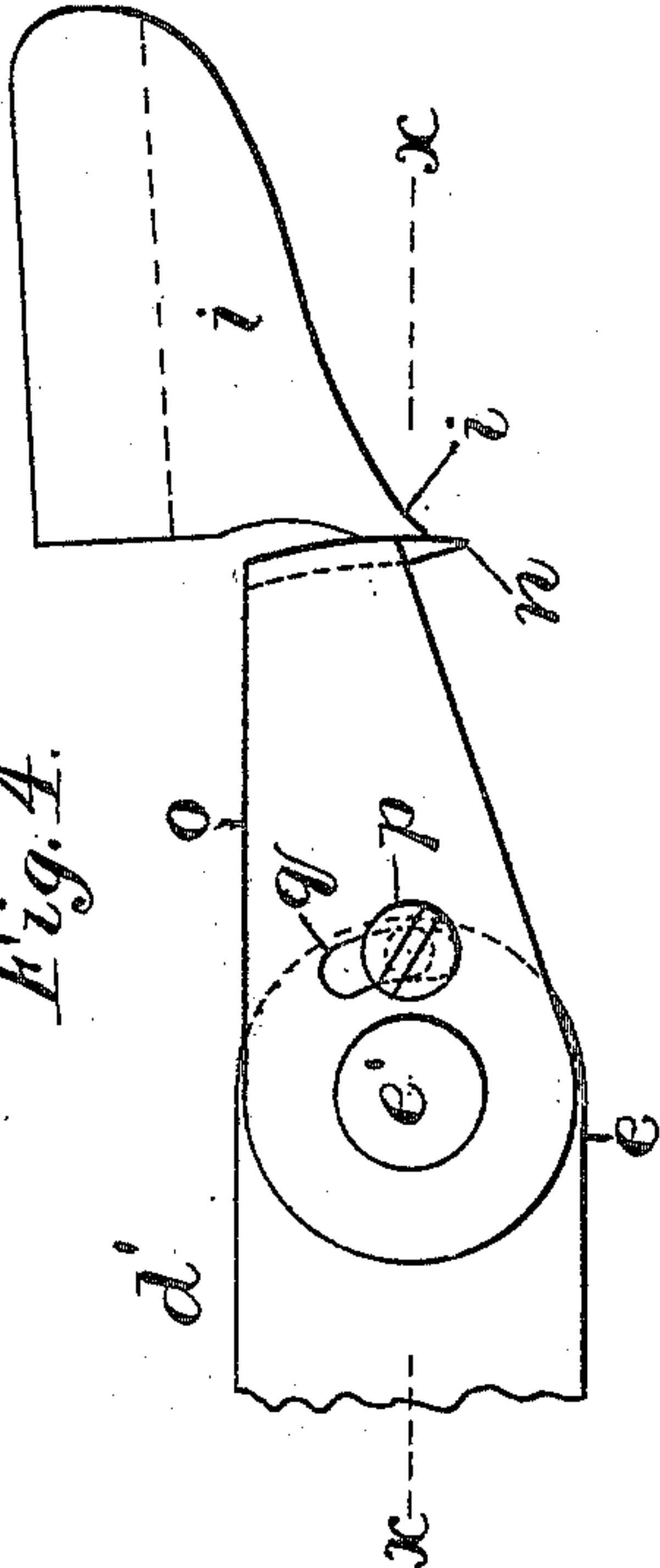


Fig. 5.

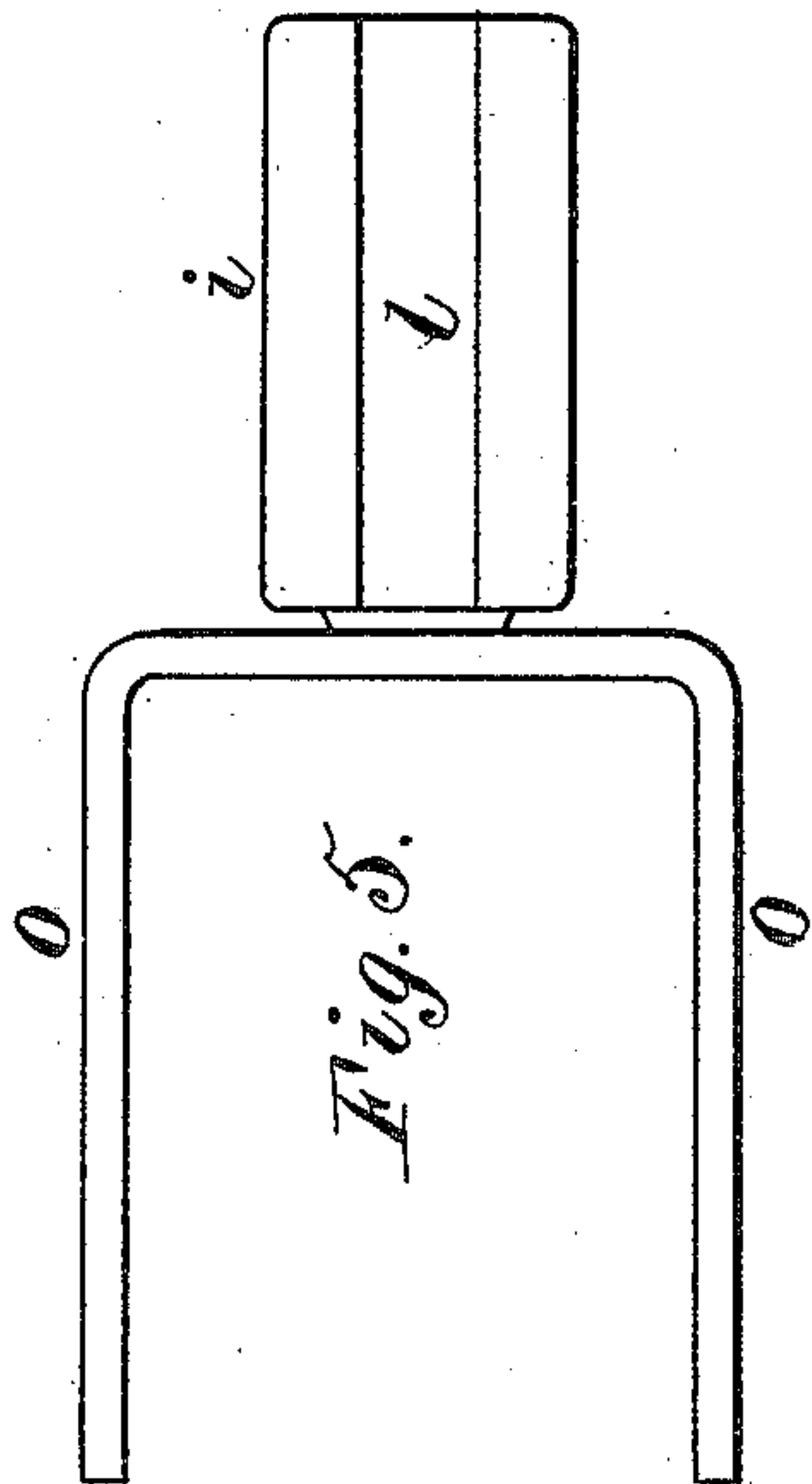
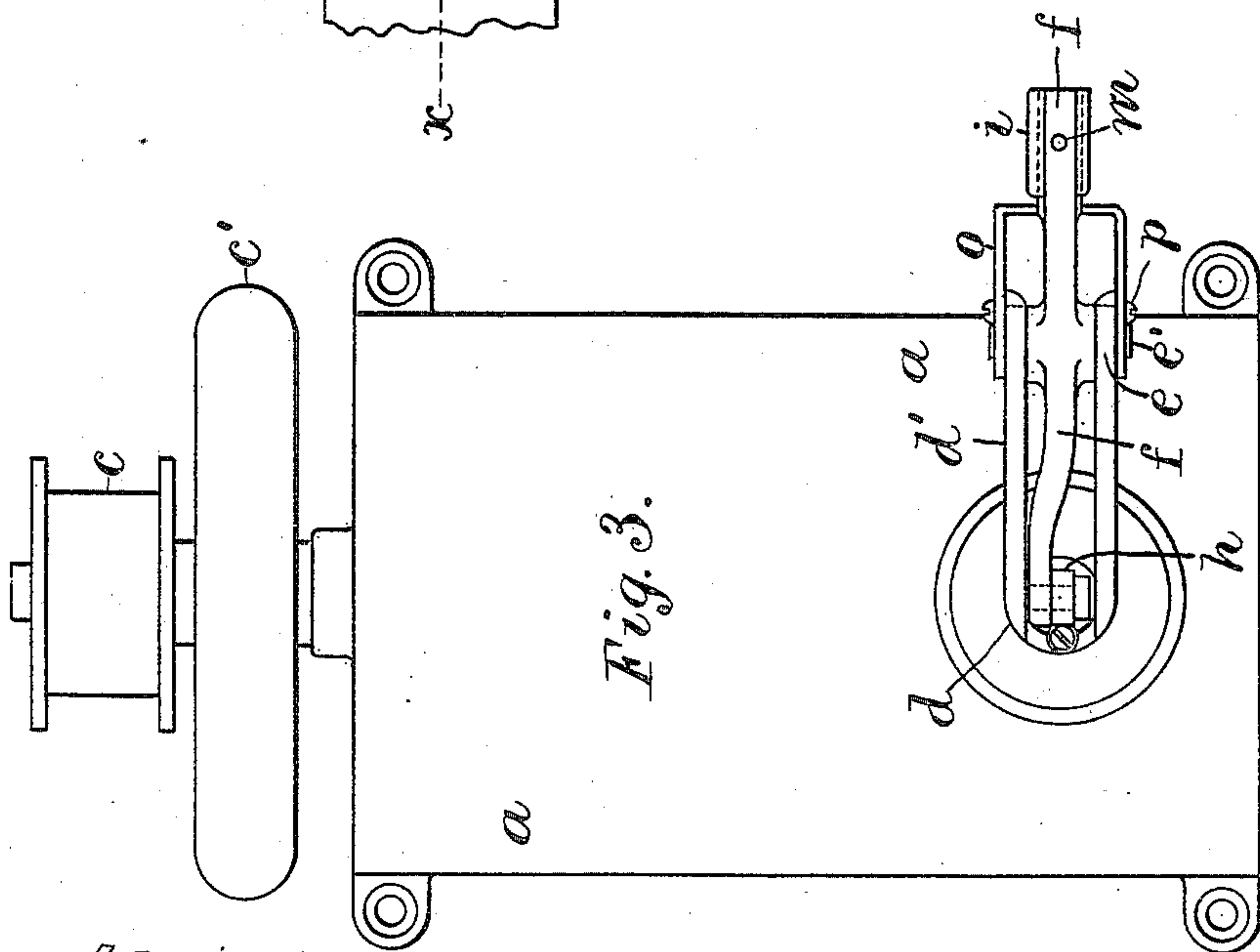


Fig. 3.



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UNITED STATES PATENT OFFICE.

MARCUS L. WRIGHT, OF NEWTON, ASSIGNOR OF ONE-HALF TO LYSANDER WRIGHT, JR., OF NEWARK, NEW JERSEY.

HEEL-SEAT-FORMING AND EDGE-SETTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 446,399, dated February 10, 1891.

Application filed November 1, 1890. Serial No. 370,072. (No model.)

To all whom it may concern:

Be it known that I, MARCUS L. WRIGHT, a citizen of the United States, residing at Newton, Sussex county, New Jersey, have invented certain new and useful Improvements in Heel-Seat-Forming and Edge-Setting Machines, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention consists in a machine comprising a vibrating former and a stationary supporter adapted to enter the seam between the sole and upper of a shoe adjacent to the path of the former to sustain the shoe when pressed against the same by the operator.

The invention is adapted for use as a heel-seat-forming or an edge-setting machine, but is designed specially for forming the heel-seat of a shoe, and is described herein in connection with such operation.

By the use of my invention the exterior of the heel-seat or edge of the shoe is uniformly shaped all around, and the operation is performed so rapidly that the shoe is preferably held in the hand of the operator. A last having been previously fitted tightly within the shoe, the latter is pressed against the supporter, so that the seam between its sole and upper is entered by the supporter, which latter operates to sustain the thrust of the shoe and also to hold the shoe in the desired relation to the former while it is shifted by the operator.

The construction will be understood by reference to the annexed drawings, in which—

Figure 1 is a front elevation, and Fig. 2 a side elevation, of a machine embodying my invention, a portion of the bed being broken away in Fig. 1 to show the driving-crank. Fig. 3 is a plan of the machine. Fig. 4 is an enlarged view of the adjustable supporter and the "former," with a portion of the pivot-bearing. Fig. 5 is a plan of the adjustable supporter and the former. Fig. 6 is a front view of the former, and Fig. 7 is a front view of the supporter. Fig. 8 is a plan of the former and supporter in a different arrangement from that shown in the preceding figures.

The machine is shown of a convenient design to secure upon a work-bench at a suit-

able height for the operator to apply the shoe to the former; but the design of the machine may be altered without departing from my invention.

a is the bed of the machine, and *b* a driving-shaft, with pulley *c* and fly-wheel *c'* fixed upon its end outside the bed.

d is a column projected upward from the bed, with a goose-neck *d'*, carrying a bearing *e* for a pivot *e'*, upon which a lever *f* is pivoted to vibrate the former. A crank *g* is attached to the inner end of the shaft *b* and connected by a rod *h* to the rear end of the lever *f*. The forward end of the lever carries the former *i*, which is preferably made detachable from the lever, so as to use various styles of formers in the same machine to use with various patterns of shoes. The former is held removably upon the lever by a dovetail *l* and set-screw *m*. The former is provided with an acute corner to penetrate between the heel-seat and the sole, as shown in Fig. 2, to round the heel-seat uniformly at its junction with the sole, and the supporter *n* is of wedge form, adapted to fit into the groove between the sole and upper, and is rigidly attached to the frame of the machine adjacent to the sharp corner of the former. With the construction shown the rotation of the crank *g* operates through the rod *h* and lever *f* to vibrate the former vertically, and the supporter is therefore arranged with the wedge projected downward, so that the shoe may be held against the same with the heel-seat uppermost. The supporter is preferably made adjustable to hold the heels of different-sized shoes at a suitable distance from the vibrating former, and is shown attached movably upon the pivot-pin *e'* by lugs *o*. A clamp-screw *p* is inserted through a slot *q* in one or both of the lugs *o* to permit the vertical adjustment of the supporter and to hold it rigidly in position. The supporter is shown in Fig. 7 with its edge curved and placed in contact with curved dotted lines representing the heel-seat *s* and the bottom of the seam *r* adjacent to the sole. The operative corner of the former to which the reference-letter *i* is applied in Fig. 6 may be made straight, as shown in the drawings, or curved like the supporter in Fig. 7, or both

may be made straight. A last is tightly fitted within the shoe to shape the heel-seat, as heretofore, and the shoe is pressed forcibly by the operator in contact with the supporter *n*, the guide fitting into the groove *r* and holding the heel-seat at a suitable distance from the vibrating former to receive the blows of the latter. The rapid vibration which is possible in such a machine permits the former to operate at very minute intervals all around the heel-seat when the shoe is turned in contact with the supporter, and thus shapes the heel-seat much more evenly and effectively than when it is hammered by hand. The detachability of the former from the vibrating lever and the adjustability of the supporter permit the same machine to be used for all styles and sizes of shoes, while the adjustment of the supporter to and from the corner of the former wholly obviates the necessity of adjusting the stroke of the latter. A crank of uniform stroke may thus be employed to actuate the former, or any suitable means may be substituted for such crank to reciprocate the former in proximity to the supporter. A dotted line *x* is shown in Fig. 4 extended through the pin *e'* to represent the radius upon which the former vibrates. The exterior surface of the supporter is preferably concentric with the pin *e'*, as shown in Fig. 4, and by pivoting it upon such pin it may be adjusted vertically and still preserve a close contact with the vibrating former, which oscillates from the same pivot.

Having thus described my invention, it will be seen that it greatly facilitates the shaping of the heel-seat and secures a uniformity of shape that is difficult to obtain by hand labor.

As neither the shoe nor its last require to be clamped in the machine, a great deal of time is saved, and the operator may quickly change one shoe for another as the heel-seat of each is completed by the machine.

The means for vibrating the former is obviously immaterial; but if a detachable former be used it is obvious that a vibrating carrier must be employed to reciprocate the same, and the lever *f* represents such reciprocating carrier in the construction illustrated.

Where the supporter is projected from the pivot of an oscillating carrier, as shown in the drawings, the former may be made to reciprocate inside the supporter, as shown in Fig. 8, which represents the supporter and former in plan, like Fig. 5. In such case the former would be attached to the lever *f* nearer to the fulcrum, and the operation of the former within the supporter would enable the operator to reverse the shoe (indicated in Fig. 1) in relation to the supporter, which would

be more effective for shoes made with a certain kind of welt.

As my invention is not limited to an oscillating carrier, the supporter and former may be sustained and actuated in any other suitable manner.

The operation of my invention has been described in connection with the forming of a heel-seat; but the "edge-setting" of a shoe may obviously be effected with the same mechanism, as the operation is precisely the same, the supporter *n* in such case fitting between the sole and the upper in the same manner as it is represented in Fig. 1 fitting between the heel and the counter.

I am aware that a tool for shaping shoes to their lasts has been devised heretofore, the same consisting in the shaping member and a tongue secured rigidly thereto and adapted to enter the seam between the sole and upper of the shoe. My invention differs from the said construction in comprising a vibrating former and a stationary supporter for the shoe. I hereby disclaim the said prior construction.

Having thus set forth my invention, what I claim herein is—

1. A heel-seat-forming and edge-setting machine comprising the former *i* and means for vibrating the same, and the supporter *n*, adapted to enter the seam between the sole and upper of the shoe and held stationary adjacent to the path of the former to sustain the shoe when pressed against the same by the operator.

2. A heel-seat-forming and edge-setting machine comprising the carrier and means for vibrating the same, the former *i*, having a dovetail groove fitted adjustably to the carrier and clamped thereon by means of a set-screw, and the stationary supporter *n*, adapted to enter the seam between the sole and upper of the shoe and located adjacent to the path of the former.

3. A heel-seat-forming and edge-setting machine consisting in a suitable bed, the column *d*, having the lever *f* pivoted thereon by the pin *e'*, the wedge-shaped supporter *n*, pivoted adjustably upon such pin, the former *i*, secured detachably upon the said lever adjacent to the supporter, and means for vibrating the lever *f*, as and for the purpose set forth.

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

MARCUS L. WRIGHT.

Witnesses:

OBADIAH WESTBROOK,
FRANCIS J. SWAYZE.