

(No Model.)

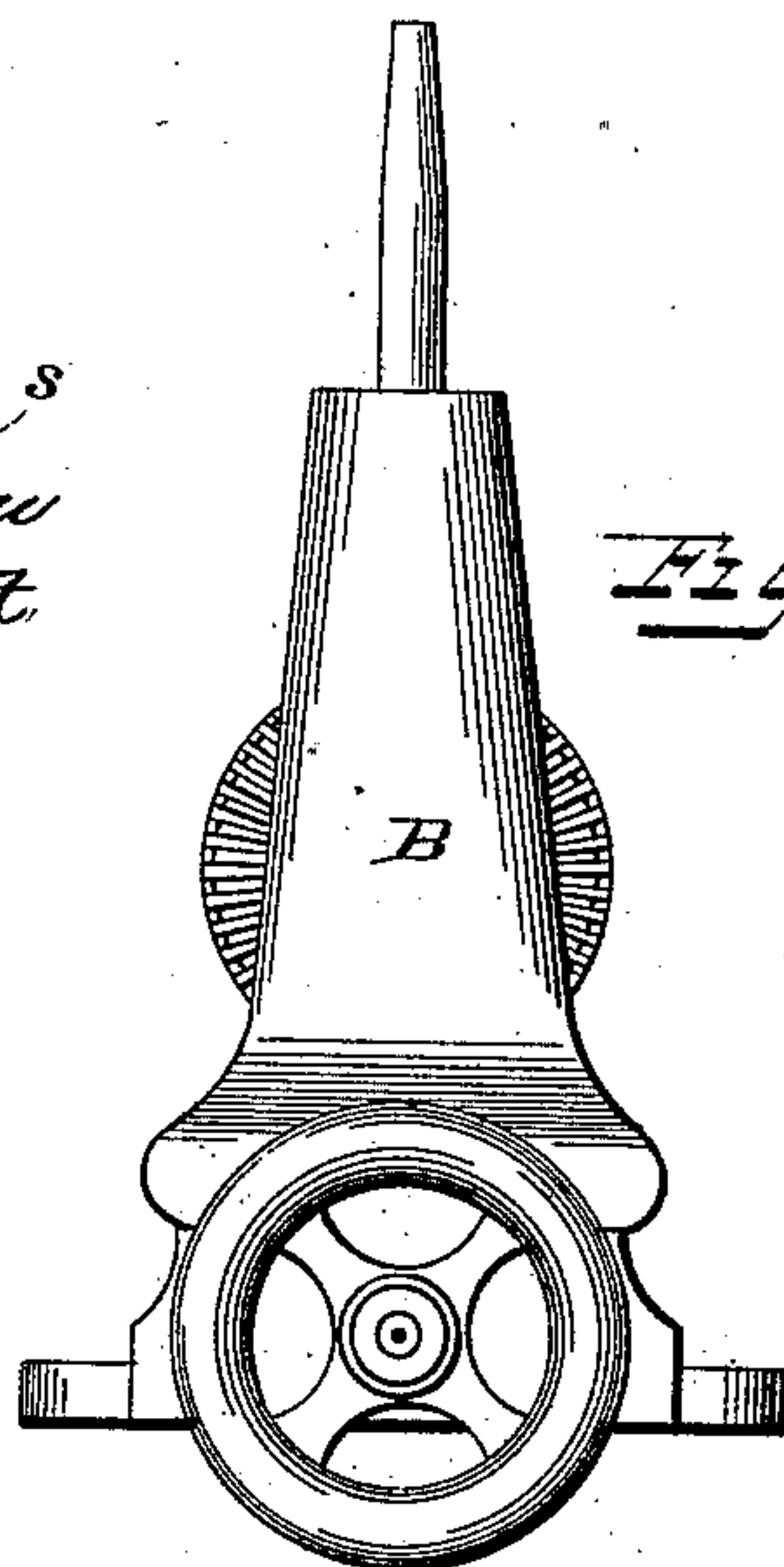
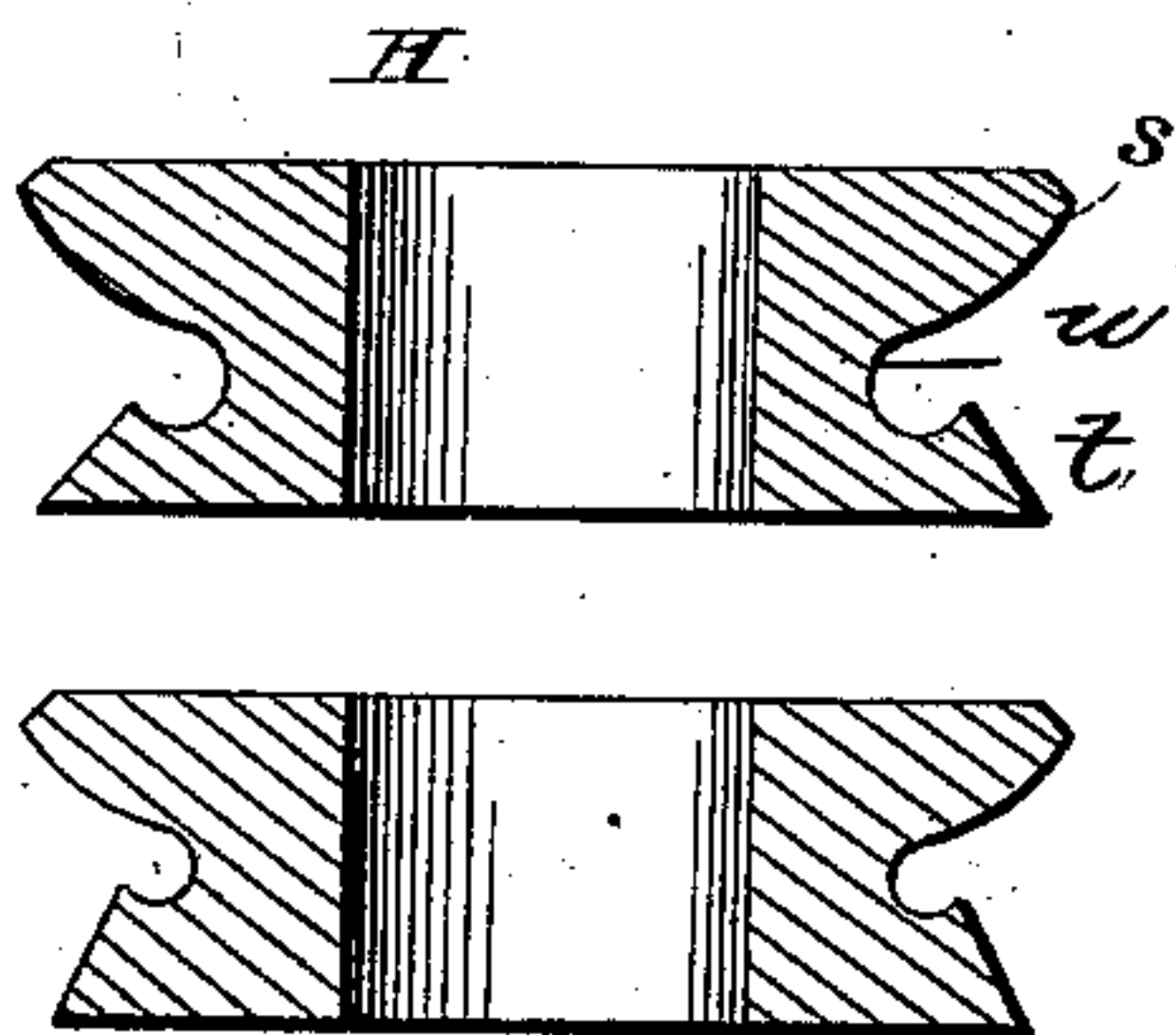
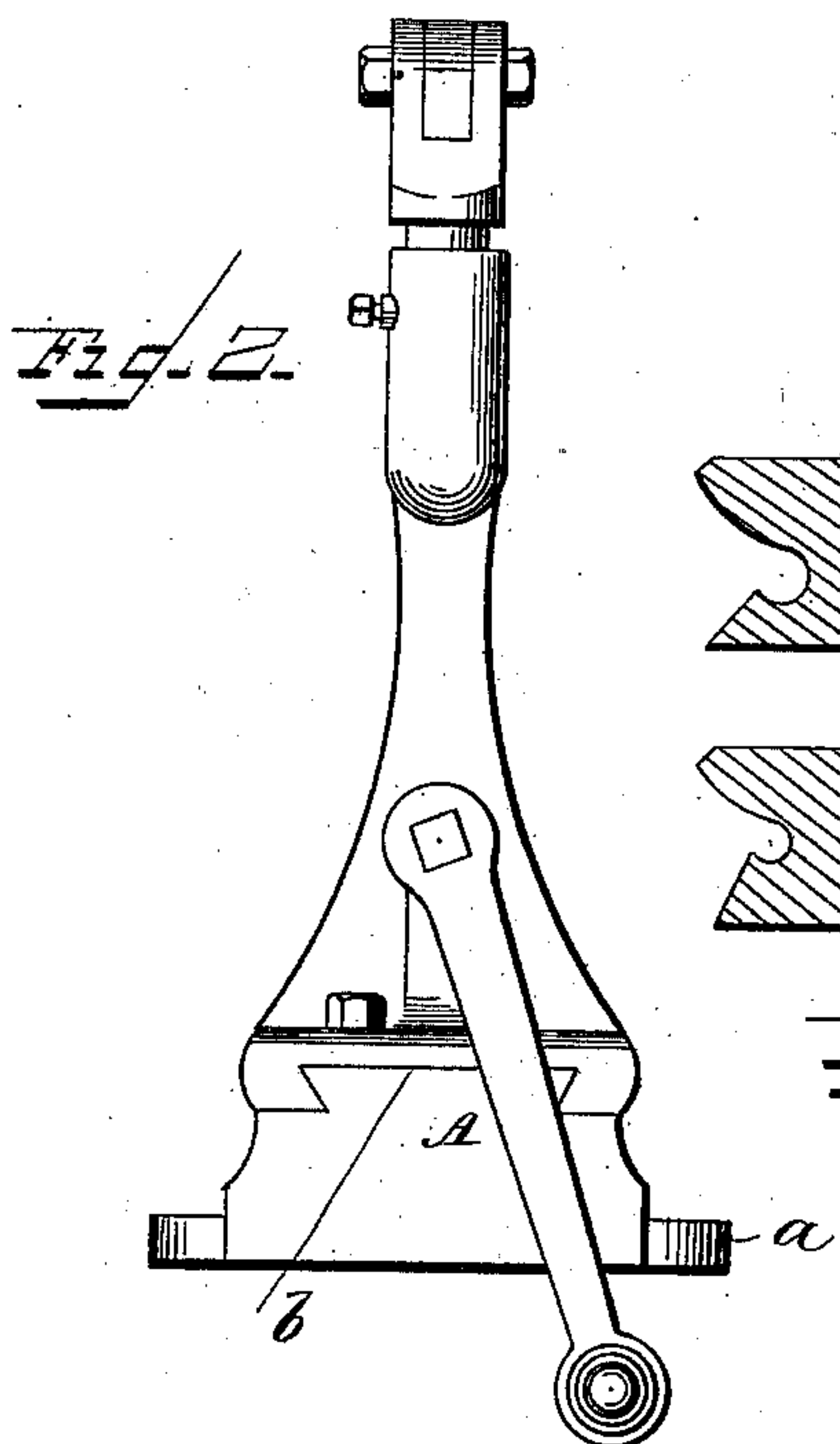
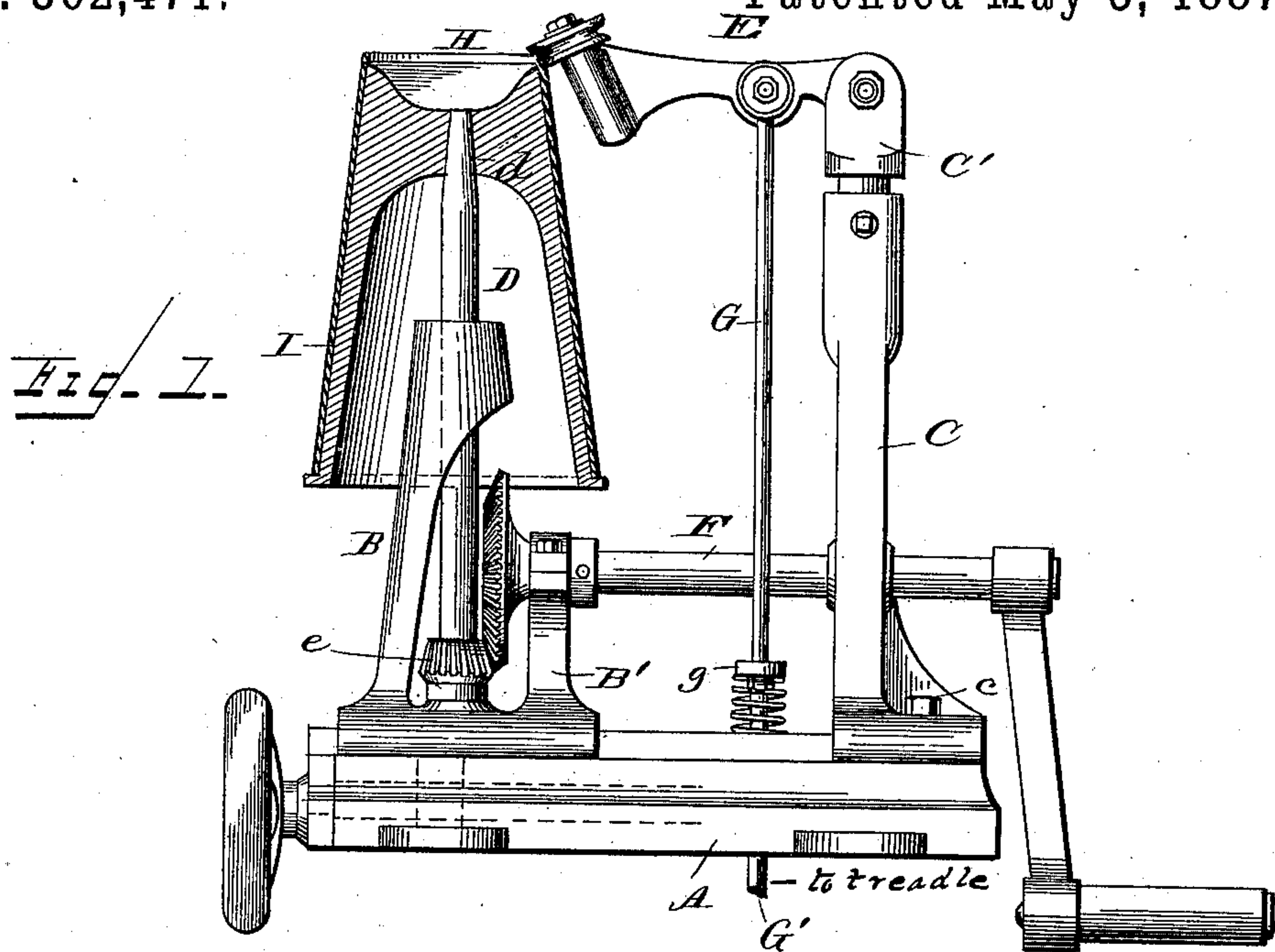
2 Sheets—Sheet 1.

E. F. VERDEL.

MACHINE FOR TIN WIRING THE EDGES OF SHEET METAL VESSELS.

No. 362,471.

Patented May 3, 1887.



WITNESSES

F. L. Ourand

E. V. Johnson

Ernst G. Verdel.

INVENTOR

Attorney

(No Model.)

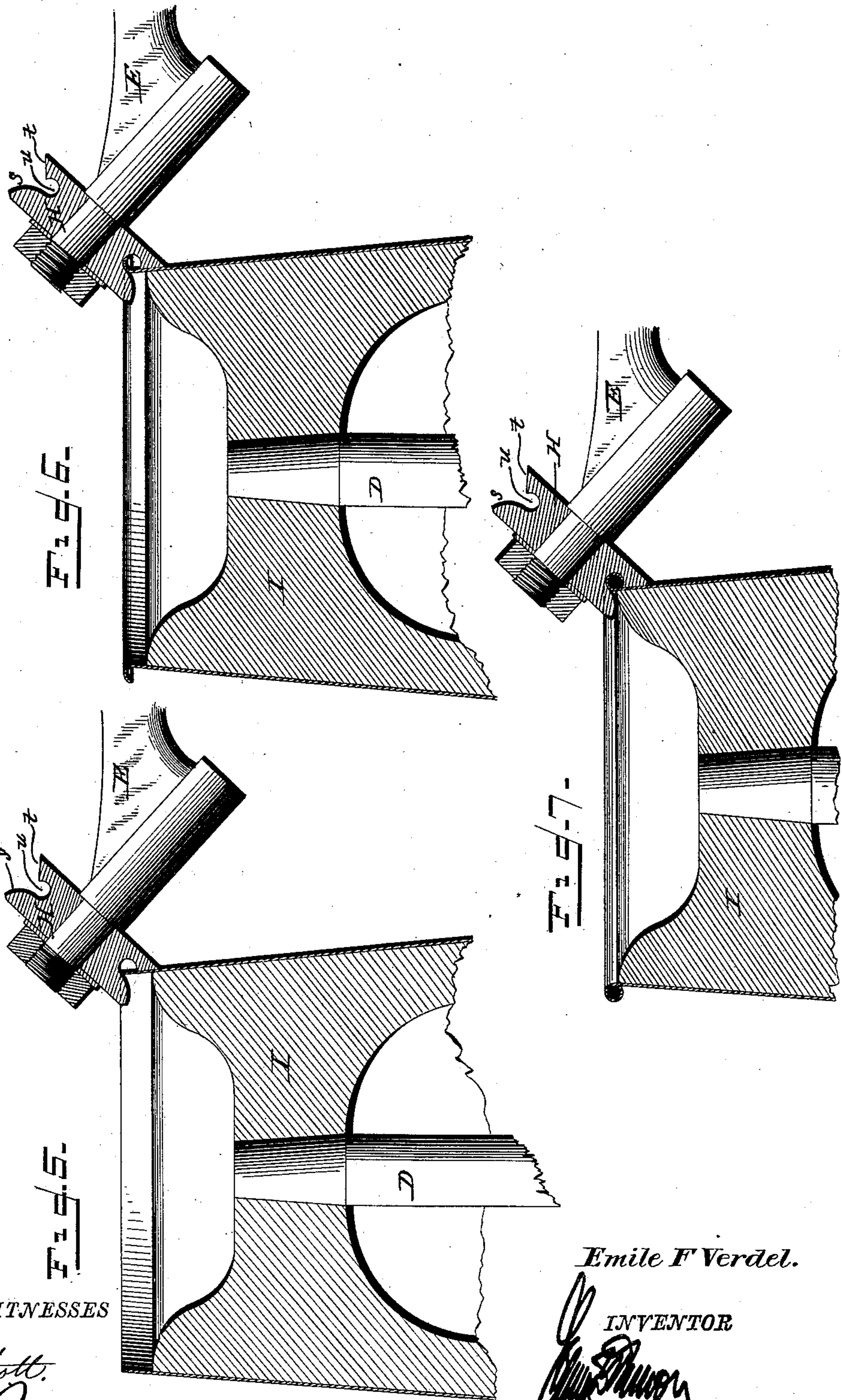
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WITNESSES

G. S. Elliott.
M. Johnson.

Emile F Verdel.

INVENTOR

[Signature]
Attorney

UNITED STATES PATENT OFFICE.

EMILE F. VERDEL, OF MEMPHIS, TENNESSEE, ASSIGNOR OF ONE HALF TO
FRANK OZANNE, OF SAME PLACE.

MACHINE FOR TIN-WIRING THE EDGES OF SHEET-METAL VESSELS.

SPECIFICATION forming part of Letters Patent No. 362,471, dated May 3, 1887.

Application filed January 21, 1886. Serial No. 189,319. (No model.)

To all whom it may concern:

Be it known that I, EMILE F. VERDEL, a citizen of the United States of America, residing at Memphis, in the county of Shelby and State of Tennessee, have invented certain new and useful Improvements in Machines for Tin-Wiring Sheet-Metal Vessels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to that class of mechanism designed to "tin-wire" the edges of sheet-metal vessels or articles—that is, to roll the edge of the metal upon itself to give it the appearance of being wire-edged. Machines now on the market designed to accomplish this work are so costly as to be out of the reach of the majority of tin-workers, and they require to be operated by a skilled workman.

The object of my invention is to produce an inexpensive hand-machine, by means of which the edges of tin and other light sheet metal may be "tin-wired" by unskilled labor; and my invention consists in the construction and combination of the parts, as will be herein-after fully set forth, and specifically pointed out in the claims.

In the accompanying drawings, which illustrate my invention, Figure 1 is a side view of a machine for forming joints on sheet metal and beading said joints. Figs. 2 and 3 are end views, and Fig. 4 is a sectional view, of the rotating heads. Figs. 5, 6, and 7 are detail views illustrating the progress of the work on a vessel.

A refers to the base of the implement, which is provided with outwardly-projecting lugs or ears *a*, with perforations which form a means for securely attaching the same to a work bench or stand, and said base-plate is provided at its upper edge with a dovetailed projecting portion, *b*, upon which the movable standards B and C are secured. Said base-plate is also provided with an opening between said standards, through which a rod of a treadle passes. The standard B is adapted to fit over the dovetailed portion of the base, and has formed there-

on a downwardly-projecting screw-threaded member, with which a screw-threaded shaft engages for adjusting the same longitudinally upon the base-plate, said shaft being provided near its end with a hand-wheel for turning said screw-threaded shaft so as to adjust the standard B when desired. The standard C may have a similar attachment, though I prefer to secure the same, after being adjusted, by a set-screw, *c*, which may engage with threaded perforations in the bed-plate.

The standard B extends upwardly and has formed therein a bearing for a vertical shaft, D, which is tapered at its upper end, as shown at *d*, the lower end resting upon a bearing formed near the lower end of the standard, and adjacent to the same the rotary shaft is provided with the pinion *e*.

The standard B carries a member, B', which projects vertically from the base thereof, the upper portion of said member B' forming a bearing for a horizontal shaft, F. This shaft F passes through a bearing in the standard C, said bearing being on a line with the bearing in the member B', and the end of said shaft has a suitable crank-handle keyed thereon for rotating the same. It will be noted that when the crank-handle is rotated this rotary motion will be imparted to the vertical shaft D; also, that the standard C may be adjusted upon the base-plate, and when so adjusted it will slide upon the horizontal shaft.

The upper portion of the standard C has formed thereon a socket, and within said socket is adjustably secured a forked head-piece, C', between the arms of which is pivoted a lever, E, said lever carrying at its end a wiring-roll, H, which is journaled thereon so as to be at an angle with the lever, as shown. Between the bearing of this wiring-roll H and its pivoted end are attached rods G, which extend downwardly and are connected to each other by a cross-plate, *g*, a rod, G', being attached to said cross-plate centrally, and extends downwardly through the base-plate, beneath which it is connected to a treadle or lever. A spiral spring, which has a tendency to throw the lever E upwardly, is located between the cross-plate *g* and the bed-plate, so as to normally hold the lever E and its wiring-roll in a raised position.

I, as shown in dotted lines in Fig. 1, refers to a form which corresponds in configuration with the shape of the article to be placed thereon, and said form is provided centrally with a tapered opening, by means of which it is rigidly secured to, though removable from, the tapered end *d* of the vertical shaft D, and the roll H is adapted to contact with the edge thereof when forced upon the same by the treadle, hereinbefore referred to.

The article to be wired, after being double-seamed, is placed upon the form I, the edge to be beaded fitting close and projecting a distance equal to the circumference of the bead above the top of the edge of the form I. Pressure is then applied on the treadle, which brings the edge *s* of the roll H against the metal which projects above the form I at the proper angle to turn said projecting edge outwardly. The shaft F is then turned, which imparts a rotary motion to the form I, and the friction causes the roll H to revolve, the rolling motion thereof and the pressure forcing the tin to follow outward and downward the outline of the groove *u* in the roll H, the lower edge or flange, *t*, preventing the spreading of the tin below the beaded edge until the upper flange, *s*, rests on the edge of the die J. The bead or wire edge now being completed, the pressure is removed from the treadle and the spring forces lever E, with its roll H, upward, so that the article which has been tin-wired can be removed from form I and another one substituted.

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

1. In a machine for tin-wiring the edges of sheet-metal vessels, the combination, substantially as described, of the revolving form for carrying the vessel to be operated upon, and a tin-wiring roll provided peripherally with a central groove or recess terminating at one side in a gradual curve and at the other side meeting the beveled peripheral face of the

roll at a sharp angle, whereby the edge of a vessel may be coiled upon itself without wiring.

2. The combination, in a machine for tin-wiring or beading sheet metal, of a roll, H, having a groove, *u*, and projecting portions *s* and *t*, adjacent to said groove, said roll being carried by a pivoted lever which is adjustable vertically, and a rotary roll, I, adapted to carry the work and rotate the same against the roll H, substantially as shown, and for the purpose set forth.

3. In a tin-wiring machine, a roll for turning the edges of sheet metal upon each other, having a semicircular recess formed at its central portion, one edge of the periphery being curved adjacent thereto, while the opposite edge is formed at an angle, substantially as shown, and for the purpose set forth.

4. In a tin-wiring machine, a base-plate, A, provided with standards B and C, which are adjustable upon the base-plate independent of each other, a vertical shaft adapted to be rotated and receive a form, as set forth, and an adjustable lever, E, pivotally attached to the standard C and carrying at its end a peripherally-grooved roll, which is attached to said lever at an angle therewith, substantially as shown, and for the purpose set forth.

5. The combination, substantially as described, of the bed-plate, the standards mounted adjustably thereon, a vertical shaft or spindle journaled in bearings in one of the standards, a horizontal shaft geared to said vertical shaft and mounted in bearings near the base of both standards, the head-piece adjustably secured in the socket of standard C, and the lever pivoted at one end to the head-piece and provided at the other end with a revoluble spindle.

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

EMILE F. VERDEL.

Witnesses:

H. TAYLOR,
O. L. RACINE.