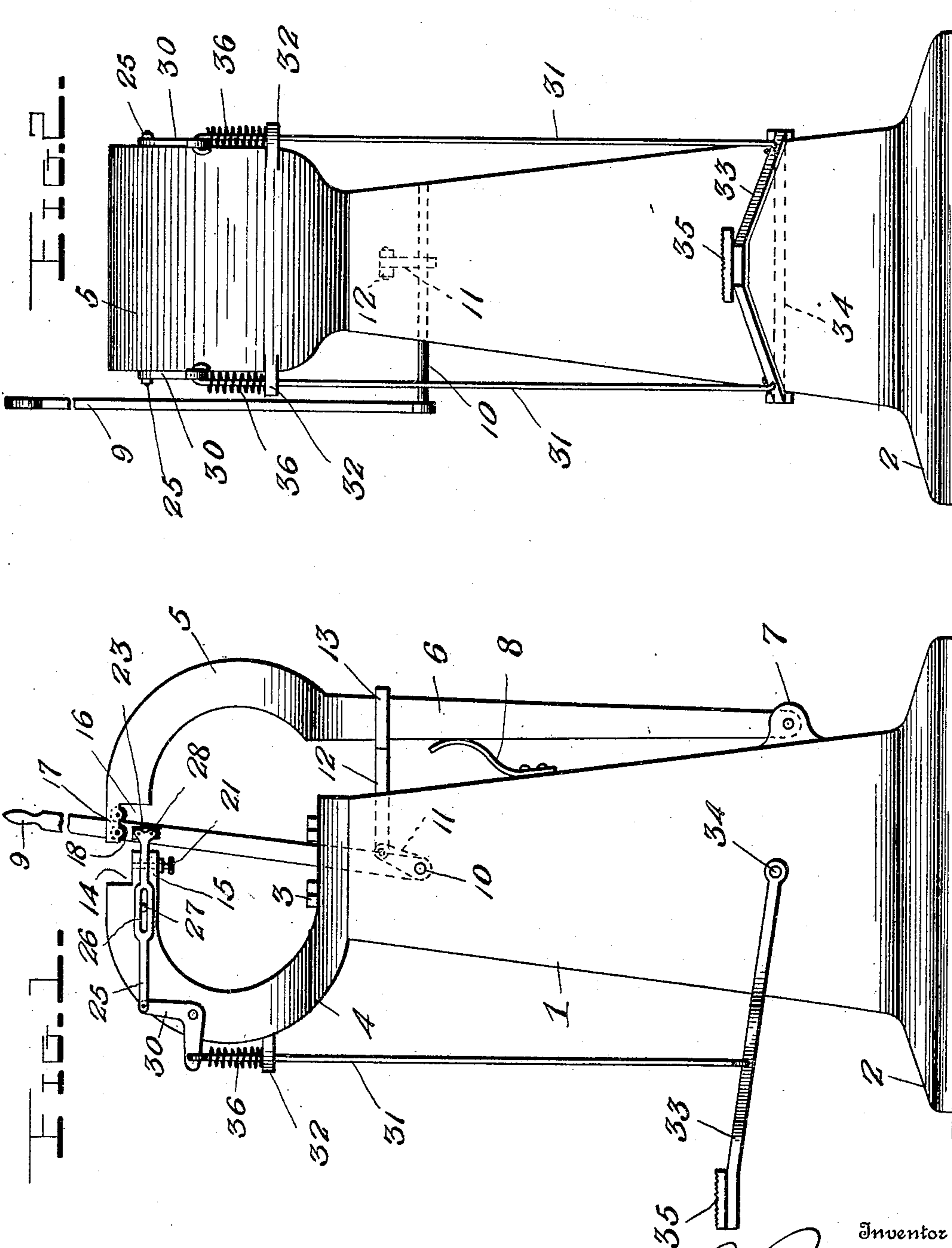


N. B. ROBEY.
WELDING AND CALKING MACHINE.
APPLICATION FILED JAN. 7, 1909.

935,232.

Patented Sept. 28, 1909.
2 SHEETS—SHEET 1.



Witnesses

Chas. L. Griesbauer.
L. C. Little

334

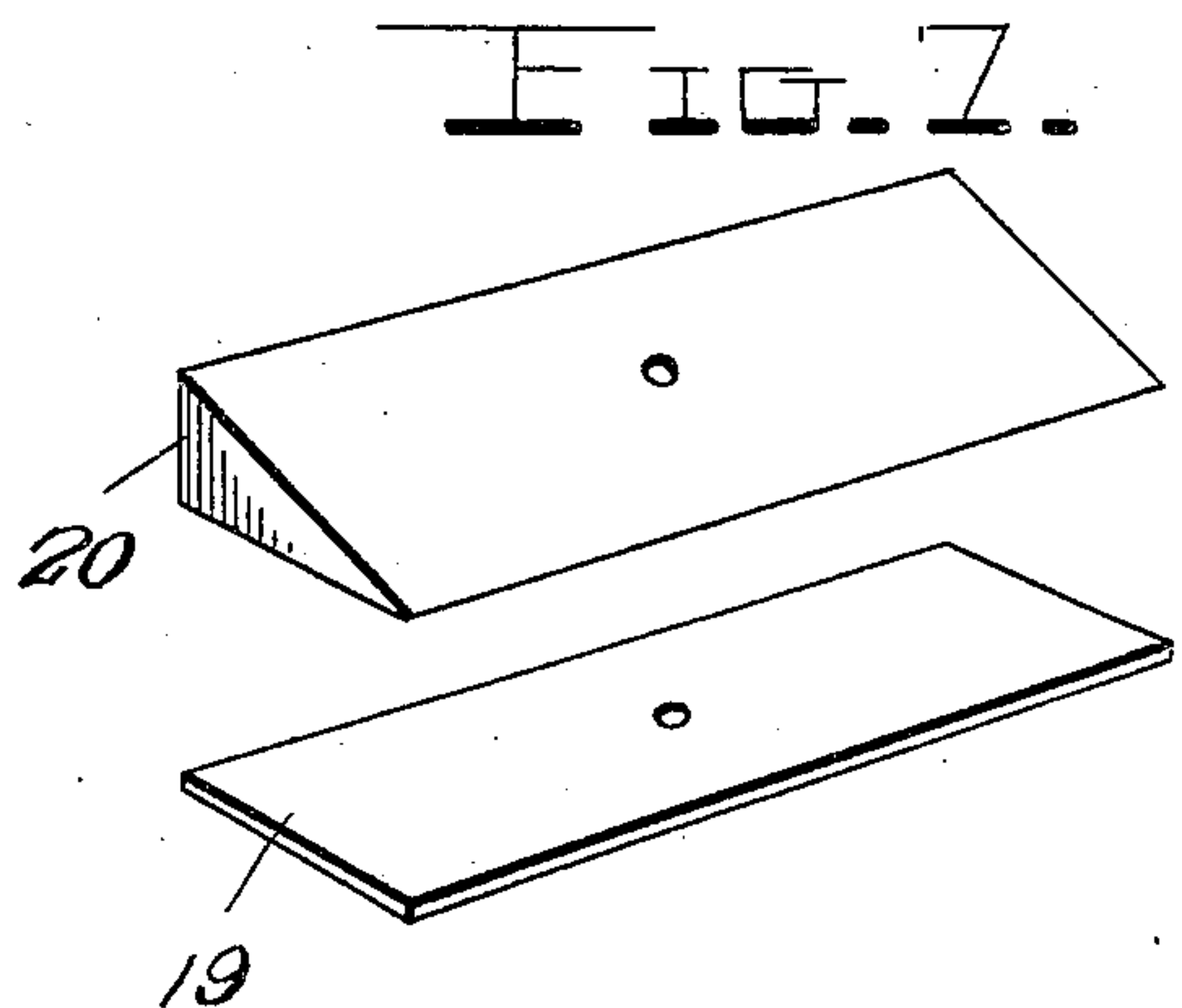
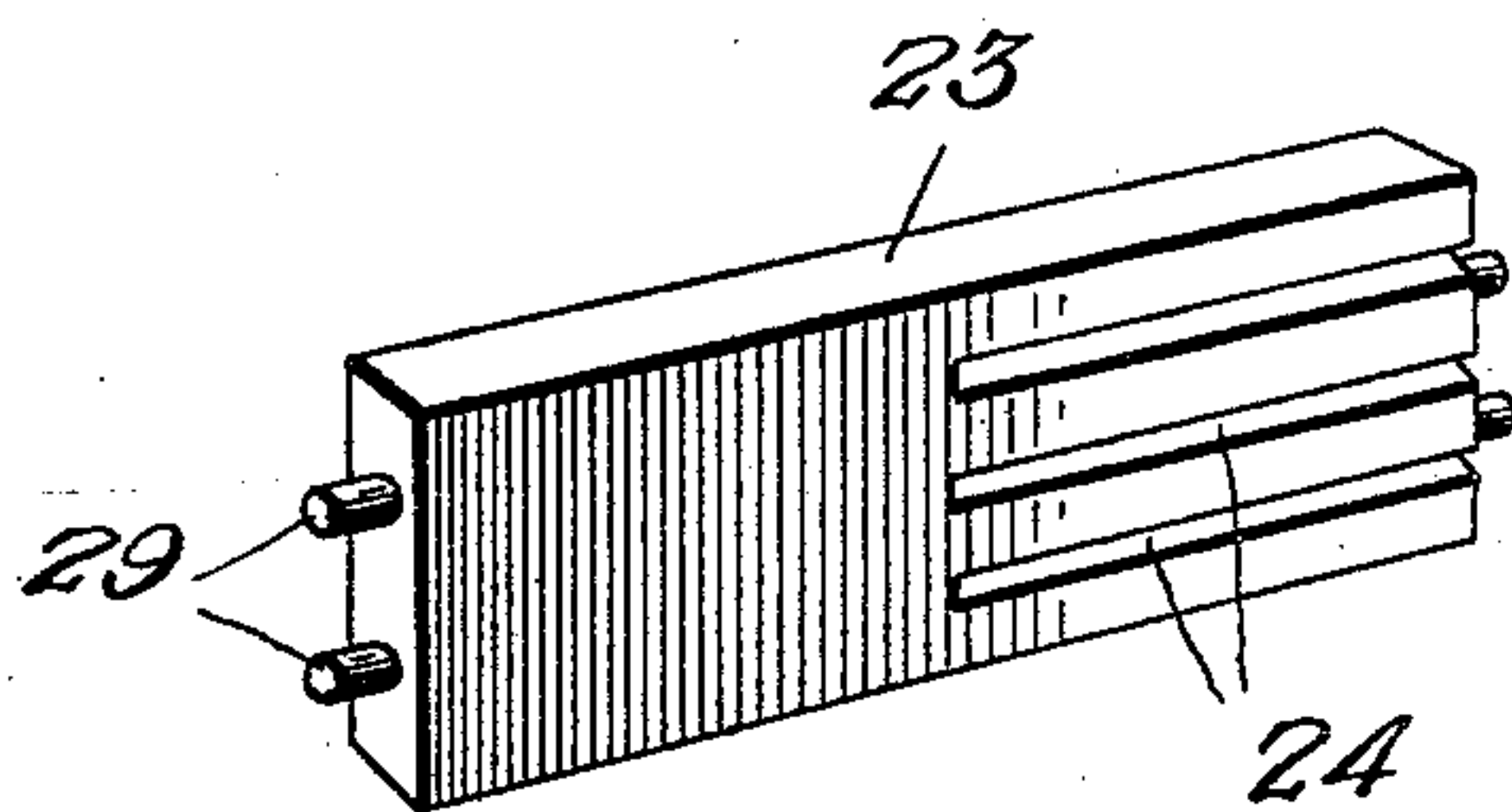
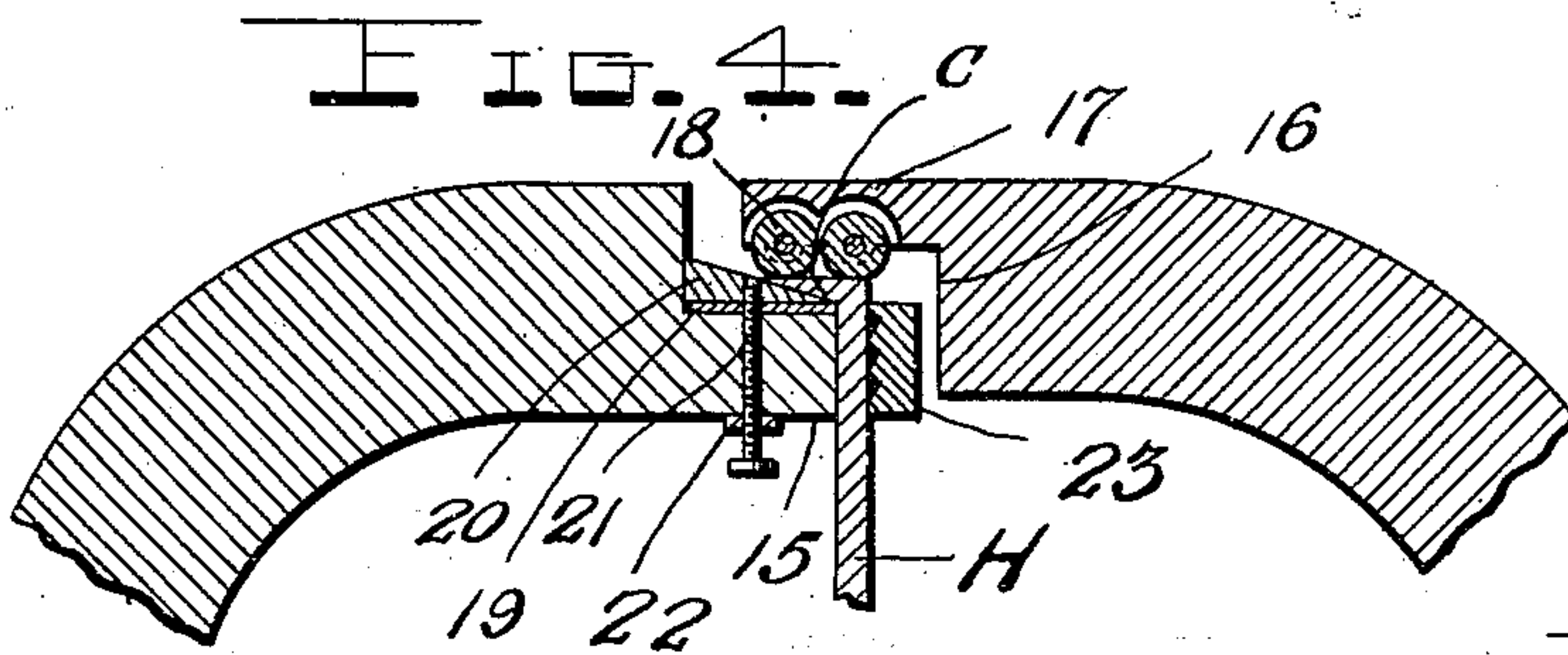
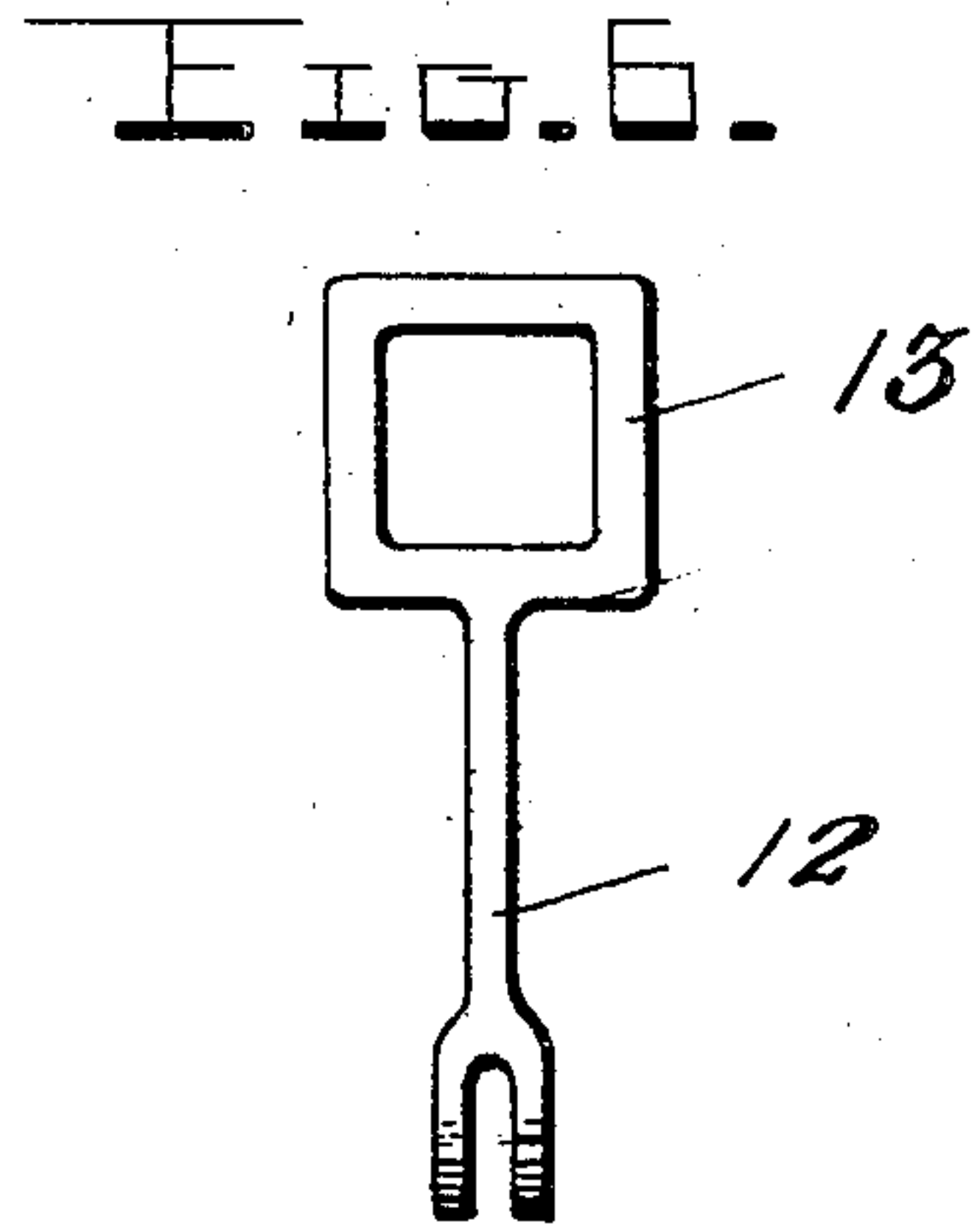
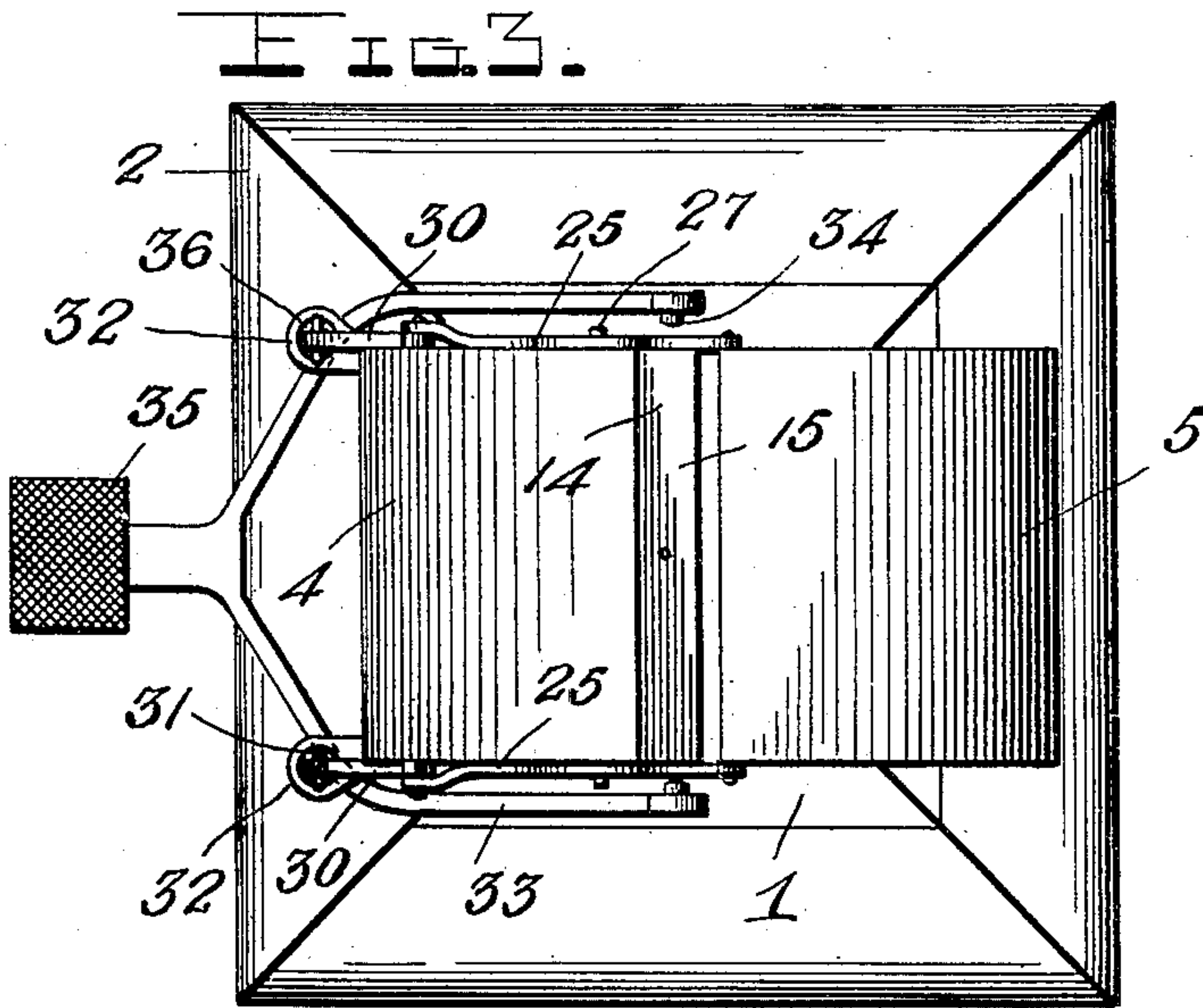
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2 SHEETS—SHEET 2.



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L. O. Little.

By

N. B. Robey ^{Inventor}
Watson E. Coleman ^{Attorney}

UNITED STATES PATENT OFFICE.

NAPOLEON B. ROBEY, OF INDIANAPOLIS, INDIANA.

WELDING AND CALKING MACHINE.

935,232.

Specification of Letters Patent. Patented Sept. 28, 1909.

Application filed January 7, 1909. Serial No. 471,214.

To all whom it may concern:

Be it known that I, NAPOLEON B. ROBEY, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Welding and Calking Machines, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in machines for welding, bending forming calks on horse shoes and performing analogous operations.

The object of the invention is to provide a simple and practical metal working machine which may be used for performing a variety of different kinds of work quickly and effectively.

With the above and other objects in view, the invention consists of the novel features of construction and the combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the machine; Fig. 2 is a front view of the same; Fig. 3 is a top plan view; Fig. 4 is an enlarged vertical section through the jaws; Fig. 5 is a detail perspective of the work holding or clamping member; Fig. 6 is a detail view of the link 12; and Fig. 7 is a detail view showing two of the shims used for adapting the machine for operation upon different sized stocks.

Referring more particularly to the drawings, 1 denotes a body or stand in the form of a hollow post, the flat side faces of which converge upwardly and inwardly from the flared base 2. Upon the flat upper end of the body 1 is bolted or otherwise secured, as at 3, a stationary jaw member 4 of semi-circular shape. This member 4 extends outwardly over the front side of the body and mounted upon its other or rear side is a similar opposing jaw member 5. The latter is formed by shaping and curving the upper end of a vertically disposed lever 6 which has its lower end pivoted between spaced bearing lugs 7 formed upon the rear portion of the body 1 adjacent to its base. The movable jaw member 5 is forced normally in a rearward direction or to an open position by means of a leaf spring 8 secured to the body and bearing against the lever 6; and it is adapted to be moved forwardly to an operative position by rocking a hand lever 9.

This lever is fixed at one end of a transverse rock shaft 10 extending through and journaled in the upper portion of the body 1 and having fixed upon its central portion an arm 11 to which is pivoted one end of a link 12. This link extends rearwardly through a suitable slot in the rear wall of the body 1 and its rear end is formed with a loop 13 which surrounds the lever 6.

The jaw member 4 has its upper end formed upon its top with a transversely extending recess 14 which forms a projecting portion 15; and the opposing end of the jaw member 5 has its bottom face formed with a transverse recess 16 to receive the projecting portion 15 of the jaw member 4 and to provide the projecting portion 17 to enter the recess 14. By making the opposing faces of the jaw members 4, 5 of right angular shape, as shown, the machine may be used not only for welding but also for bending metal and particularly bending toe and heel calks on horse shoes. To facilitate bending metal, the bottom face of the projecting portion 17 of the movable jaw member 5 has journaled upon it a pair of rollers 18; and to permit stock of different sizes to be worked upon by the machine, shims 19, 20 such as shown in Fig. 7 of the drawings may be used upon the upper face of the projection 15 of the jaw 5, as shown in Fig. 4. Any number of the shims 19 which are flat metal plates may be employed and they are arranged beneath the shim 20 which is a beveled or wedge-shaped block and is used particularly when it is desired to form a tapered calk C on a horse shoe H, as seen in said Fig. 4. These shims are secured in position by means of a fastening screw 21 projecting upwardly through a threaded opening in the projecting portion 15 of the jaw member 4 and having upon its projecting lower end a nut 22 and also a suitable finger piece.

For the purpose of temporarily holding the horse shoe H or other piece or pieces of work in position upon the jaw member 4 while the jaw member 5 is being swung to an operative position, a work holding member 23 is preferably provided. This member, as shown in Fig. 5, is in the form of a rectangular block having one portion of its face smooth and its other portion formed with longitudinally extending V-shaped grooves 24, and it is adapted to oppose the rear face of the projecting portion 15 of the jaw 4.

It is movable toward and from said face by means of two links 25 arranged horizontally on opposite sides of the jaw member 4 and formed intermediate their ends with enlarged slotted portions 26 to receive guide pins 27. The rear ends of said links 25 are shaped to provide spaced ears 28 to receive studs 29 projecting from the ends of the block or member 23. The other or forward ends of the links 25 are connected to the arms of bell cranks 30 pivoted at their angles on opposite sides of the member 4 and having their other arms connected to the upper ends of links 31. The latter pass through and slide in guides 32 and have their lower ends loosely connected to the diverging arms of the forked or Y-shaped foot lever 33. The arms of said lever receive the body 1 between them and are pivoted to the same, as shown at 34; and the outer or front end of the lever 33 is provided with a foot piece 35. Coil springs 36 are arranged upon the upper portions of the links 31 between the bell cranks 30 and the guides 32 and tend to actuate the links 25 rearwardly to move the work holding member or block 23 away from the jaw member 4.

The machine may be used in various ways for various purposes but it is particularly adapted for welding together two pieces of metal and bending metal. When it is desired to make a weld, the two pieces of heated metal are placed in overlapping position between the flat opposing faces of the holding block or member 23 and the projection 15 of the jaw 5. The foot lever 33 is then depressed to cause said block or member 23 to hold the pieces of metal and the lever 9 is then swung forwardly and downwardly to cause the jaw member 5 to engage the block or member 23 and press it forwardly against the jaw 4 with sufficient force to weld the interposed pieces of metal. In bending a piece of metal, it is placed between the block or member 23 and the projection 15 of the jaw 5 and held in a similar

manner with its upper end projecting above said portion 15, and the lever 9 is then actuated to throw the jaw member 5 forwardly and cause its rollers 18 to bend said projecting end of the metal. In a similar manner the two heel calks of a horse shoe may be simultaneously bent and shaped and, when it is desired to taper or point such calks, the shim 20 may be used as shown in Fig. 4. While these are the preferred uses of the invention, it will be understood that the machine may be used in other ways and for other but analogous purposes.

Having thus described the invention what is claimed is:

1. In a machine of the character described, a body, a stationary jaw, a movable jaw, a work holding means to coact with the stationary jaw and adapted to be engaged by the movable jaw, means for slidably mounting said work holding means, a spring for retracting said work holding means, means for projecting said work holding means and means for actuating said movable jaw.

2. In a machine of the character described, a body, a stationary jaw member thereon, a lever pivoted to the body and carrying a jaw movable toward and from the stationary jaw, means for actuating said lever, a work holding block arranged between the stationary and movable jaws, links projecting from the ends of said block and having a slot and pin connection with said stationary jaw member, a foot lever, guides, links slidable in said guides and having their lower ends connected to said lever, bell cranks pivoted to the stationary jaw member and uniting said links connected to the foot lever and arranged between the bell cranks and the guides.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.
 NAPOLEON B. ROBEY.

Witnesses:

GUY L. BERRY,
 M. A. BERRY.