

(No Model.)

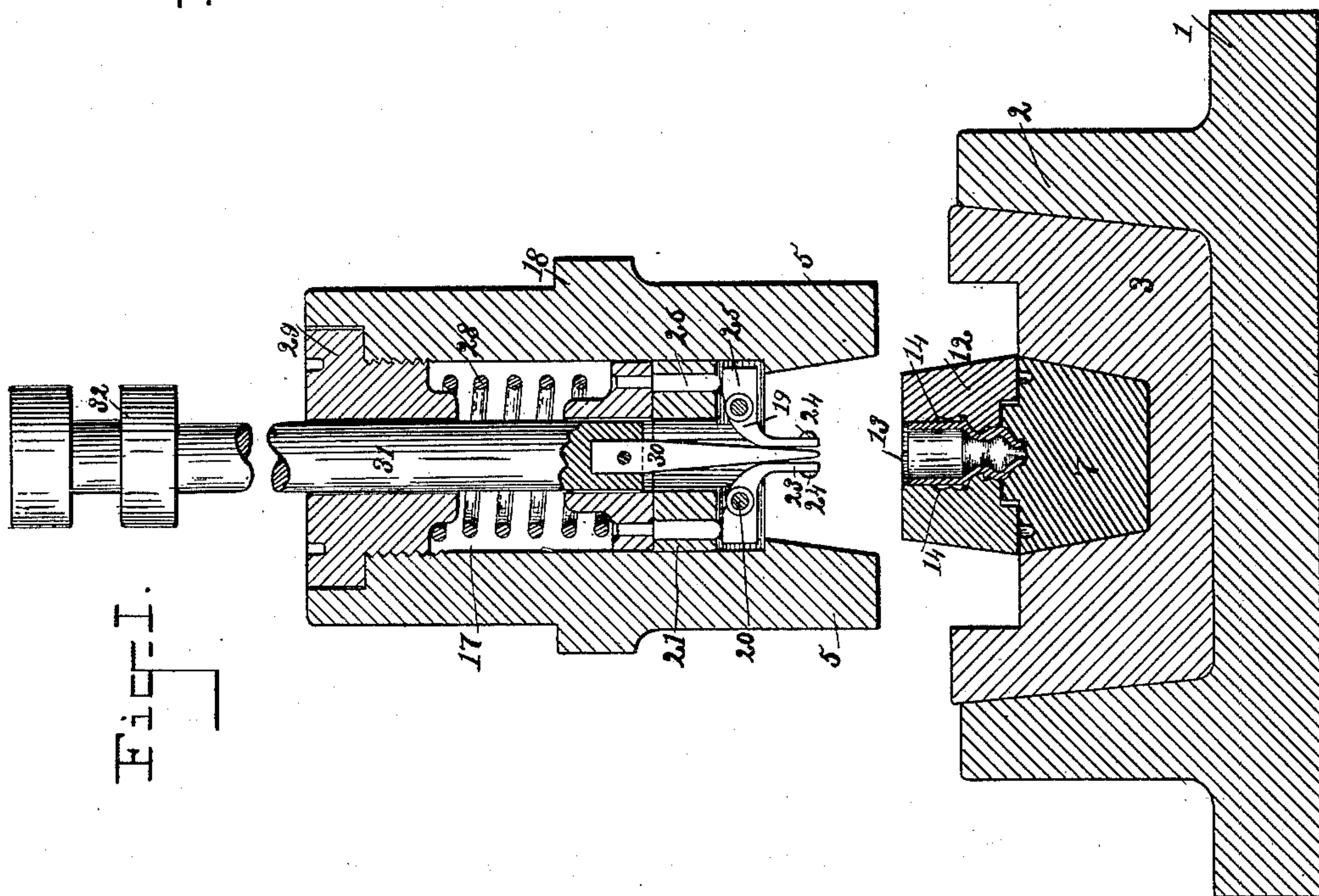
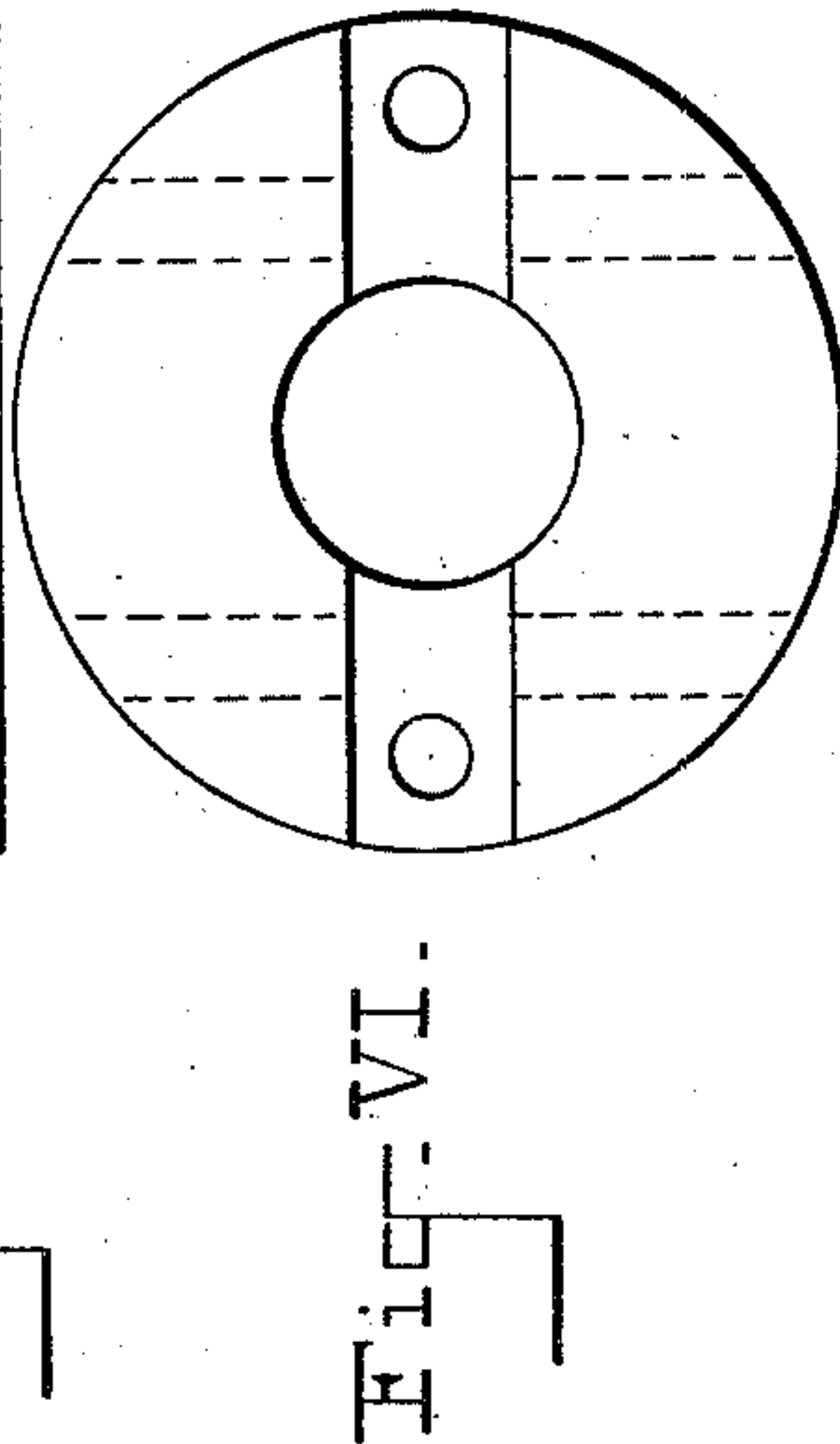
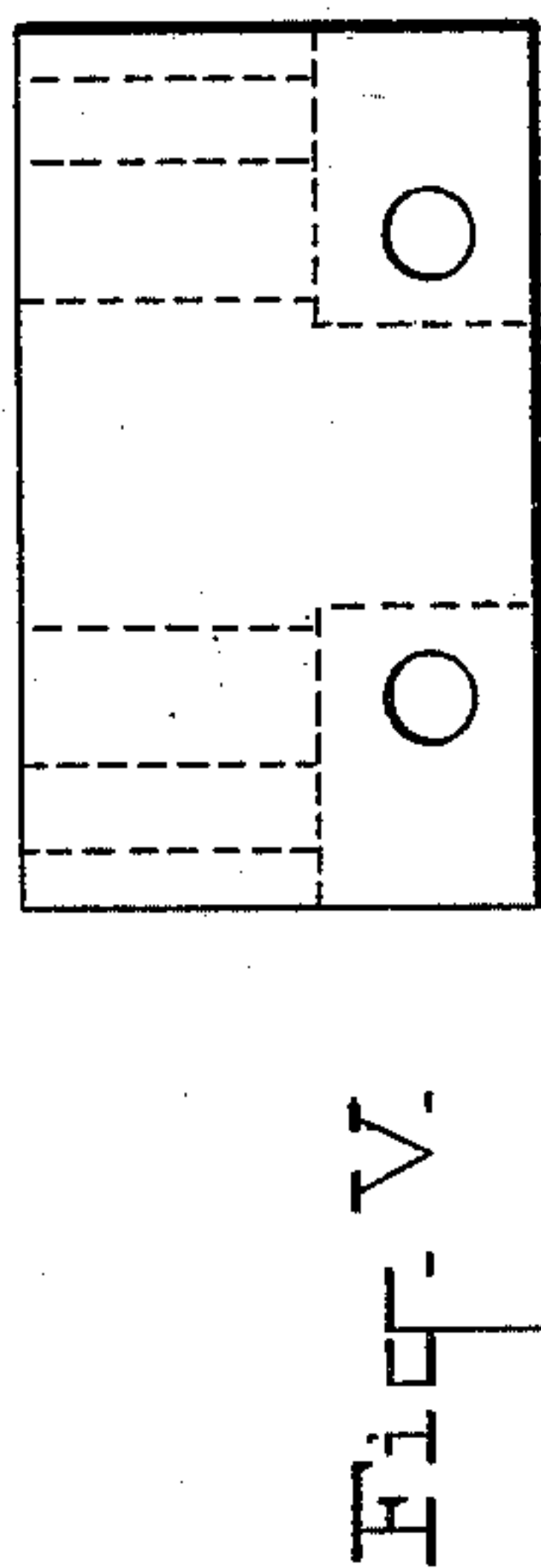
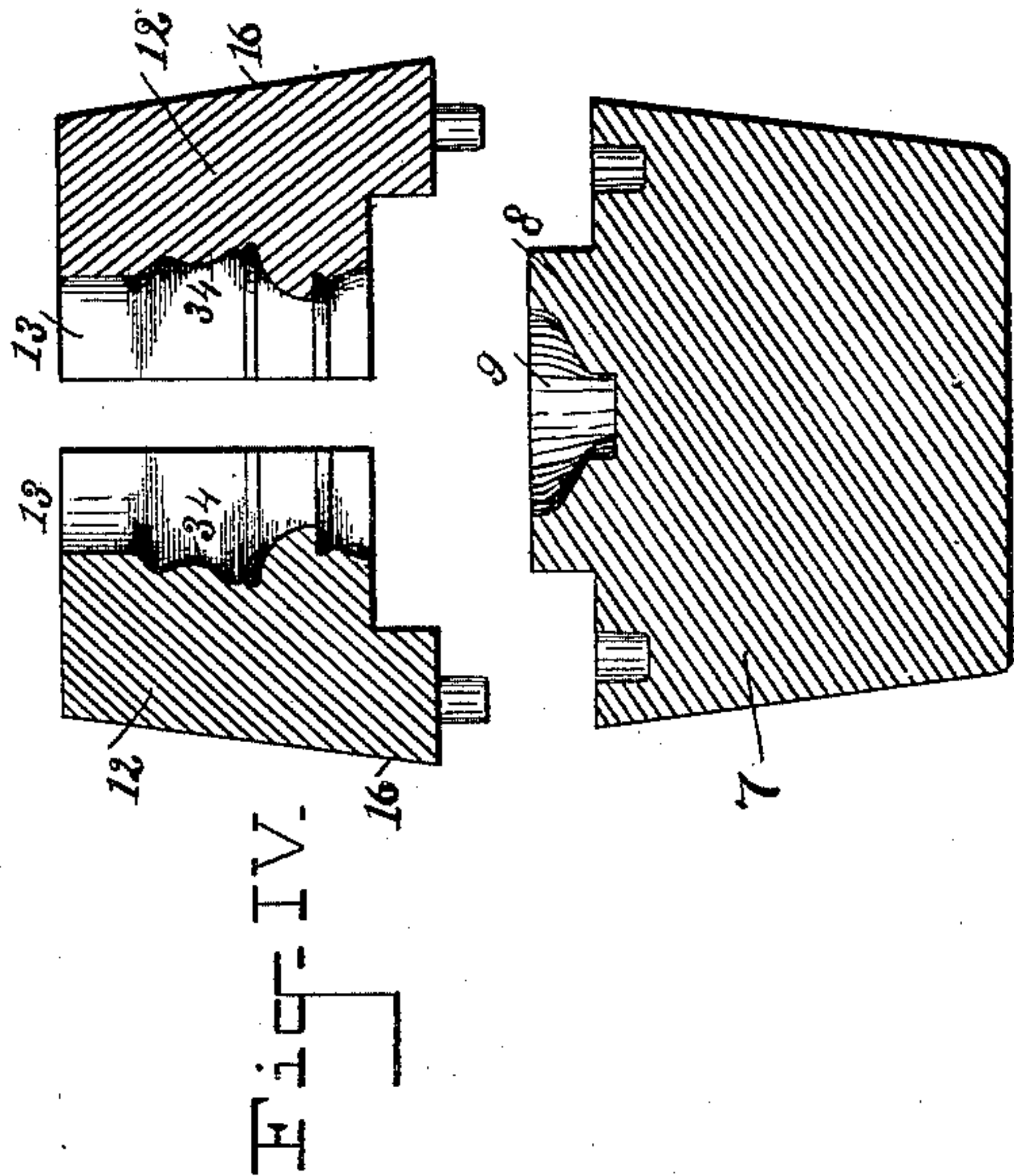
2 Sheets—Sheet 1.

C. W. BUTTS.

MACHINE FOR FORMING NIBS ON WATCH PENDANTS.

No. 431,435.

Patented July 1, 1890.



Witnesses

Lillis Hanna
George S. Bell

Inventor

Charles W. Butts

By *Smith & Bros*

Attorneys

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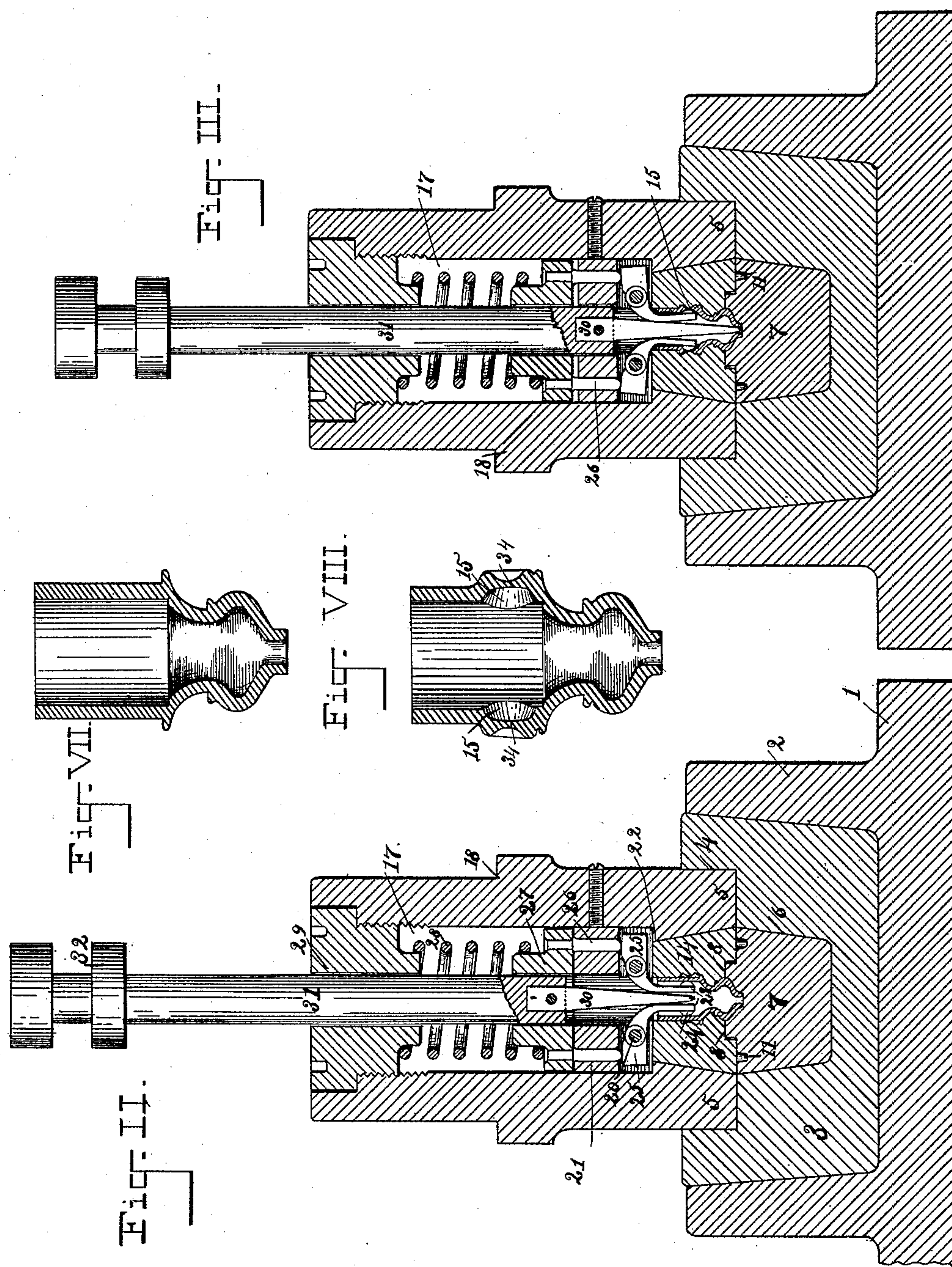
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UNITED STATES PATENT OFFICE.

CHARLES W. BUTTS, OF SAG HARBOR, NEW YORK, ASSIGNOR TO THE
FAHYS WATCH CASE COMPANY, OF SAME PLACE.

MACHINE FOR FORMING NIBS ON WATCH-PENDANTS.

SPECIFICATION forming part of Letters Patent No. 431,435, dated July 1, 1890.

Application filed April 14, 1890. Serial No. 347,792. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. BUTTS, a citizen of the United States, residing at Sag Harbor, in the county of Suffolk and State of New York, have invented a new and useful Machine for Forming the Nibs on Watch-Pendants, of which the following is a specification.

My invention relates to a machine whose purpose is to facilitate the formation of those watch-pendants whose bow-sockets have an annular flange or raised margin, (known by watch-case makers as a "nib.") Apart from the desirability of obtaining the desired configuration with the least practicable sacrifice of the material, usually gold or silver, I prefer, on other considerations, to produce the nibs by the process of striking up in the die or upsetting device described in the following specification, reference being had to the accompanying drawings, in which—

Figure I is a vertical section of a machine embodying my invention, the parts being shown in position before the upsetting action. Fig. II is a similar view showing the parts in position for upsetting. Fig. III is a like section showing the same devices in their effective position. Fig. IV is a sectional view, on an enlarged scale, of the dies separated. Fig. V is a side elevation, and Fig. VI an under side view, of the punch-carrying block. Figs. VII and VIII are sectional views of a pendant before and after punching.

The base 1, which may be of cast-iron, has a pit 2, whose form and dimensions are such as to snugly hold the bed or bolster 3, having a broad and shallow depression 4, which receives and centers the lower end of the follower or outside punch 5, having at the center of said depression the narrower and deeper tapering depression or cavity 6, to which is snugly fitted a piece of cast-steel 7, which I call the "lower die." A raised central portion or dais 8 of said lower die has at its center a cavity 9, which fits and holds the lower half of the "foot" of the pendant-blank 10. Sockets in said lower die 7 receive dowels 11 on a two-part body-die composed of a pair of half-dies 12 12, of identical form one to the other, and which touch one an-

other at a vertical plane, which is coincident with the axis of the cavity 9. Each of the thus opposed vertical walls of the said half-dies has a cavity 13, that forms an intaglio counterpart or matrix of the upper part of the pendant, including the special depressions 14 14, that constitute the matrices, whose co-action with the outwardly-pressed jaws, to be presently described, operates to create the desired protuberances or nibs 15 15 on the pendant. The upwardly-tapered sides 16 of the half-dies fit the correspondingly-sloped walls at the lower portion of the aperture 17, which extends vertically throughout the punch 5

Shoulders 18 on the outside of the outside punch 5 enable the application of a depressing-instrument. (Not shown.)

19 19 are two steel jaws fulcrumed at 20 20 in a block 21, which rests on a shoulder 22 of the outside punch 5. Each jaw has a shank 23, that extends perpendicularly down the hollow axis of the pendant, and near its lower end and next the pendant-wall has a punch or teat 24. On the other side of the fulcrum each jaw terminates in a heel 25. Upon each of said heels rests a vertical rod 26, whose upper end is fastened in a sleeve 27, which sleeve is depressed by a helical spring 28, which is held in the outside punch by means of a nut 29, that is screwed into the upper end of the aperture 17.

The jaws 19 19 are so formed that when in their normal or inactive position the opposing edges of their said shanks present an up-flared throat for reception of a correspondingly-tapered drift or spreader 30, that is secured to and extends downward from a plunger 31, which, extending upward through the sleeve 27 and nut 29, has a circumferential groove or neck 32 for the application of a depressing and elevating instrument. (Not shown.)

It will be seen that the instant the drift is withdrawn from the effective position shown is Fig. III the pressure of the rods 26 on the jaw-heels 25 brings the jaw-shanks 23 to the retracted position shown in Figs. I and II, so that on lifting the outside punch 5 off of the bolster the now-punched pendant can be re-

withdrawn and an unpunched blank substituted in its place, upon which, the plunger being returned to its position on the bolster, the work is repeated.

5 As shown, the nib-forming recesses 14 14 have at their bottoms rounded teats 34, which form in the nibs rounded sockets to receive the bow.

Having thus described my invention, the following is what I claim as new therein and
10 desire to secure by Letters Patent:

1. In a machine for forming the nibs on watch-pendants, the combination, with the two-part die 12 12, having the matrices 14 14,
15 of the fulcrumed jaws 19 19, armed with punches 24 24, and the drift or spreader 30, substantially as set forth.

2. In a machine for forming the nibs on watch-pendants, the combination, with the
20 punching or striking-up devices 12 19 30, of the automatically-retracting devices, which consist of the rods 26, which are pressed upon the heels 25 by spring-depressed sleeve 27, substantially as set forth.

25 3. In a machine for forming the nibs on watch-pendants, the combination of the following elements, to wit: the bolster 3, hav-

ing the depressions 4 and 6, the outside punch 5, having the central aperture 17, the lower die 7, the two-part body-die 12 12, hav- 30 ing the nib-matrices 14 14, the jaws 19 19, armed with the punches 24 24, and the tapering drift or spreader 30, the whole being combined and operating as set forth.

4. In a machine for forming the nibs on
35 watch-pendants, the combination, with the described punch-spreading devices, of the punch gaging and retracting mechanism consisting of nut 29 in the outside punch 5, the spring 28, the sleeve 27, and the rods 26, 40 which rest upon the heels 25, as and for the objects specified.

5. The combination of a pendant-holding die, a collapsible punch adapted to enter said pendant, and a spreader for said punch, sub- 45 stantially as set forth.

6. The nib-forming die having nib-shaped depressions or cavities with teats or projections in the bottom thereof.

CHAS. W. BUTTS.

Witnesses:

THOS. F. BISGOOD,
W. E. DENISON.