

No. 774,791.

PATENTED NOV. 15, 1904.

J. D. SEIBERT.
POWER HAMMER.

APPLICATION FILED APR. 30, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

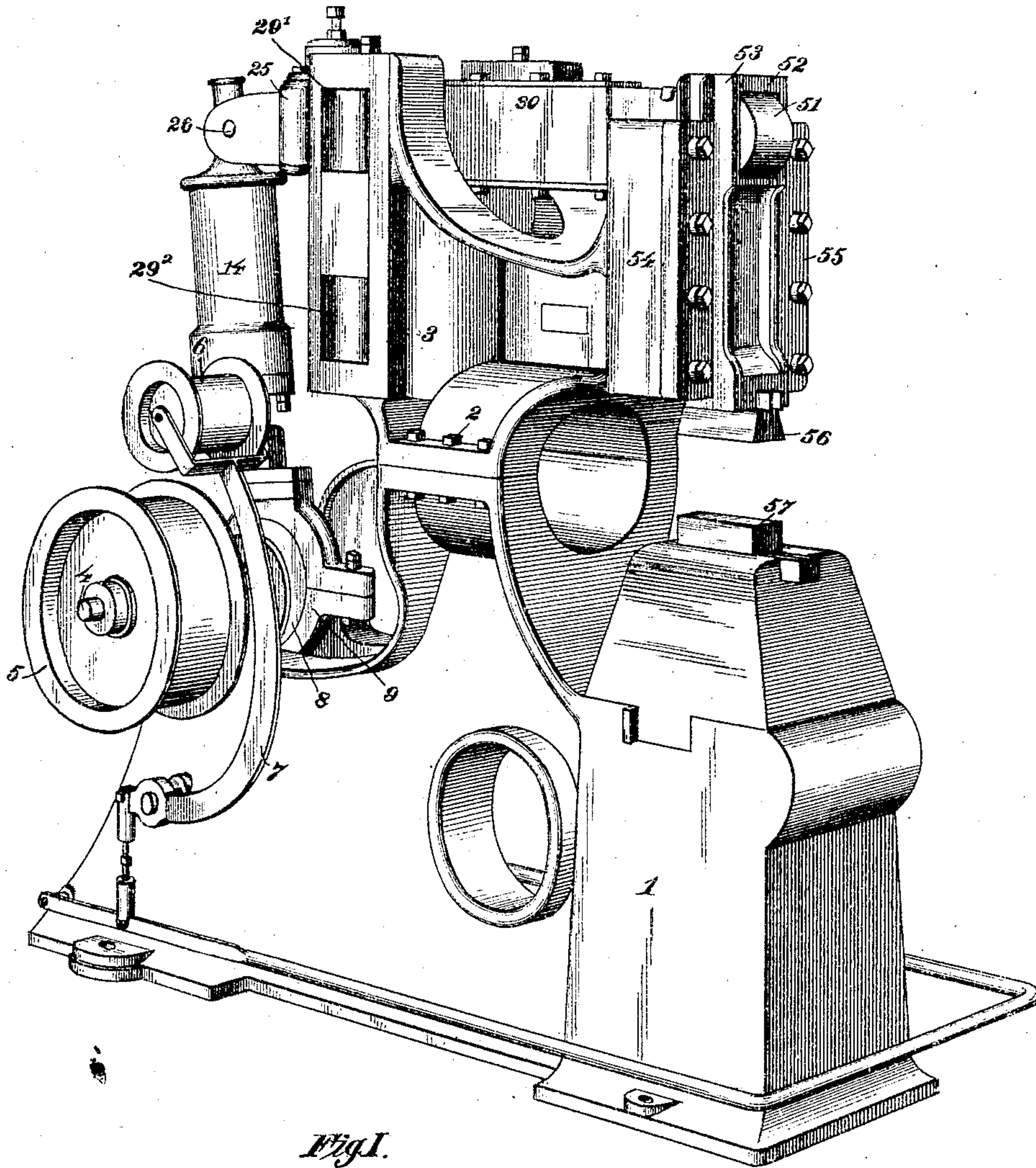


Fig. 1.

Witnesses

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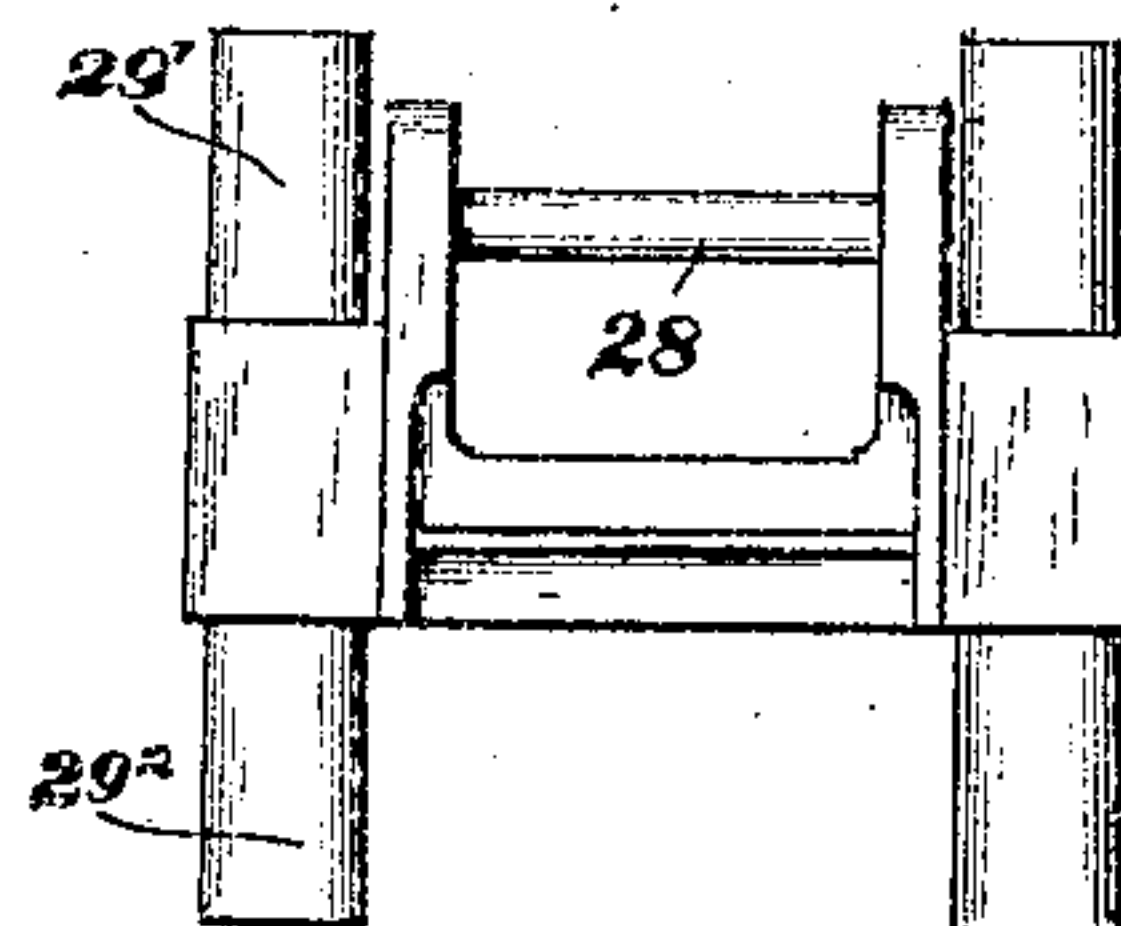
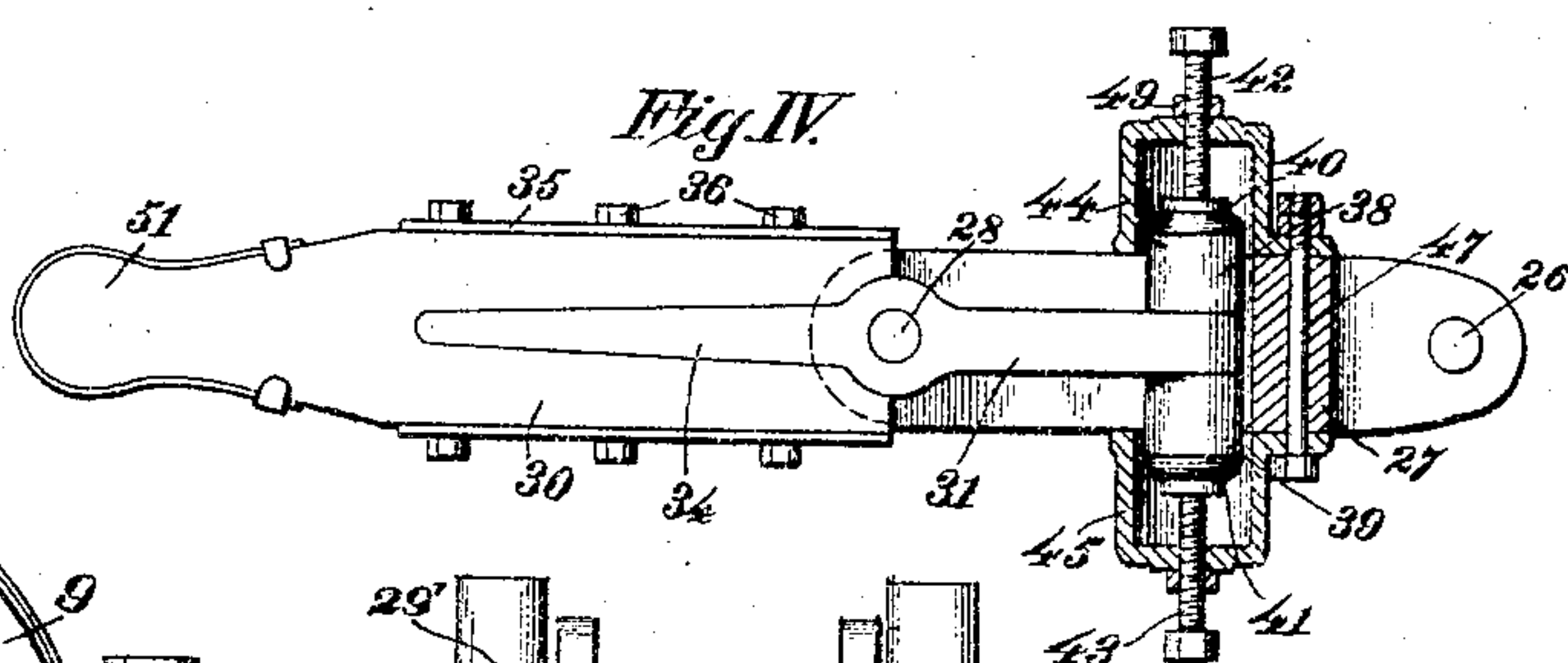
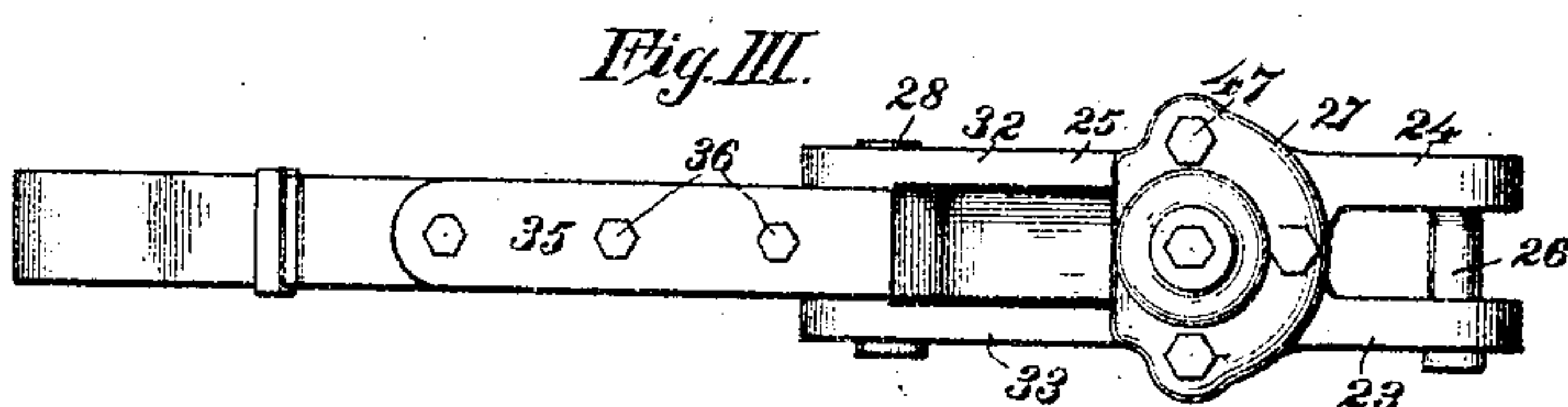
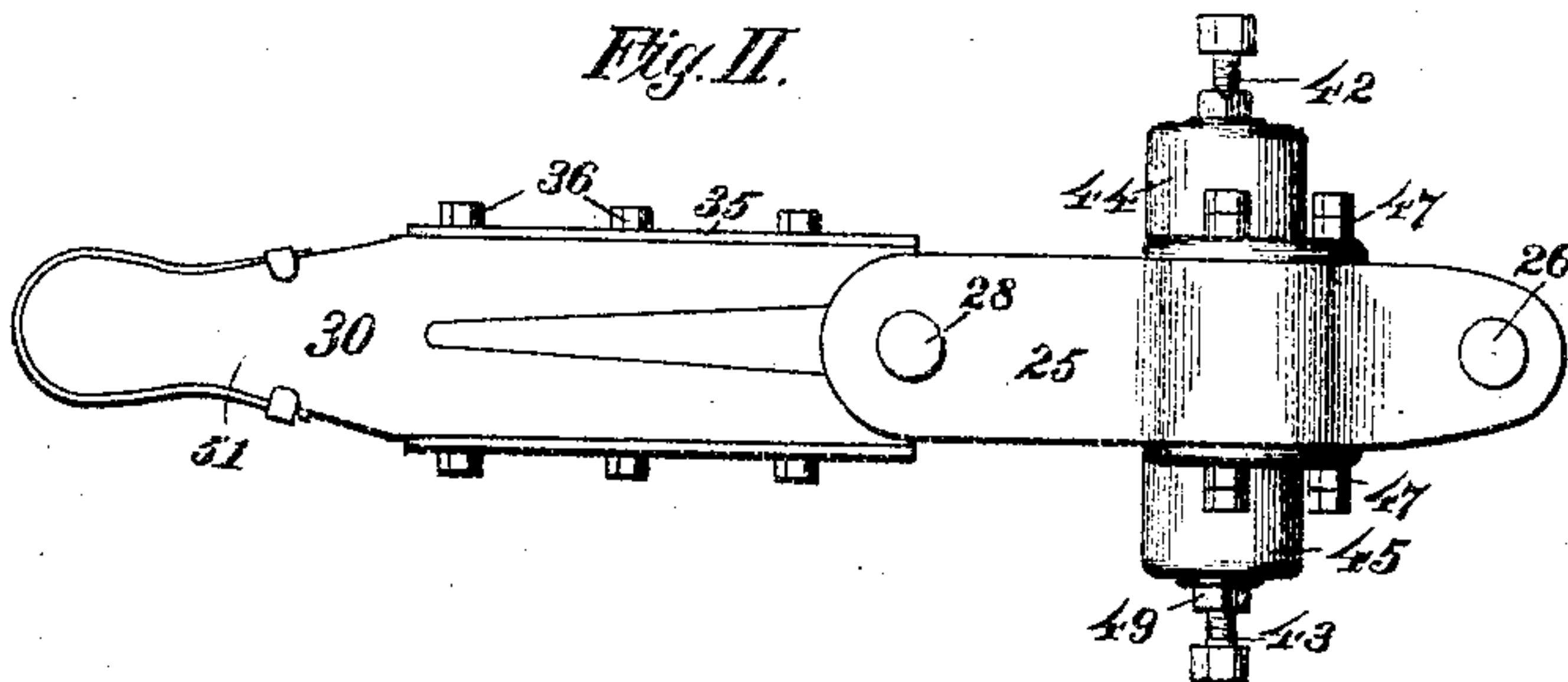
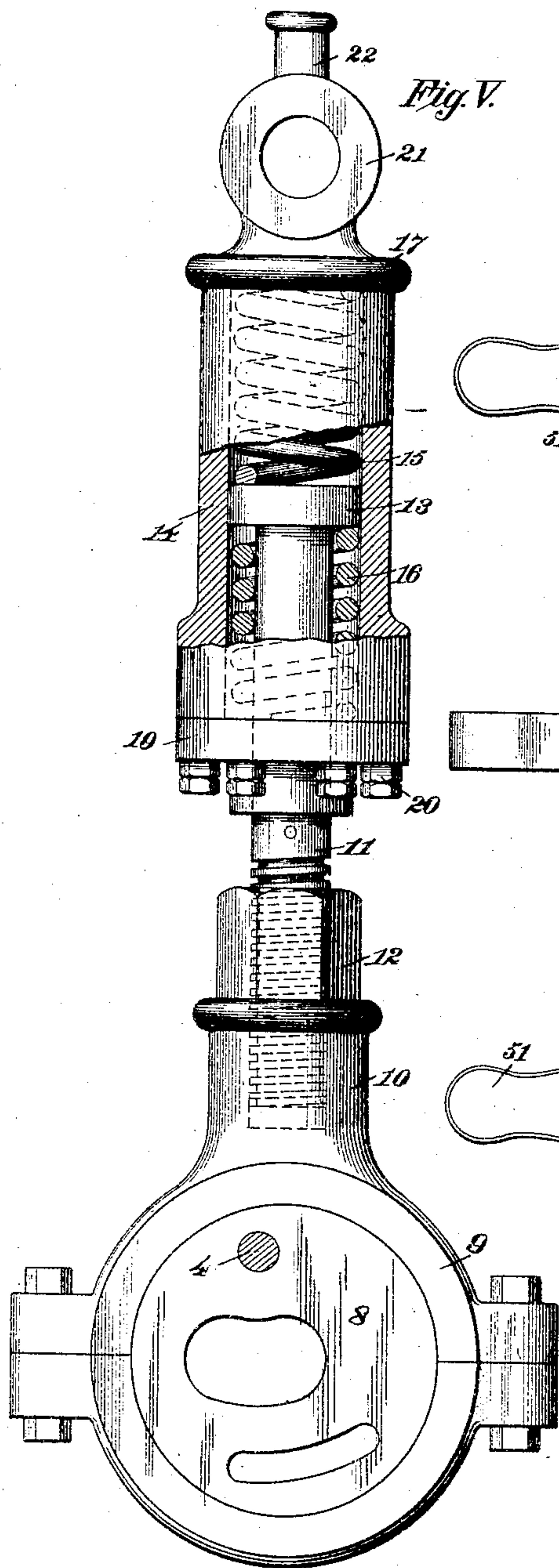
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2 SHEETS—SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES D. SEIBERT, OF BELLEFONTE, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO J. HOWARD LINGLE, OF BELLEFONTE, PENNSYLVANIA.

POWER-HAMMER.

SPECIFICATION forming part of Letters Patent No. 774,791, dated November 15, 1904.

Application filed April 30, 1902. Serial No. 105,386. (No model.)

To all whom it may concern:

Be it known that I, JAMES D. SEIBERT, of Bellefonte, in the county of Center, State of Pennsylvania, have invented certain new and useful Improvements in Power-Hammers, of which the following is a complete specification, reference being had to the accompanying drawings.

The object of my invention is to produce means for increasing the resilient action in the impact-delivering mechanism of power-hammers by which, as is well understood in the art, the efficiency of the machine may be increased.

The means by which that object is attained will be hereinafter fully specified, and succinctly set forth in the appended claims.

In the accompanying drawings, Figure I is a perspective view of a preferred form of a machine embodying my improvements. Fig. II is a side elevation of my helve complete, but detached. Fig. III is a top plan view of the subject-matter of Fig. II. Fig. IV is a view similar to Fig. II, showing a portion of the helve in vertical section. Fig. V is a side elevation, partly in section, of the pitman which actuates the helve. Fig. VI is a side elevation of the saddle which affords the pivotal connection between the helve and the head-piece of the frame.

Referring to the numerals on the drawings, 1 indicates the bed-frame of a representative form of a power-hammer, to which is secured, as by bolts 2, a head-piece 3. The parts referred to may be of any usual or preferred construction or design.

4 indicates a shaft carried in suitable bearings in the frame 1 and provided with a fixed pulley 5, by which it may be driven.

6 indicates a belt-guide pulley, carried as upon a bent frame 7.

8 indicates an eccentric fixed to the shaft 4 and adapted to drive a collar 9, into a recess in the head 10 of which is threaded a screw 11.

12 indicates a lock-nut upon the screw 11, adapted to fix the screw at any point of adjustment within the head 10. The screw 11 is provided with a head 13, which works

within a case 14 between balancing-springs 15 and 16. The springs bear at their ends 50 opposite to the head 13, respectively, against a head 17, which closes the upper end of the case 14, and against a collar 19, secured, as by a crown of bolts 20, to the bottom of the case. Preferably made integral with the head 17 is 55 an annular bearing-piece 21, preferably surmounted by an oil-cup 22. The bearing-piece is designed to fit between jaws 23 and 24 in a casting 25, which constitutes a part of the helve and is secured in place therein, as by a 60 pin or bolt 26. The jaws 23 and 24 are rigidly united, as by a cross-piece 27, formed integrally with them. Movably secured to the casting 25, as by a pin 28 on the saddle 29, carried by the head-piece 3 of the machine, is 65 the remaining portion 30 of the two-part helve. The saddle 29 is provided near its opposite extremities upon opposite sides of it—that is, above and below—with cushions 29' and 29², which serve to confine and yieldingly 70 support it within the head-piece 3. The saddle, with its attached cushions, is shown in elevation in Fig. VI, and one end of it, as carried in the head-piece 3 in use, is illustrated in Fig. I of the drawings. The part 30 is 75 provided with a projection 31, which extends from one end of the part 30 between the two sides 32 and 33 of the casting 25. The part 30 being preferably made of wood, the projection 31 is preferably secured thereto, as by 80 a tongue 34, embedded in the wood. The part 30 is preferably provided upon two sides with plates 35, which, as well as the tongue 34, are preferably secured to the part 30, as by bolts 36, passing through the part 30, the tongue 85 34, and the plates 35.

The casting 25 and the part 30, united as above specified by the bolt or pin 28, constitute a two-part helve which is designed to act as a unit, but with a yielding or resilient action 90 between the parts. To accomplish that result, I provide near the extremity of the projection 31, upon opposite sides thereof, respectively, cushions 38 and 39, which are preferably made of rubber, but may be of any suitable mate- 95 rial. These cushions are preferably mounted,

respectively, in cups 40 and 41, whose positions are controlled as by means of set-screws 42 and 43, working in cases 44 and 45, respectively, secured, as by bolts 47, to opposite sides 5 of the casting 25.

49 indicates lock-nuts by which the set-screws 42 may be fixed in position and properly adjusted.

It should be noted that the cushions 38 and 10 39 are located between the pins 26 and 28, respectively, by which the operative efficiency of the two-part helve is augmented. The rounded head 51 upon the part 30 of the helve enters a housing 52, provided for it in the vertically-reciprocating hammer-head 53, which 15 works in suitable guideways 54 and 55, provided for it on the head-piece 3.

56 indicates the hammer proper, and 57 the anvil against which it makes impact.

20 In operation motion being imparted to the shaft 4 is communicated through the eccentric 8 and pitman secured to the head 10 thereof and through the two-part helve to the housing 53. The length and efficiency of the throw of 25 the helve in its vibratory action is determinable by regulation of the resistance of the springs 15 and 16 and by that of the cushions 38 and 39 through their respective means of adjustment above specified.

30 The springs 15 and 16 are preferably made of coiled steel, but may be made of other ma-

terial, if preferred, and the use of pneumatic springs is contemplated as a possibility.

What I claim is—

1. The combination with the frame of a 35 power-hammer, of a two-part helve comprising one part pivoted to the frame and provided with a longitudinal projection, another part, also pivoted to the frame, and consisting of a casting comprising jaws, cross-piece, and side 40 pieces, cushion-cases respectively secured to the cross-piece, and cushions in said cases yieldingly supporting the projection of the first-named part of the helve between them.

2. The combination with the frame of a 45 power-hammer, of a two-part helve comprising one part pivoted to the frame and provided with a projection having a tongue embedded therein, another part, also pivoted to the frame, and consisting of a casting comprising jaws, 50 cross-piece, and side pieces, cushion-cases respectively secured to the cross-piece and cushions in said cases yieldingly supporting the projection of the first-named part of the helve 55 between them.

In testimony of all which I have hereunto subscribed my name.

JAMES D. SEIBERT.

Witnesses:

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