

No. 790,930.

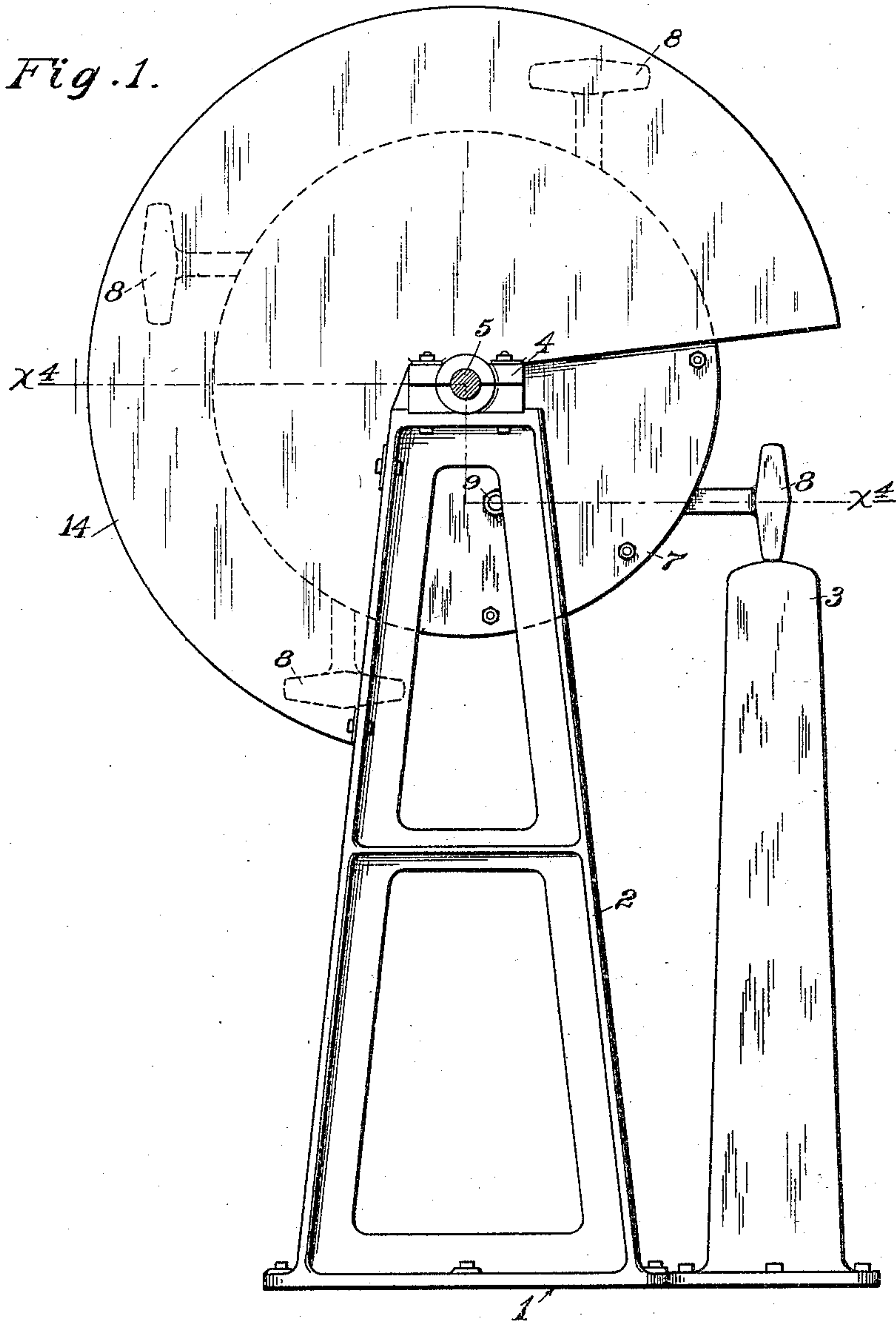
PATENTED MAY 30, 1905.

L. L. SOUTH & E. E. PRATT.

CENTRIFUGAL HAMMER.

APPLICATION FILED MAR. 1, 1904.

2 SHEETS—SHEET 1.



Witnesses.

E. W. Jepsen.

H. D. Kilgore

Inventors

Leonard L. South.

Eugene E. Pratt.

By their Attorneys.

Williamson Merchant

L. L. SOUTH & E. E. PRATT.

CENTRIFUGAL HAMMER.

APPLICATION FILED MAR. 1, 1904.

2 SHEETS—SHEET 2.

Fig. 2.

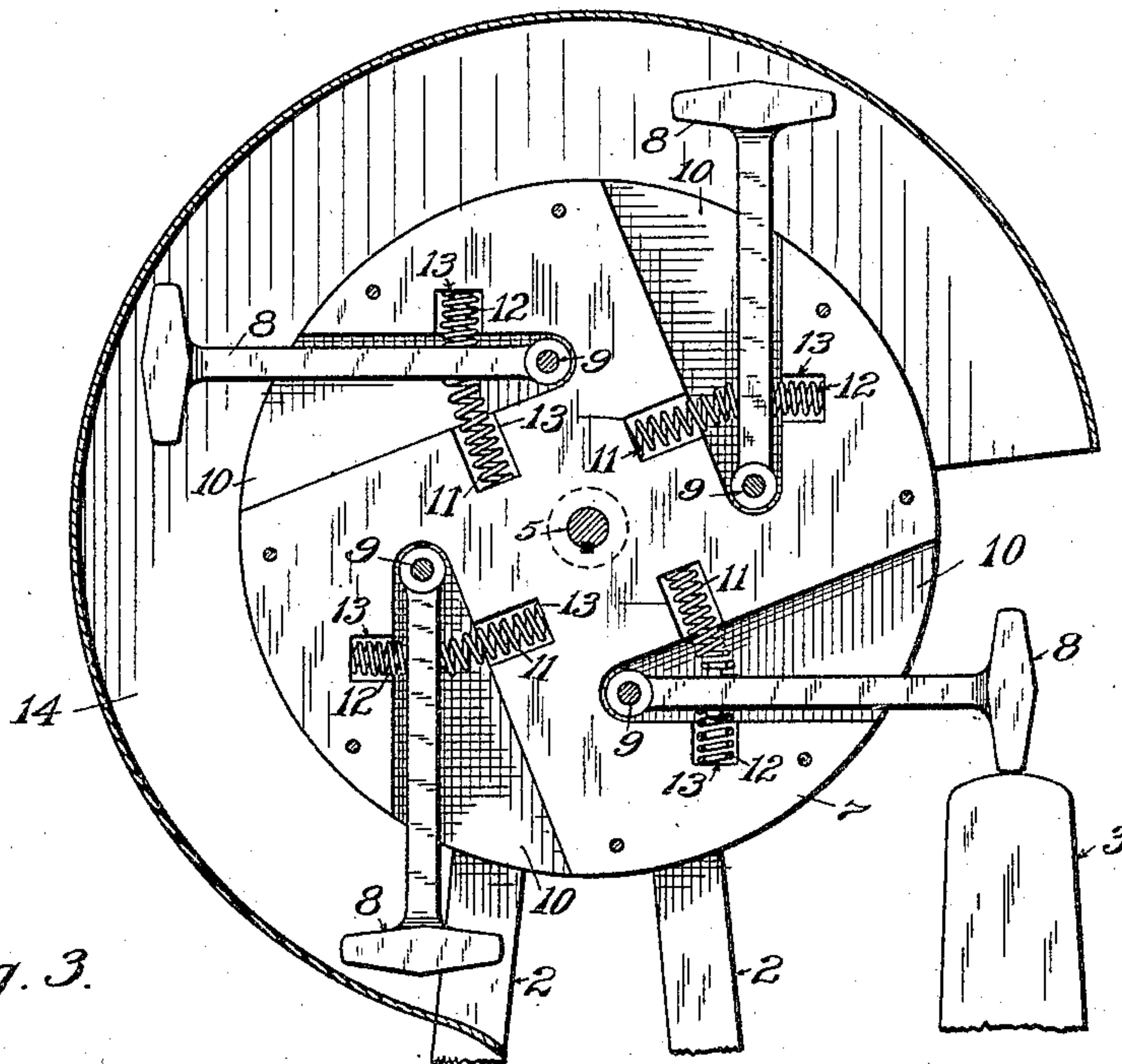


Fig. 3.

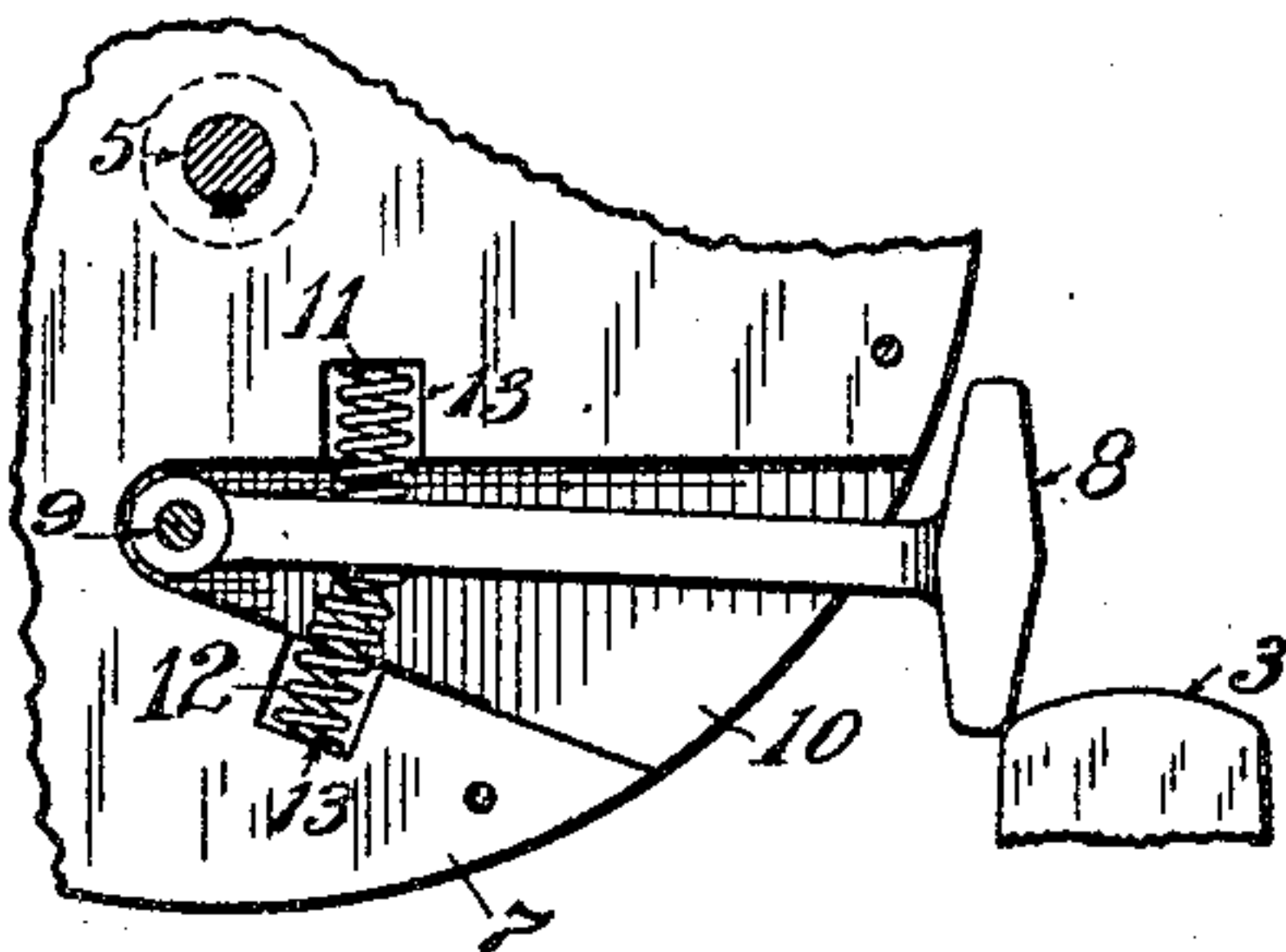
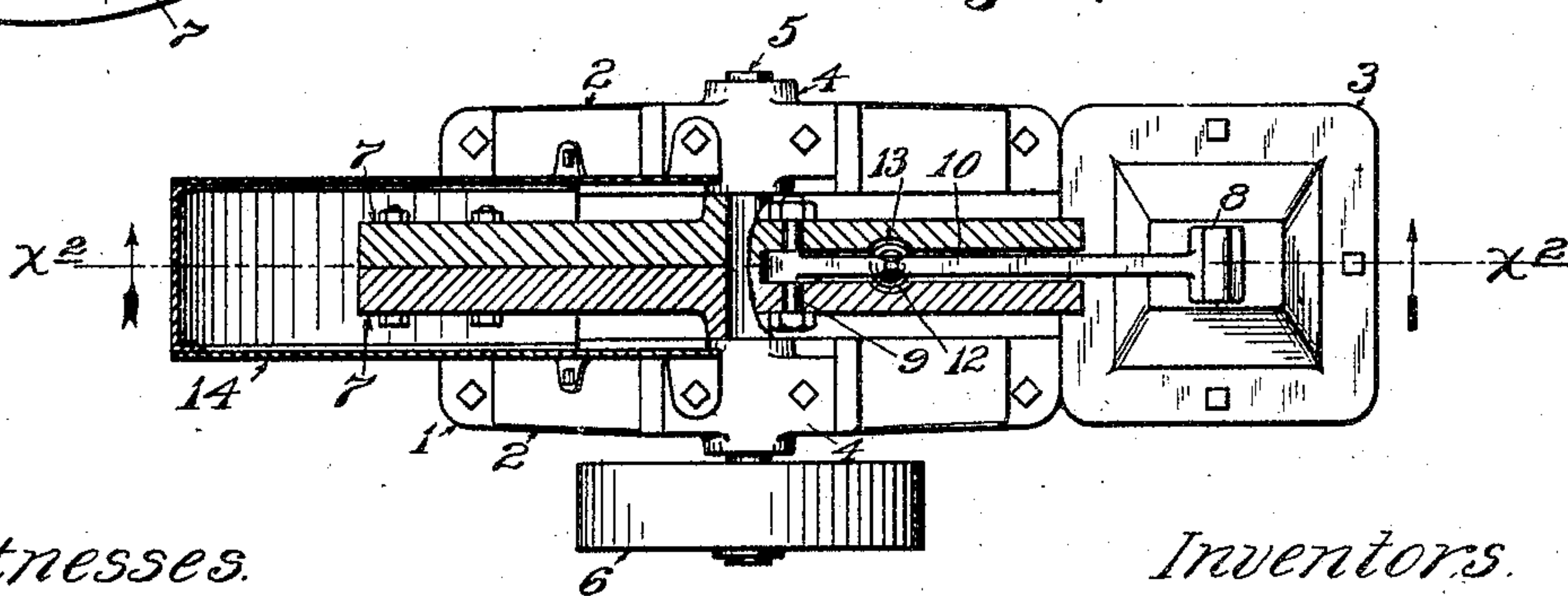


Fig. 4.



Witnesses.
E. H. Jeppesen.

A. D. Kellogg

Inventors.
Leonard L. South.
Eugene E. Pratt.

By their Attorneys.
Williamson Merchant

UNITED STATES PATENT OFFICE.

LEONARD L. SOUTH AND EUGENE E. PRATT, OF WEBSTER, SOUTH DAKOTA; SAID SOUTH ASSIGNOR TO SAID PRATT.

CENTRIFUGAL HAMMER.

SPECIFICATION forming part of Letters Patent No. 790,930, dated May 30, 1905.

Application filed March 1, 1904. Serial No. 195,999.

To all whom it may concern:

Be it known that we, LEONARD L. SOUTH and EUGENE E. PRATT, citizens of the United States, residing at Webster, in the county of Day and State of South Dakota, have invented certain new and useful Improvements in Centrifugal Hammers; and we 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.

Our invention has for its object to provide an improved rotating power-driven hammer especially adapted for use in forging metal upon an anvil; and to this end it consists of the novel devices and combinations of devices hereinafter described, and defined in the claim.

The invention is illustrated in the accompanying drawings, wherein like characters indicate like parts throughout the several views.

Figure 1 is a view in side elevation, showing our improved hammer. Fig. 2 is a vertical section taken through the upper portion of the hammer approximately on the line $x^2 x^2$ of Fig. 4. Fig. 3 is a view corresponding in the line of its section to Fig. 2, but showing different positions of the parts and with some parts broken away; and Fig. 4 is a horizontal section on the line $x^4 x^4$ of Fig. 1, some parts being left in full.

The numeral 1 indicates a base-plate from which rise a pair of bearing-brackets 2 and an anvil 3. Mounted in suitable bearings 4 on the upper ends of the brackets 2 is a counter-shaft 5, having at one projecting end a pulley 6, over which will run a power-driven belt (not shown) to impart rotary motion to the said shaft. Secured to the shaft 5 between the brackets 2 is a disk-like hammer carrier or head 7, shown as made up of a pair of plates bolted or otherwise rigidly secured together. This rotating carrier carries the hammer or hammers, of which to secure the best results there should be a plurality. As shown, there are four of these hammers,

(indicated at 8.) The heads of these hammers project beyond the periphery of the carrier 7, and their handles are pivoted at 9 to the said carrier at points eccentric to its shaft 5. The said hammer-handles work freely in outwardly-diverging pockets 10, formed in part in each of the plates which make up the carrier 7. Springs 11 and 12 are seated in recesses 13, formed in part in each of the said carrier-plates. These springs yieldingly hold the hammers in intermediate position, but yield to permit them to move in either of two directions, so as to deliver the proper blow onto the upper end of the anvil or onto the forging placed upon the anvil.

The numeral 14 indicates a segmental shield which incloses the carrier 7 and the hammers, but clears the hammer-heads. This shield is rigidly secured to the brackets 2 and is cut away at the proper points to permit the hammers to operate upon the forging. This shield is provided to prevent the hammers from striking persons or objects while passing to and from the work, and it also serves to prevent accidents or damage in case one of the hammers should be broken and thrown outward by centrifugal force.

The operation is obvious. Under rotary movements of the shaft 5 and carrier 7 the hammer will be brought in rapid succession onto the forging or onto the anvil and will be kept thrown outward, so as to properly deliver the blows onto the work. When a hammer strikes the anvil or a forging on the anvil, it is forced backward against its spring 11, or rather is held for an instant substantially stationary while the carrier moves forward, and then is dragged off from the work by a movement illustrated in Fig. 3. Soon after being drawn from the work the hammer will of course be thrown outward by centrifugal force into a normal striking position. It will thus be seen that in order to cause the hammers to be properly drawn from the work it is necessary that their handles be pivoted to the carrier at points offset from or eccentric to its axis. The cushioning-springs,

while not absolutely necessary, are nevertheless necessary in order to obtain the best results.

5 From what has been said it will be understood that the hammer described is capable of many modifications within the scope of our invention as herein set forth and claimed.

What we claim, and desire to secure by Letters Patent of the United States, is as follows:

10 The combination with an anvil and suitable supports, of a power-driven shaft journaled in said supports, a hammer-carrier made up of a pair of connected plates se-

cured to said shaft and formed with pockets 10 and recesses 13, of spring-pressed hammers 8, having their handles pivoted at 9, and working within said pockets 10, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

LEONARD L. SOUTH.
EUGENE E. PRATT.

Witnesses:

FRANK SEARS,
W. W. SEARS.