No. 677,433. Patented July 2, 1901.

E. S. BRETT.

DROP STAMP.

(No Model.) (Application filed Apr. 15, 1901.) 2 Sheets—Sheet 1.

Fig 1

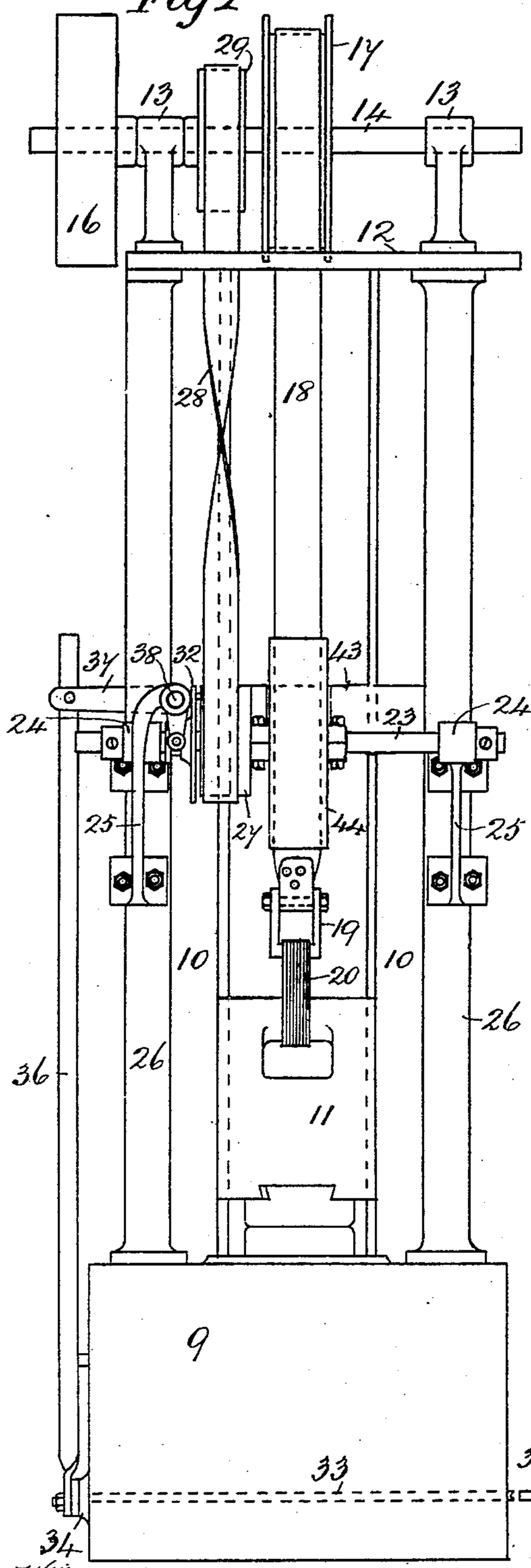
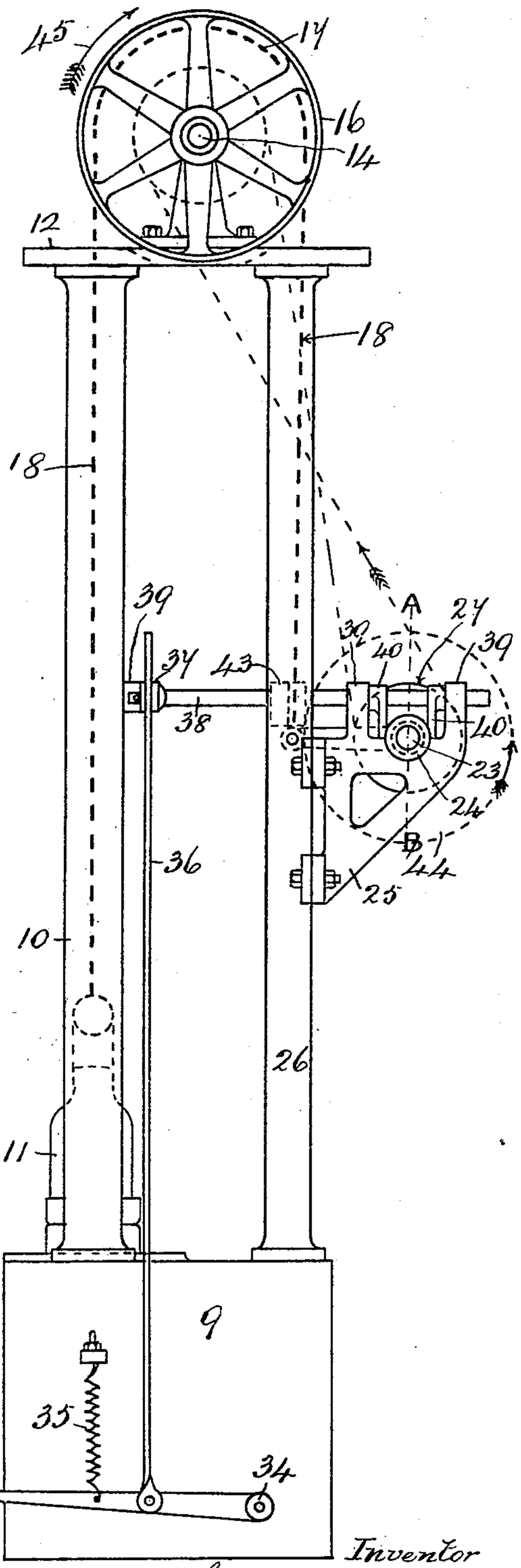


Fig 2



Witnesses
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J. B. Hayward

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(No Model.) 2 Sheets—Sheet 2.

Fig 3

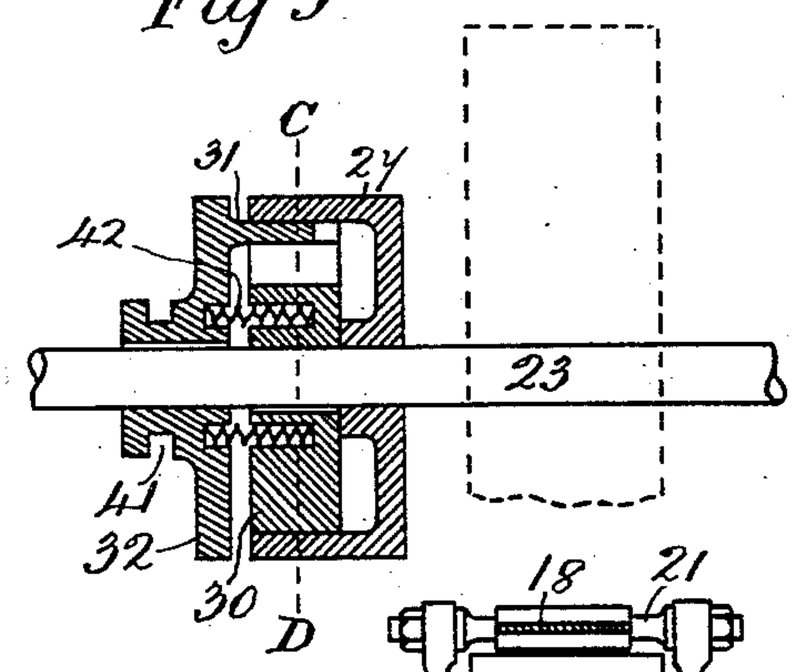


Fig 4

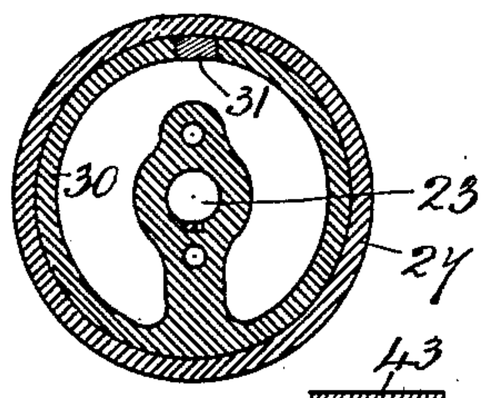
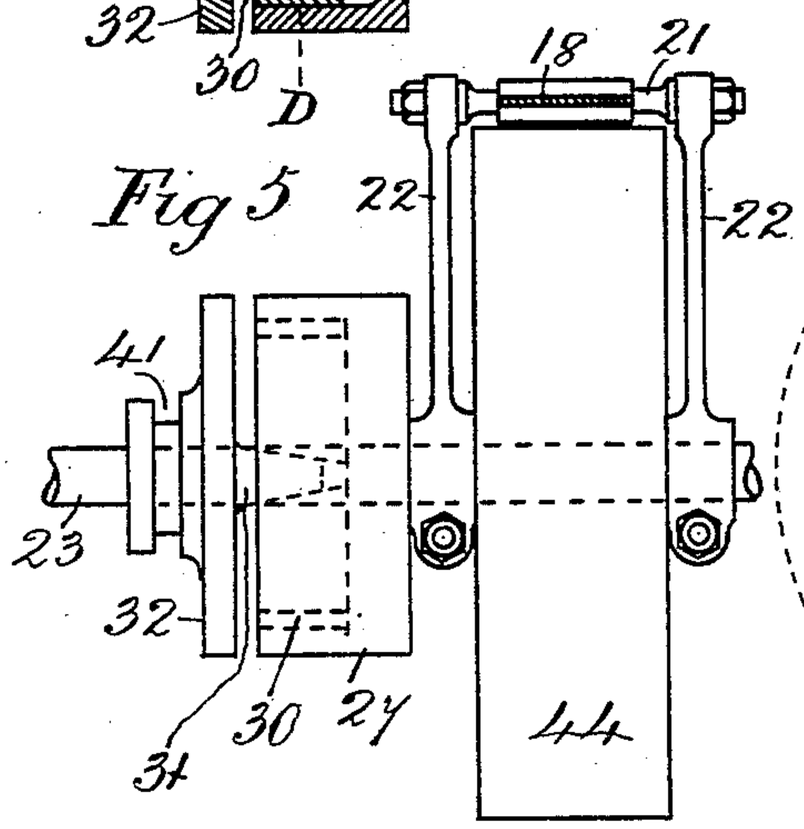


Fig 5



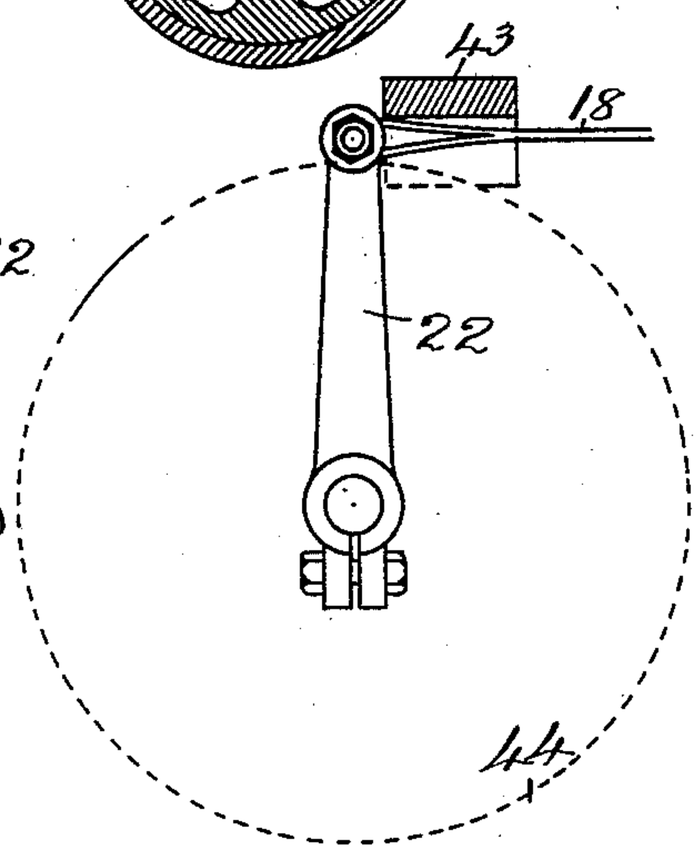


Fig 6

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UNITED STATES PATENT OFFICE.

EDWARD SAMUEL BRETT, OF COVENTRY, ENGLAND.

DROP-STAMP.

SPECIFICATION forming part of Letters Patent No. 677,433, dated July 2, 1901.

Application filed April 15, 1901. Serial No. 55,830. (No model.)

To all whom it may concern:

Be it known that I, EDWARD SAMUEL BRETT, a subject of the King of Great Britain, and a resident of Ashfield, Coundon road, Coventry, England, have invented certain new and useful Improvements in Drop-Stamps, of which the following is a specification.

My invention relates to improvements in drop-stamps; and its object is to provide improved mechanism for operating such stamps. I attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a rear side view of my invention as applied to a drop-stamp. Fig. 2 is a side view of the invention. Fig. 3 is an enlarged side sectional view of the clutch device on line A B, Fig. 2. Fig. 4 is an enlarged transverse sectional view of the clutch on line C D, Fig. 3. Fig. 5 is an enlarged plan view of the principal parts of my invention. Fig. 6 is a side view of one of the lifting-arms.

Similar numbers refer to similar parts throughout the several views.

9 is the anvil-block, upon which are erected the guides 10 10, within which slides the hammer-head 11. The upper ends of the guides 10 10 are held together by the plate 12, upon which are carried the journals 13 13, in which the shaft 14 revolves. This shaft is driven by pulley 16 from any suitable main driving-shaft.

17 is a pulley keyed to the shaft 14, on which rides the lifting-band 18, whose one end is secured to the hammer-head 11 by means of the shackle 19 and cords 20, while its other end is secured to the cross-bar 21, which connects the two outer ends of the arms 22 22. These arms are secured firmly upon the counter-shaft 23, which is journaled at 24 24 on brackets 25 25, secured to the pillars 26 26. Upon this shaft 23 the clutch-pulley 27 revolves freely and is driven by band 28 from the pulley 29 on shaft 14. Within the clutch-pulley 27 is the expansive ring 30, which is keyed rigidly to the shaft 23 and having a tapered gap cut to accommodate the wedge 31, carried upon the clutch-plate 32, which slides on a feather-key on the shaft 23. This plate 32 is operated from a treadle 33, which passes around the front and along each side of the block 9, and pivoted on each side at 34. This treadle is held upward by spring 35. To the treadle is connected the vertical rod 36, which is again connected to lever 37, which is secured to rock-shaft 38, which is journaled at 39, and upon which is secured the levers 40, at whose outer ends are usual slide-blocks, which engage in the groove 41 of the plate 32. This plate 32 is pressed by springs 42 in order to keep the wedge 31 outwardly from its gap in the clutch-band 30 except when it is forced inward by the levers 40. The part rotation of the shaft 23 is limited by the ends of the arms 22 striking against the cushion-block 43, which is carried from the pillars 26 26.

44 is an idle pulley loosely mounted on shaft 23.

The action is therefore as follows: The shaft 14, with the pulleys 17 and 29 and the pulley 27, is continuously running. By applying downward pressure upon the treadle 33 the rod 36 is lowered, when by means of the lever 37, rock-shaft 38, and levers 40 the plate 32 is forced inward, with the wedge 31 expanding the gap in the band 30, and thereby frictionally binding itself within the pulley 27. Consequently the motion of the pulley 27 is imparted to the shaft 23, by which the arms 22 are carried around as long as the pressure on the treadle is maintained, and with them the band 18. By reason of the pulley 17 traveling in the direction shown by arrow 45 it will be readily seen that a comparative light pull downward by the arms 22 exerts sufficient friction of the band 18 on pulley 17 for the latter to practically do the work of raising the hammer-head 11. Upon the release of the clutch-plate 32 the band 18 is free to permit of the head 11 falling suddenly to give the blow required. Hence by a longer or shorter dwell of the clutch in action a longer or shorter stroke is given to the head, with a relative heavy or light blow as the result. Also by these means a much heavier hammer may be used than could conveniently be used by the old method of pulling the band 18 down by hand.

It will be obvious that any suitable form of clutch may be substituted for the one shown and described having a quick engaging and releasing action. Also it will be readily seen that the shaft 23, with its clutch device, may be placed in any convenient position so long

as its operating mechanism is within reach of the operator.

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

In drop-stamps the combination with the anvil, the guides, and the hammer-head, raising-band, and continuously-running pulley 17, of the pulley 29, arms 22 22, pulley 44, mounted on shaft 23, and clutch device with its operating mechanism, all substantially as set forth and shown.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWARD SAMUEL BRETT.

Witnesses:

CHARLES T. POWELL,

C. HAYWARD POWELL.