

(No Model.)

W. TODD.  
CRIMPING MACHINE.

No. 534,022.

Patented Feb. 12, 1895.

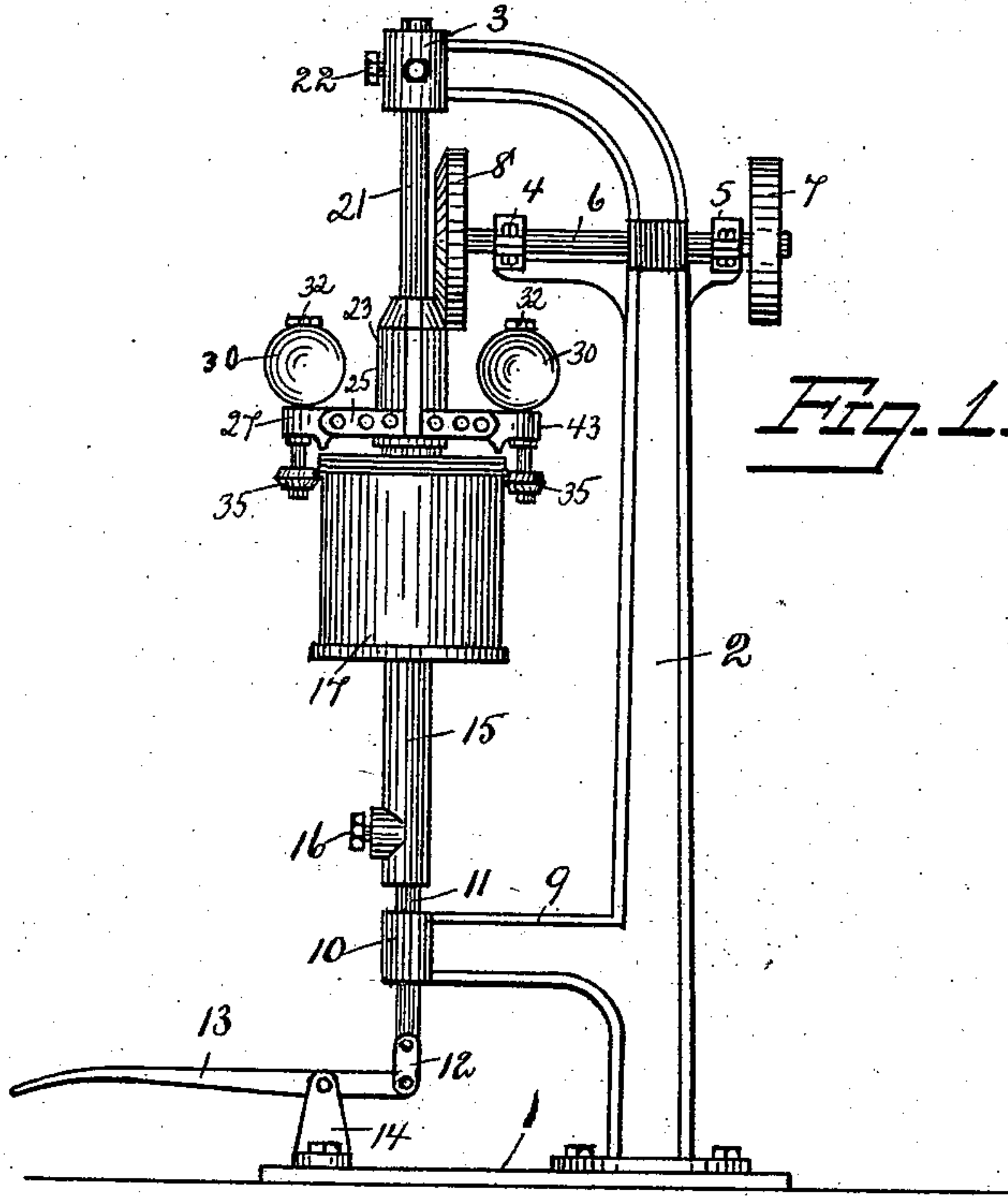


Fig. 1.

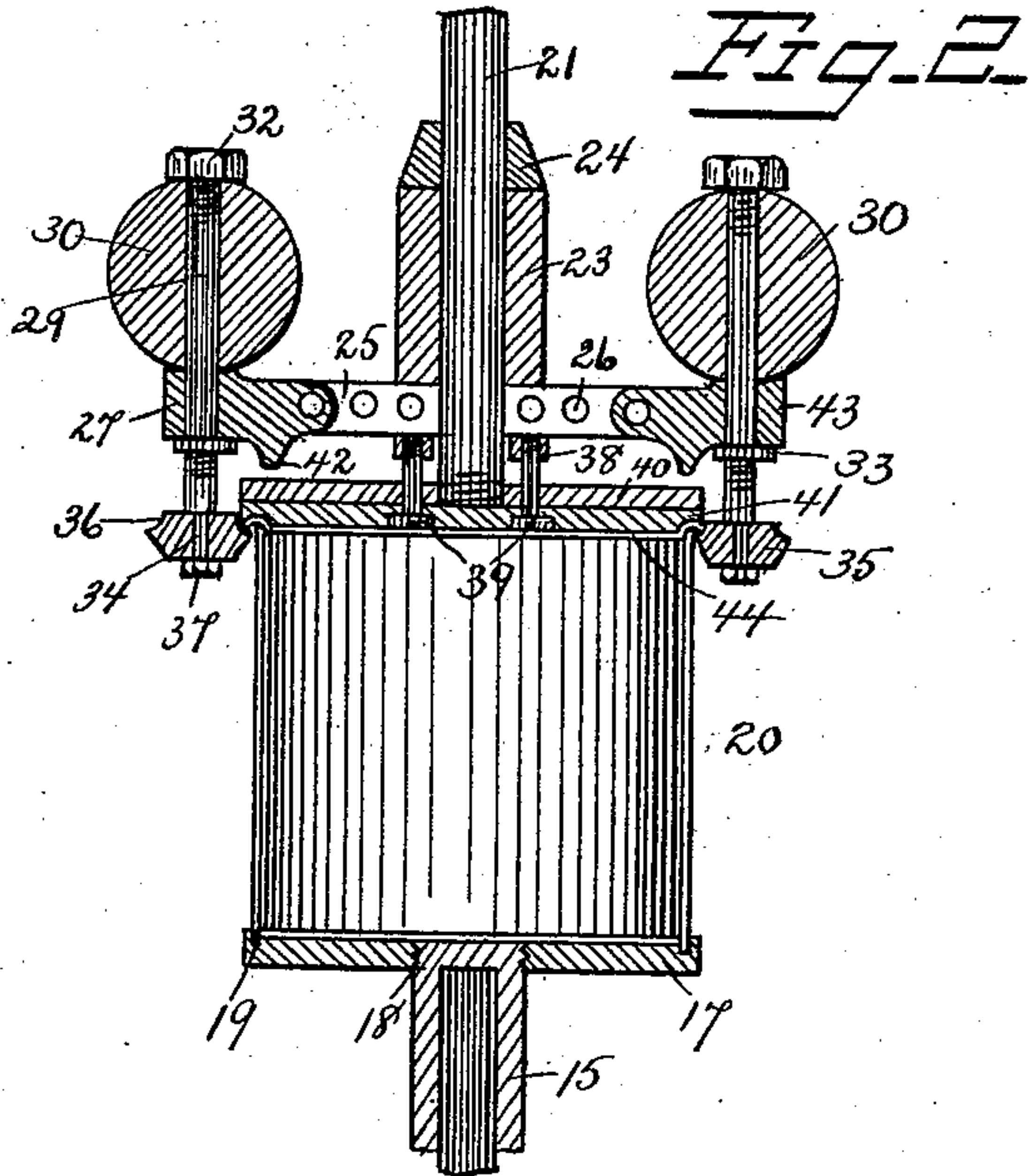
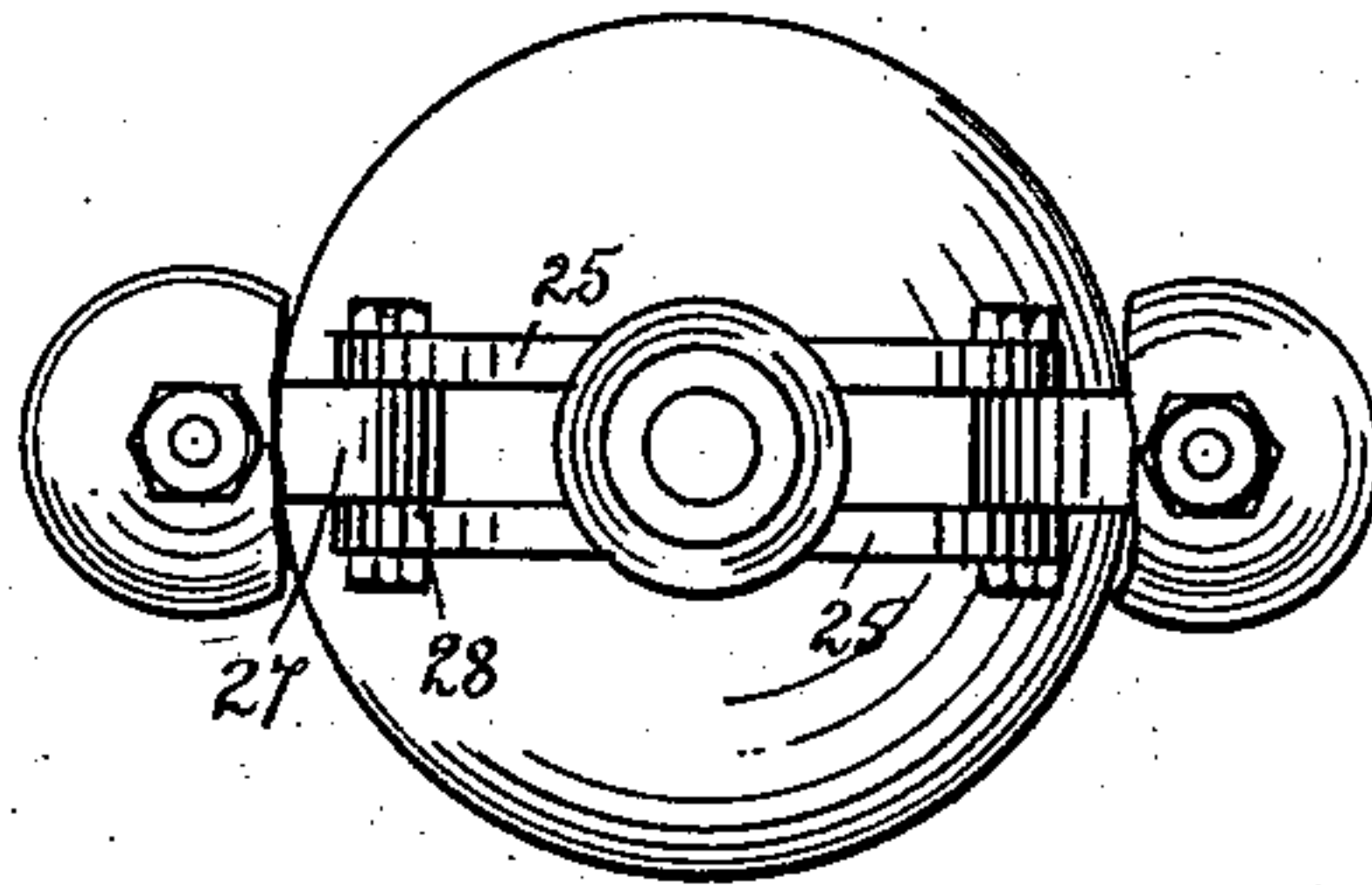


Fig. 2.

Fig. 3.



Witnesses  
*Albert Popkins.*  
*Edward Weaver*

Inventor  
*Willis Todd*  
By *W. A. Ruff*  
Attorney



# UNITED STATES PATENT OFFICE.

WILLIS TODD, OF OMAHA, NEBRASKA.

## CRIMPING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 534,022, dated February 12, 1895.

Application filed June 16, 1894. Serial No. 514,747. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIS TODD, a citizen of the United States, residing at Omaha, in the county of Douglas and State of Nebraska, have invented certain new and useful Improvements in Crimping-Machines; and I 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.

My invention relates to crimping machines, designed for applying covers or lids to cylindrical cans or boxes.

The invention consists in the improved mechanism hereinafter fully described for supporting the can or box in a fixed or stationary position during the crimping operation, for presenting the edge of the cover to the action of the crimping devices, and for conveniently throwing the crimping mechanism into and out of operation, and withdrawing the finished can.

In the accompanying drawings,—Figure 1 is a side elevation of a crimping machine embodying my invention. Fig. 2 is a central vertical section of a part of the machine; and Fig. 3 is a plan view of the mechanism shown in Fig. 2, portions of the ball weights being broken away.

The numeral 1 indicates the base of the machine from which rises a standard 2, having its upper end curved to form an overhanging bearing 3. The standard 2 is also provided with horizontal bearings 4 and 5 near its upper end, within which is supported a shaft 6, carrying at its outer end a belt pulley 7, and at its inner end a beveled friction wheel 8. A horizontal arm 9 projects from the standard 2 near the lower end of the latter, said arm being parallel to the shaft 6, and having a vertical sleeve opening 10 to serve as a keeper and guide for a plunger rod 11, which extends through said opening. The lower end of rod 11 is connected by a link coupling 12 to the short arm of a foot lever or treadle 13, fulcrumed upon a suitable bracket arm 14, of the base 1.

Upon the rod 11 above the arm 9, I arrange a sleeve 15, which is movable on said rod but adapted to be secured adjustably upon the rod by a set screw 16. The upper end of the

sleeve 15 is screw threaded to receive a circular plate or disk 17, the latter having an interiorly threaded central opening 18 to receive the threaded end of the sleeve. This disk 17 is formed with a circular groove 19 near its periphery to receive the bottom edge or flange of the can 20, and to accommodate cans of different sizes, a series of these grooves 19 may be formed concentrically in the disk.

Within the bearing 3 I secure the upper end of a rod 21 by suitable set screws 22, and upon the rod is mounted a sleeve 23 provided at its upper end with a beveled friction wheel 24. To the lower end of the sleeve 23 are secured two parallel arms 25, each having a series of holes 26. Between these arms 25 is fulcrumed a lever 27 upon a cross pin 28. The outer end of the lever 27 is vertically bored to receive a rod 29, which projects both above and below the lever 27. A ball weight 30, formed with a central opening 31, is fitted upon the rod 29 above the lever 27 and held by a nut 32. Below the lever 27 the rod 29 is provided with an annular shoulder 33, which co-operates with the nut 32 to hold and steady the rod and ball.

The lower end 34 of the rod 29 is reduced in diameter, as shown, and upon the reduced end is loosely mounted the crimping wheel 35, formed with a peripheral groove 36, and secured by a nut 37.

Below the parallel arms 25, and encircling the rod 21, is a steel ring 38 formed with screw-threaded openings to receive the threaded upper ends of screws 39. The lower end of the rod 21 is screw threaded to receive a circular plate 40, formed with a central threaded opening and below the plate 40 is a second movable plate 41. Both of the plates 40 and 41 are formed with openings through which the screws 39 pass, and the under side of the plate 41 is countersunk, as shown in Fig. 2, to receive the heads of said screws.

The lever 27 is provided with a depending lug or projection 42 adapted to contact with the stationary plate 40, as will be further explained. To compensate for the centrifugal force of the lever 27 and its ball weight in operation, a duplicate lever 43 and its appurtenances may be arranged diametrically opposite the lever 27, as shown in the drawings,



but it will be apparent that a single lever and crimping wheel will operate with more or less efficiency.

The operation of the machine as thus constructed is as follows: The can 20 with its cover 44 in position, is placed upon the disk 17. Pressure upon the treadle 13 will raise the disk to present the can to the crimping mechanism. The cover will thus be brought in contact with the plate 41, and continued pressure upon the treadle will raise the said plate 41, the ring 38, and sleeve 23, thus bringing the beveled wheel 24 into frictional contact with the revolving wheel 8, and imparting revolution to the sleeve and its arms 25 and crimping wheel 35. This rotation of the sleeve, its arms and the lever 27, will by centrifugal action, cause the weight 30, to be forced outwardly and the crimping wheel 35, to be forced into contact with the edge of the cover 44. By releasing the treadle, the disk 17 and the can drop, by gravity, thus allowing the plate 41 and the sleeve 23 and the parts secured thereto to drop in turn. The falling movement of the lever 27 causes its lug 42 to strike the stationary plate 40, and tilt the ball 30 inwardly, thus throwing the wheel 35 outwardly away from the can.

To adapt the machine to cans of different sizes the lever 27 is adjustable in the holes of the arms 25, and plates 40 and 41 and rings 38 of varying sizes may be readily substituted for those shown.

It will be obvious that I avoid the rotation of the can by the construction thus described, which is a very advantageous feature, preventing, as it does, undue agitation of the contents of the can.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a crimping machine, the combination with a standard provided with vertical and horizontal bearings, of a plunger rod and disk, and means for raising and lowering the same, a power shaft carrying a friction wheel, a stationary rod for supporting the crimping mechanism, vertically sliding friction devices on said rod, and a pivotally secured and weighted lever to which the crimping wheel is attached, substantially as described.

2. In a crimping machine, the combination with mechanism, for supporting, raising and lowering a can, the power shaft and friction

gearing, of the stationary rod, the sliding, rotatable sleeve mounted thereon, and provided with parallel arms, the lever fulcrumed between said arms, the rod secured intermediate its ends to said lever and provided at its upper end with a weight and its lower end with a crimping wheel, the construction being such that said weight is forced outwardly by centrifugal action and the crimping wheel inwardly so as to engage with the cover of a can, substantially as described.

3. The combination with the can support and means for raising and lowering the same, of a stationary rod depending from the frame of the machine, and vertically sliding crimping mechanism comprising a sleeve arranged upon said rod, and having lever-supporting arms, a lever adjustable on said arms, a perforated ring surrounding said rod, a stationary plate secured to the lower end of said rod, a movable plate located below said stationary plate, and secured to the perforated ring by means of screws passing through the stationary plate and a crimping wheel and weight secured to said lever by a vertical rod, substantially as described.

4. The combination with the means for supporting the can in a stationary position and with the friction gearing and power shaft, of the revolving sleeve provided with lever-supporting arms, a lever adjustably secured thereon, a vertical rod extending through said lever and reduced in diameter at its lower end, a weight secured upon said rod above the lever, and a crimping wheel mounted upon the lower reduced end of the rod, substantially as described.

5. The combination with the threaded stationary rod and the stationary plate secured thereto, of the perforated ring arranged above said plate, the movable plate secured to said ring by bolts passing through both of said plates, the revolving sleeve carrying the crimping mechanism, and mechanism for raising and lowering the can, substantially as described.

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

WILLIS TODD.

Witnesses:

PAUL LARSON,  
C. C. CHASE.