

No. 771,750.

PATENTED OCT. 4, 1904.

J. E. RUBY.
WASHING MACHINE.
APPLICATION FILED MAR. 3, 1904.

NO MODEL.

2 SHEETS—SHEET 1.

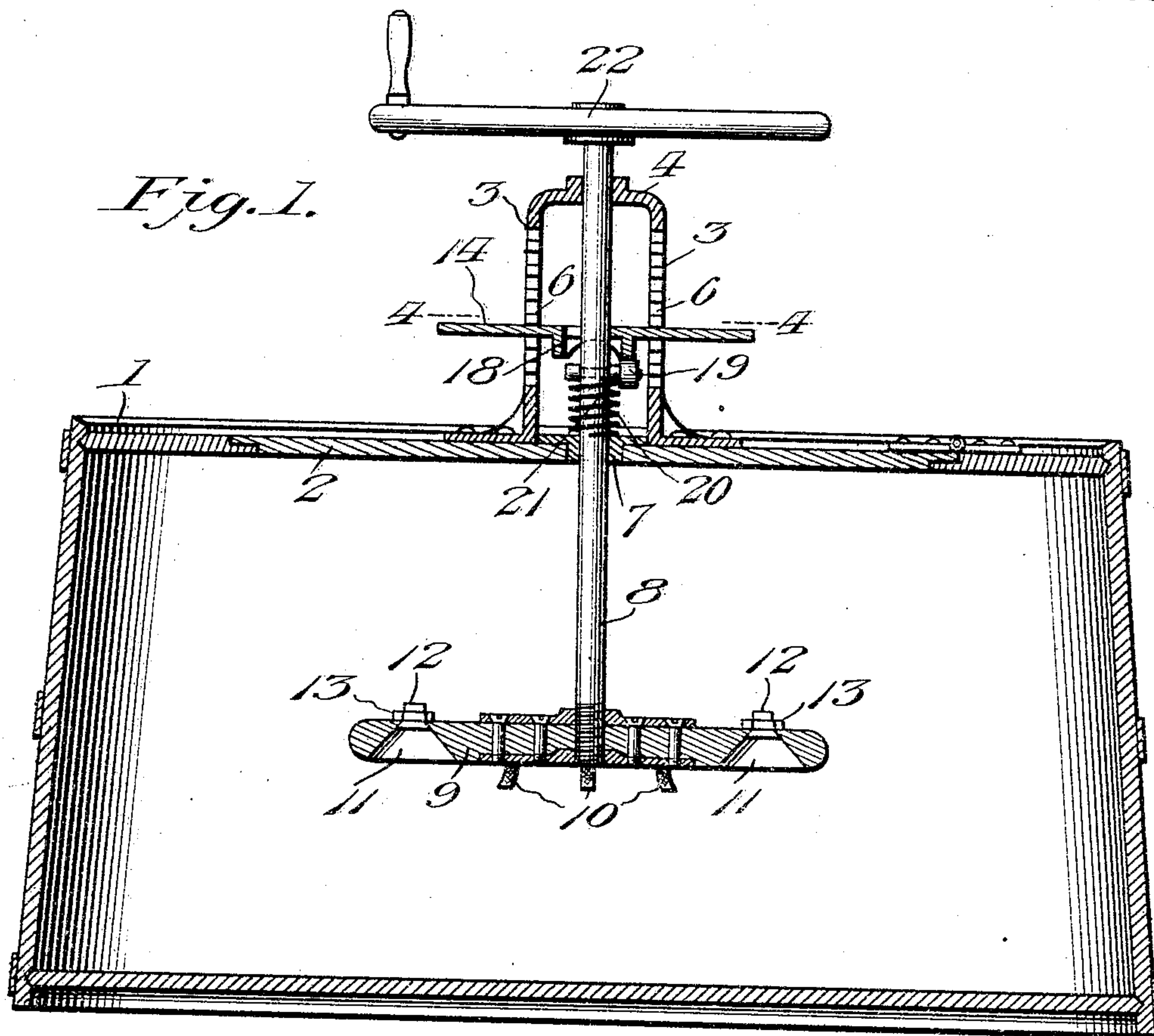
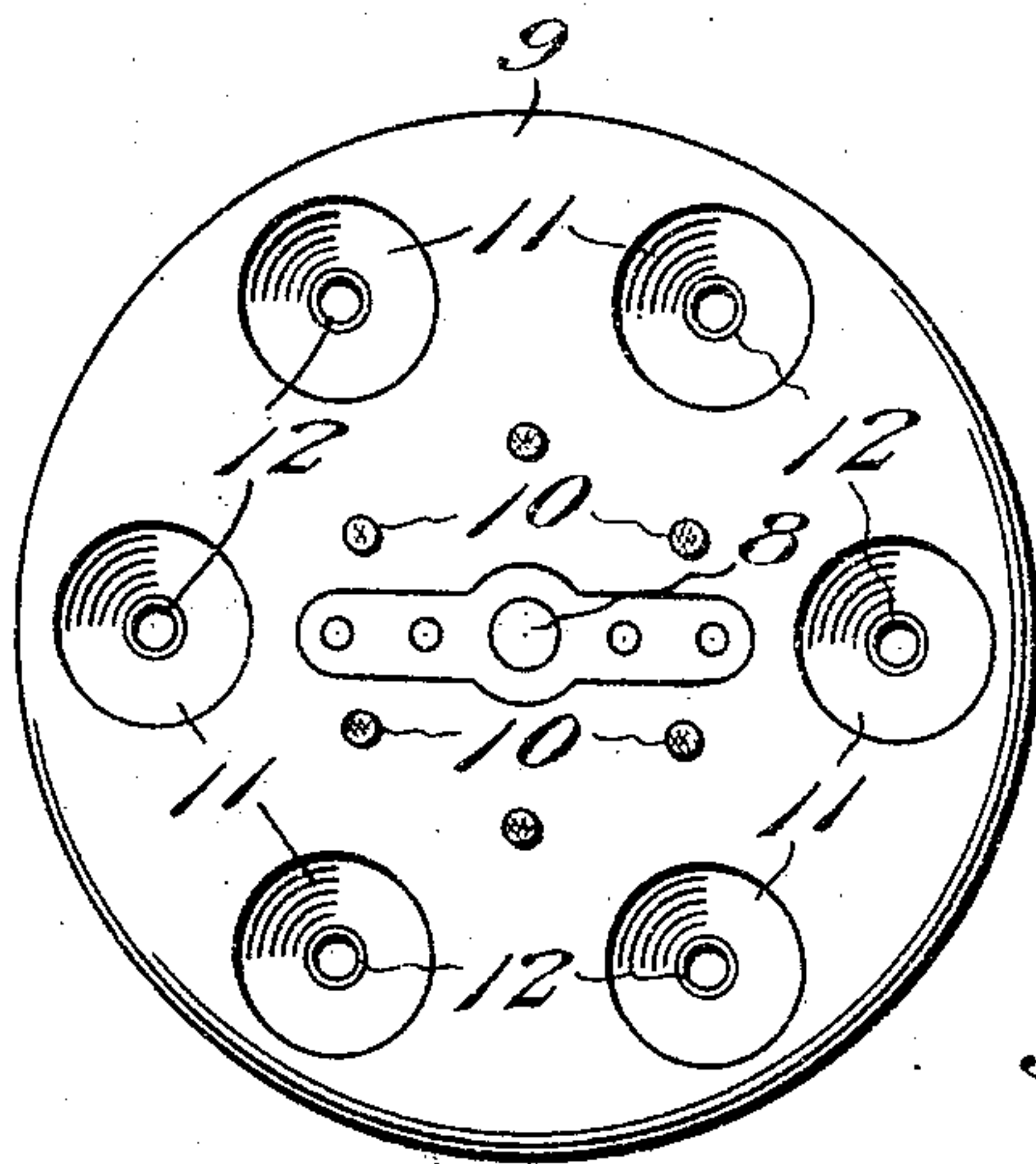


Fig. 2.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 4.

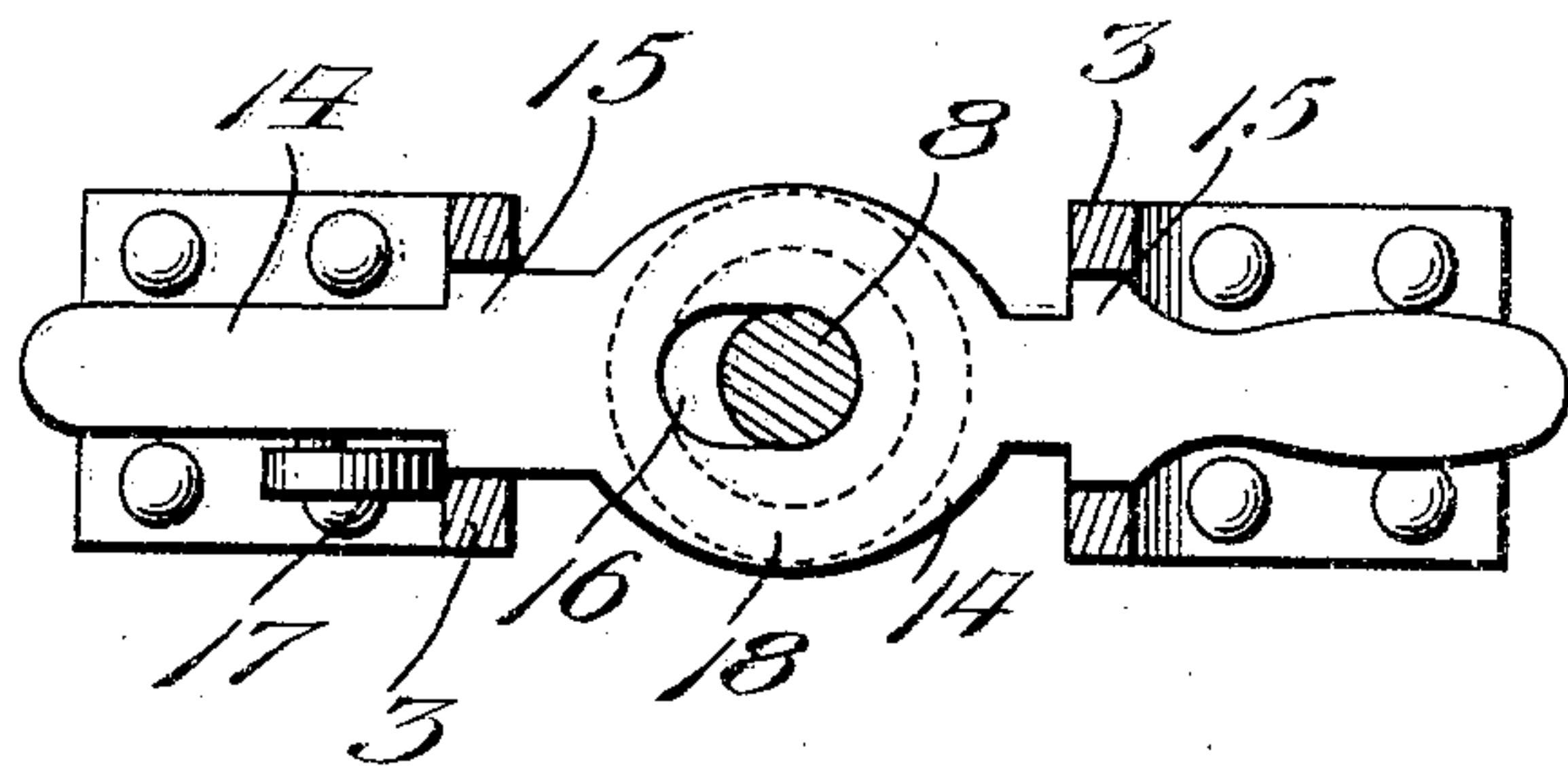


Fig. 3.

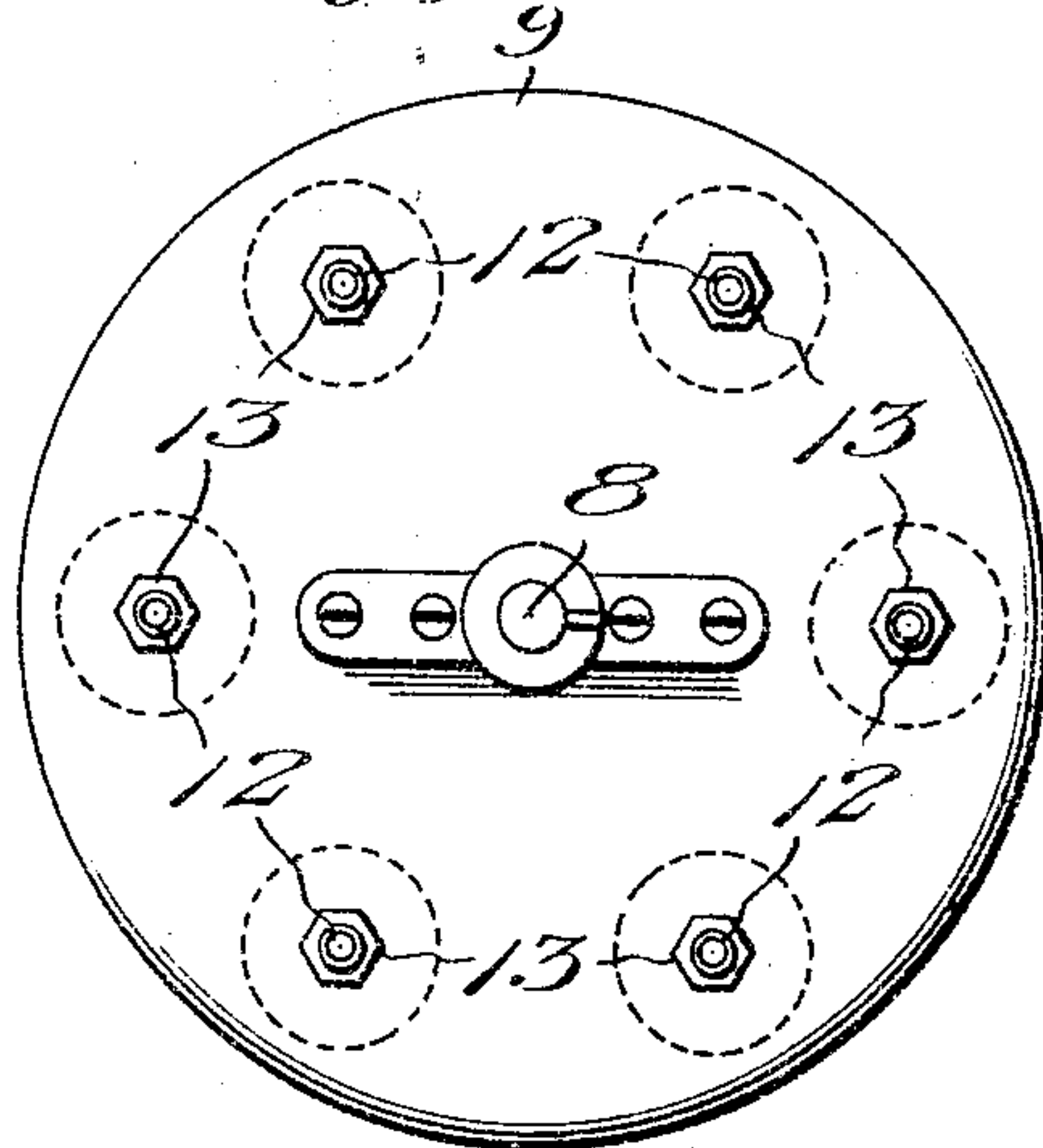


Fig. 5.

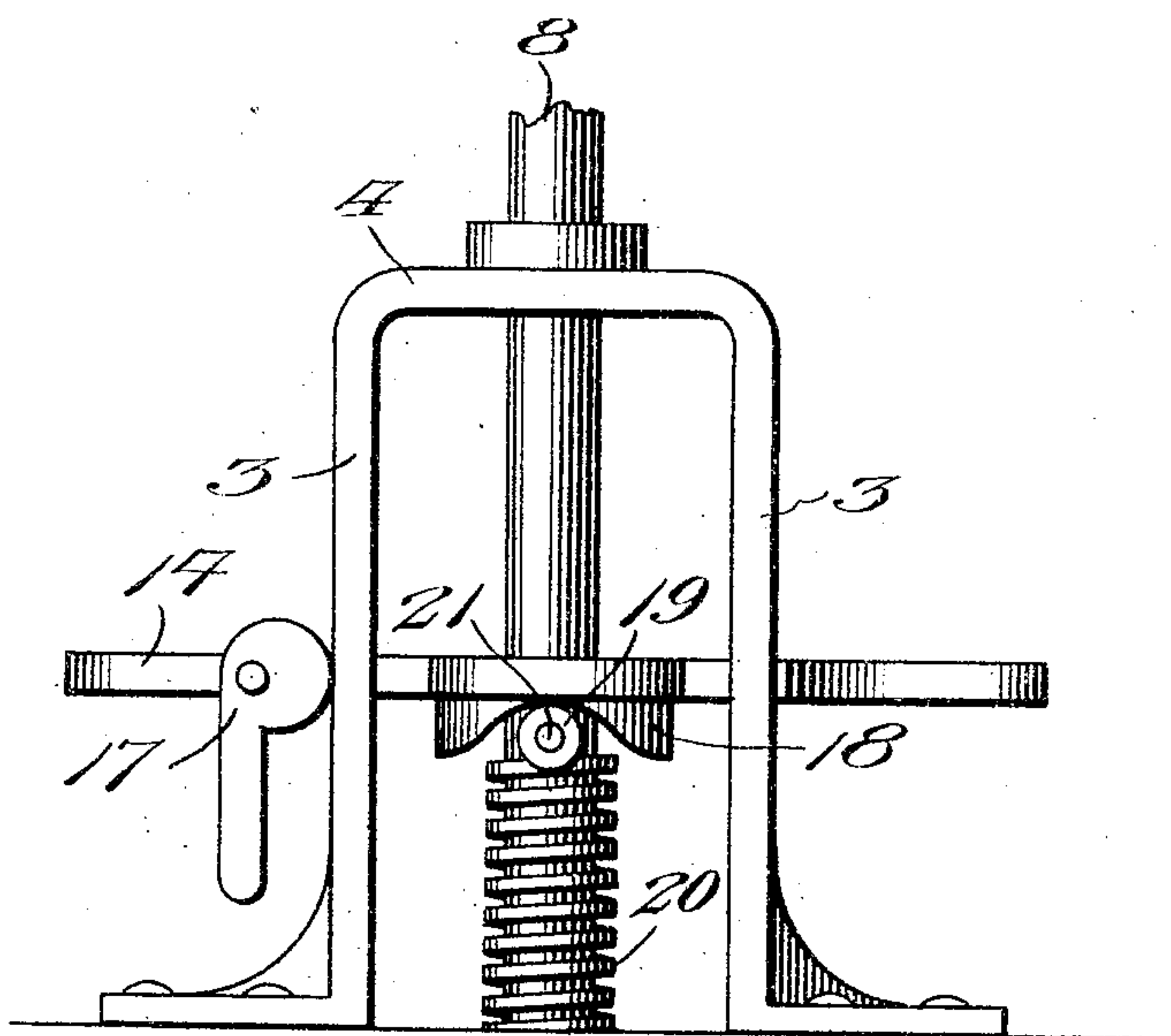
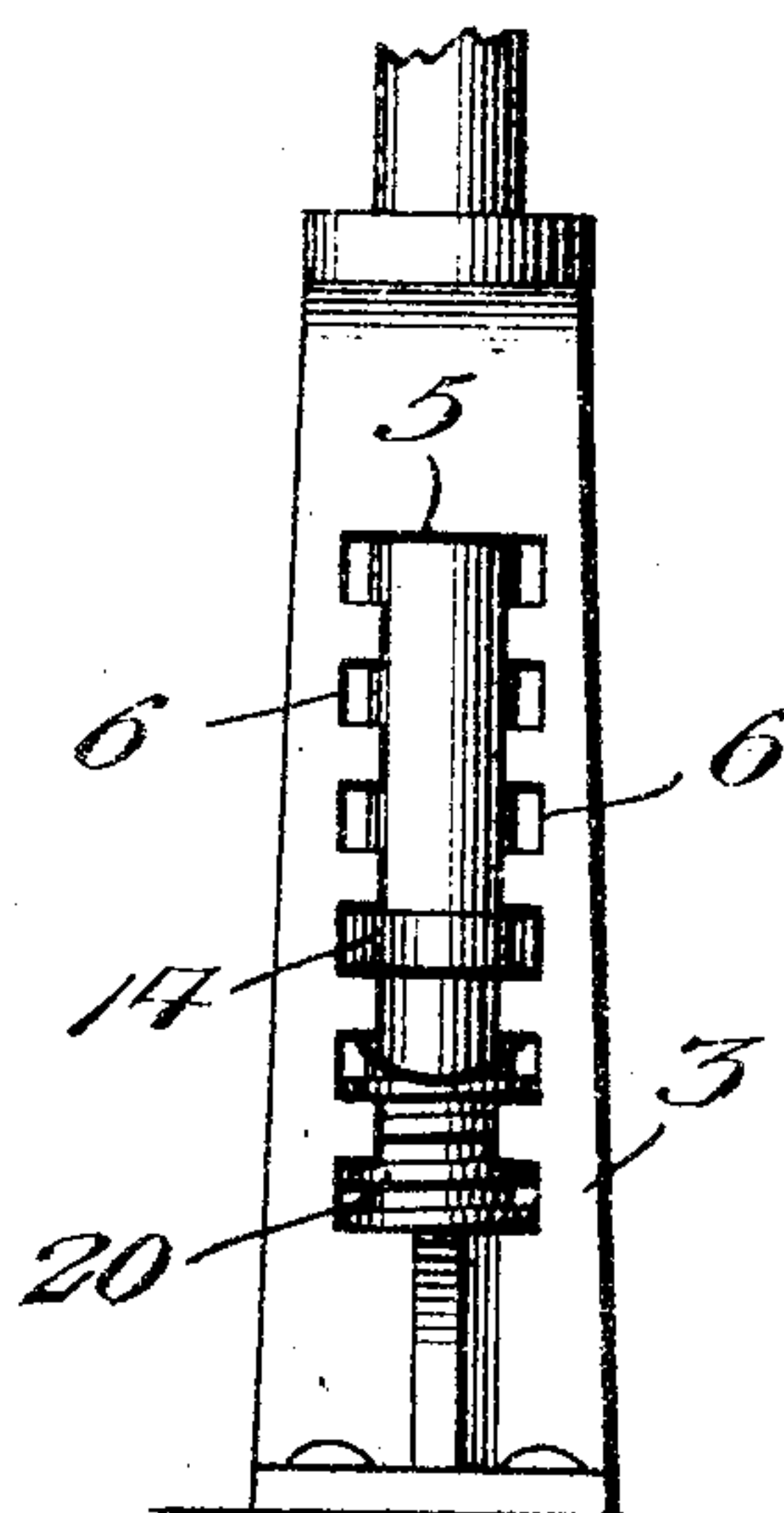


Fig. 6.



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UNITED STATES PATENT OFFICE.

JAMES E. RUBY, OF COSBY, MISSOURI, ASSIGNOR OF ONE-HALF TO
JUDSON RUBY, OF COSBY, MISSOURI.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 771,750, dated October 4, 1904.

Application filed March 3, 1904. Serial No. 196,374. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. RUBY, a citizen of the United States, residing at Cosby, in the county of Andrew and State of Missouri, have invented new and useful Improvements in Washing-Machines, of which the following is a specification.

My invention relates to new and useful improvements in washing-machines; and its object is to provide a device of this character having a combined rotary and reciprocating rubber.

Another object is to provide means whereby the rubber may be adjusted so as to operate upon any number of clothes which may be placed within the tub of the machine.

A further object is to provide novel mechanism for producing a reciprocating as well as a rotary movement of the rubber.

With the above and other objects in view the invention consists of a tub upon the top of which is arranged a supporting-frame in which is adjustably mounted a cross-plate. This cross-plate has a cam-shaped flange depending therefrom which forms a bearing for a roller arranged at one side of a revoluble vertical shaft. This roller is held normally in contact with the cam by a spring located therebelow. A rubber is secured to the lower end of the shaft, and operating means are connected to the other end thereof.

The invention also consists in the further novel construction and combination of parts hereinafter more fully described and claimed, and illustrated in the accompanying drawings, showing the preferred form of my invention, in which—

Figure 1 is a vertical section through the machine. Fig. 2 is a bottom plan view of the rubber. Fig. 3 is a top plan view thereof. Fig. 4 is an enlarged section on line 4 4, Fig. 1. Fig. 5 is an enlarged elevation of the supporting-frame and the parts connected thereto, and Fig. 6 is a side elevation thereof.

Referring to the figures by numerals of reference, 1 is a tub of any suitable construction and having a removable cover 2. Secured on this cover at the center thereof is a supporting-frame comprising oppositely-disposed

similar standards 3, connected at their upper ends by a cross-strip 4. Each of the standards has a longitudinally-extending groove 5 therein, and the edges of the grooves have notches 6, as shown. Revolvably mounted within the cross-strip 4 and within a base-plate 7, located therebelow and upon the cover 2, is a shaft 8, the lower end of which is secured in the center of a circular rubber 9. Pins 10 project downward from this rubber adjacent the center thereof, and conical recesses 11 are formed at suitable intervals within the lower face of the rubber and adjacent its periphery. Each of these recesses communicates at its upper end with an outlet-tube 12 of any preferred construction and which is preferably held in place by means of a nut 13. An adjusting-plate 14 extends through the slots 5 and has enlarged portions 15, which are adapted to be moved into engagement with the notches 6. A slot 16 is formed longitudinally within the plate 14, near the center thereof, for the reception of the shaft 8. A cam 17 is pivoted to the plate 14 near one end and is adapted to bear against one of the standards 3 and lock the plate against longitudinal movement. A circular flange 18 extends downward from the plate 14 and is concentric with the shaft 8 when the plate 14 is locked against movement. This flange has its lower edge cut away to form cam-plates upon which bears a roller 19, which is mounted upon one side of the shaft 8. A spring 20 incloses the shaft 8 and bears at opposite ends upon the base-plate 7 and the pin 21, on which roller 19 is journaled. A power-wheel 22 is connected to the upper end of the shaft 8.

After the clothes to be washed have been placed within the tub 1 and said tub has been filled with water the cover 2 is placed in position, and the rubber 9 will therefore bear upon the clothes contained within the tub. The plate 14 is then slid longitudinally, so as to bring its enlarged portions 15 into position within the adjoining notches 6, and these enlarged portions are locked within the notches by the cam 17. Shaft 8 is then rotated by means of the wheel 22, and during this move-

ment the roller 19 travels upward and downward upon the cam-face of flange 18 and alternately compresses and relaxes the spring 20. It will thus be seen that as the shaft 8 and rubber 9 rotate the same will also be moved vertically upward and downward, thereby producing a pumping operation which facilitates the cleaning of the clothes operated upon by the rubber.

10 In the foregoing description I have shown the preferred form of my invention; but I do not limit myself thereto, as I am aware that modifications may be made therein without departing from the spirit or sacrificing any
15 of the advantages thereof, and I therefore reserve the right to make such changes as fairly fall within the scope of my invention.

Having thus described the invention, what is claimed as new is—

20 1. In a washing-machine, the combination with a tub having a revoluble rubber therein, and a shaft extending from the rubber; of longitudinally-slotted standards upon the tub and at opposite sides of the shaft, a holding-
25 plate adjustably secured within the standards and inclosing the shaft, a cam depending from the plate and inclosing the shaft, a spring-pressed roller upon the shaft and bearing upon the cam, and means for rotating the
30 shaft.

2. In a washing-machine, the combination

with a rotary rubber, and a shaft extending therefrom; of a tub, longitudinally-slotted standards upon the tub and at opposite sides of the shaft, said standards having notches 35 therein, a holding-plate adjustably mounted within the slots and adapted to engage the notches, means for locking the plate in adjusted position, a cam depending from the plate and inclosing the shaft, a spring-pressed 40 roller connected to the shaft and bearing on the cam, and means for rotating the shaft.

3. In a washing-machine, the combination with a tub having a revoluble rubber therein, and a shaft extending from the rubber; of 45 longitudinally-slotted standards upon the tub and at opposite sides of the shaft, said standards having notches, a holding-plate adjustably mounted within the slots and adapted to engage the notches, means for locking the plate 50 in engagement with the notches, a circular cam extending from the plate and inclosing the shaft, a roller journaled upon one side of the shaft, a spring inclosing the shaft and adapted to hold the roller normally in contact 55 with the cam, and means for rotating the shaft.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES E. RUBY.

Witnesses:

CHAS. B. NEWLURN,
J. E. VAMER.