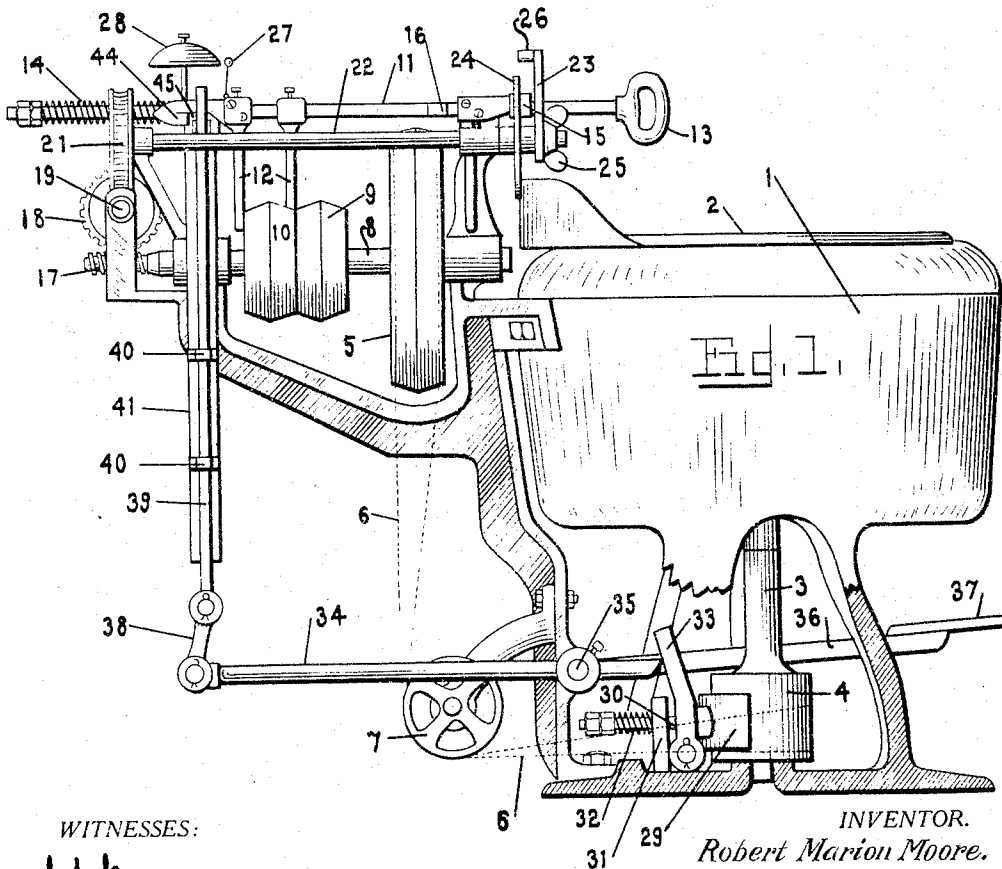
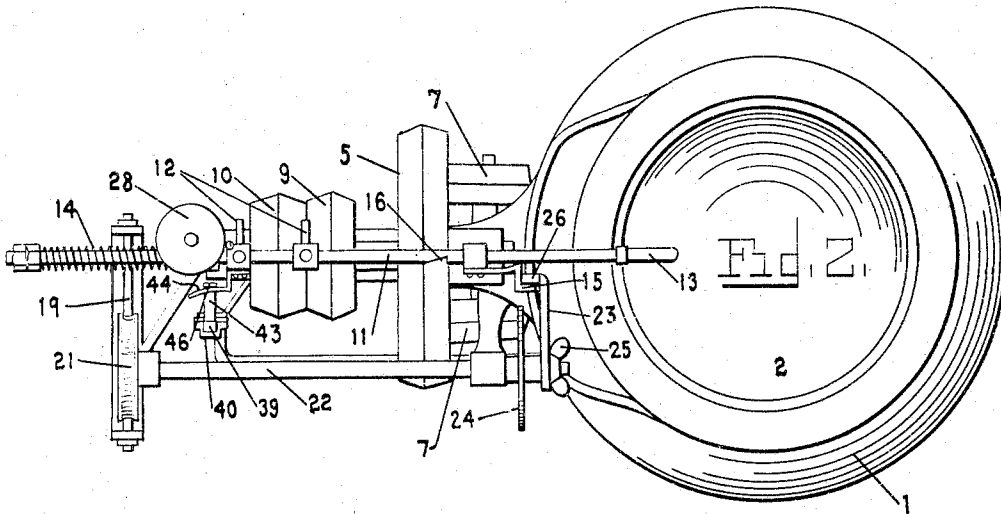


R. M. MOORE.
ATTACHMENT FOR LAUNDRY EXTRACTORS.
APPLICATION FILED MAY 2, 1910

1,015,392.

Patented Jan. 23, 1912.

2 SHEETS—SHEET 1.



WITNESSES:

J. Murray
W. H. Carham

INVENTOR.

Robert Marion Moore.

BY

John H. Spellman
ATTORNEY.

R. M. MOORE.
ATTACHMENT FOR LAUNDRY EXTRACTORS.
APPLICATION FILED MAY 2, 1910.

1,015,392.

Patented Jan. 23, 1912.

2 SHEETS—SHEET 2.

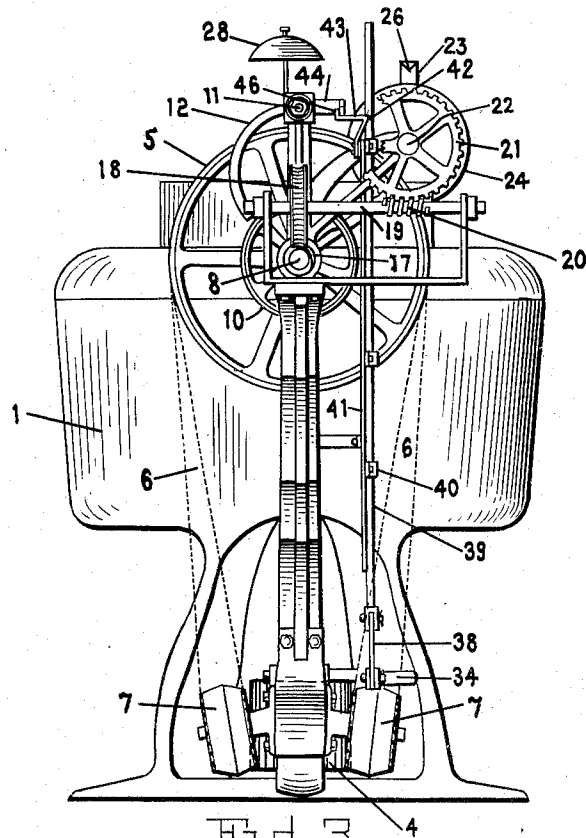


Fig. 3.

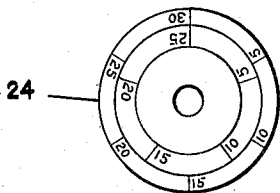


Fig. 4.

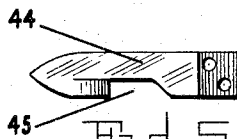


Fig. 5.



Fig. 6.

WITNESSES:

J. D. Murray
W. H. Carham

INVENTOR.

Robert Marion Moore.

BY

John M. Spellman
ATTORNEY.

UNITED STATES PATENT OFFICE.

ROBERT MARION MOORE, OF GALVESTON, TEXAS.

ATTACHMENT FOR LAUNDRY-EXTRACTORS.

1,015,392.

Specification of Letters Patent.

Patented Jan. 23, 1912.

Application filed May 2, 1910. Serial No. 558,934.

To all whom it may concern:

Be it known that I, ROBERT MARION MOORE, citizen of the United States, residing at Galveston, in the county of Galveston and State of Texas, have invented certain new and useful Improvements in Attachments for Laundry-Extractors, of which the following is a specification.

My invention relates to a new and improved time cut-off and brake attachment for laundry extractors.

Owing to the high speed at which the extractors in laundries are operated, accidents frequently occur due to the operator attempting to stop the machine by using the foot brake and misjudging the speed of the extractor basket.

The present invention has for its object the avoidance of this risk by providing automatic means for throwing off the power and applying the brake.

A further object is to provide an attachment such as will be adapted to operate after the machine has run for a certain length of time, eliminating the necessity on the part of the operator of constantly watching the clock in order to properly time the period of operation.

Finally the object of the invention is to provide a device of the character described that will be strong, durable, simple and efficient, and of comparatively simple construction, such as will not be likely to get out of working order.

With these and various other objects in view, my invention has relation to certain novel features of construction and operation, an example of which is described in the following specification and illustrated in the accompanying drawings, wherein:

Figure 1 is a side elevation of a laundry extractor provided with the herein described improved attachment, the lower portion of the extractor being broken away to show the construction therebehind. Fig. 2 is a plan view of the same. Fig. 3 is an elevation at right angles to that shown in Fig. 2. Fig. 4 is a detail view of a dial employed in the invention in conjunction with a rotating trip lever to limit the period of operation. Fig. 5 is a detail view of a latch, the function of which is made clear

hereinafter. Fig. 6 is a rear elevation of the rotatable trip lever which travels about the dial shown in Fig. 4, the functions of said trip lever being also made clear in the following specification.

Referring now more particularly to the drawing wherein like numerals of reference designate similar parts in all the figures, the numeral 1 denotes the curb or stationary receptacle of the extractor, and 2 the basket which receives the clothes, adapted to rotate within said receptacle. From one side of the basket 2, a shaft 3 extends downwardly, said shaft being provided with a pulley 4 upon its lower extremity. Rotation may be communicated to the pulley 4 from a pulley 5 by means of a belt 6 running over idler pulleys 7. The pulley 5 is mounted upon a horizontal shaft 8 which is provided with a fast and a loose pulley, 9 and 10, respectively. In order to shift the driving belt from one of the pulleys 9 and 10 to the other, there is provided a shift rod 11 upon which are mounted belt guides 12, between which the driving belt is adapted to pass. The rod 11 is provided at one extremity with a handle 13 by which it may be manually shifted, and at the other extremity a spring 14 is mounted upon said rod normally holding it in such a position as to hold the driving belt upon the loose pulley 10, and a spring latch 15 mounted adjacent to the rod 11 near the forward portion thereof is adapted to enter a notch 16 in said rod when the latter is thrown forward placing the spring 14 under tension. The driving belt will thus be transferred from the loose pulley 10 to the fast pulley 9, setting the machinery in operation and maintaining this operation until the latch 15 is withdrawn from the notch 16, permitting the spring 14 to displace the belt shift rod. Upon the outer extremity of the shaft 8 a worm 17 is provided, which worm meshes with a worm wheel 18 fast upon a spindle 19. The spindle 19 carries a worm adapted to operate a worm wheel 21. The worm wheel 21 is fast upon one extremity of a horizontal shaft 22, which will rotate at a very slow speed owing to the reduction of velocity produced by the two sets of worm gearing. It is intended that the shaft 22

make approximately 1 revolution in thirty minutes. Upon the other extremity of the shaft 22 is mounted a trip lever 23 adapted to travel around the stationary dial 24.

Before starting the machine the position of the trip-lever 23 upon the dial 24 may be adjusted where desired by loosening the wing nut 25 by which said trip lever is made fast. Upon the outer extremity of the trip-lever 23 there is provided a beveled pin 26 which is adapted to contact once in each revolution with the spring latch 15, producing displacement of said latch, and releasing the shift rod 11. The dial 24 is provided with two scales of figures, the outer scale being intended for reference when the said shaft 22 is making 1 revolution in 30 minutes, and the inner scale when said shaft is making a revolution in 25 minutes. The velocity of the shaft 22 will of course depend upon the velocity communicated to the pulley 9 by the driving belt. The dial 24 will be mounted with the zero points of its two scales directly opposite the spring latch 15. Before starting the machine the trip lever 23 will be set with the pin 26 opposite the numeral which indicates the number of minutes desired to run, this numeral being upon the outer scale if the shaft 22 is making a revolution in 30 minutes, and upon the inner scale if it is making a revolution in 25 minutes. When the rod 11 is shifted, placing the belt upon the pulley 9 the machine will continue to operate until the trip lever 23 revolves from its position of adjustment to the zero point where it will contact with the spring latch 15, displacing the same from the notch 16, thus cutting off the power. Upon the shift rod 11, is mounted a small clapper 27 which is adapted to strike a bell 28 when the said rod is rearwardly displaced, throwing the driving belt on the loose pulley. The operator will thus be given notice of the stopping of the machine. The pulley 4 is adapted to be acted upon by a brake shoe 29 fast upon a rod 30. The rod 30 is horizontally mounted in a bracket 31 and carries a coiled spring 32 which tends to hold the brake shoe normally out of contact with the pulley. An arm 33 pivoted upon the base of the extractor is adapted to bear upon the brake shoe, forcing the same into contact with the pulley 4. A lever 34 fast upon a spindle 35 has its forward extremity bearing against the arm 33 in such a manner that when the said forward extremity is raised the arm 33 is thrust forward, applying the brake shoe to the pulley 4. A forwardly projecting lever 36 has its rear extremity fast upon the spindle 35, and is provided with a foot plate 37 upon its forward extremity. By forcing this foot lever down a partial rotation is imparted to the spindle 35, causing the forward extremity of the lever 34 to be lowered, and releas-

ing the brake. The rear extremity of the lever 34 is connected by a link 38 with the lower extremity of a vertical rod 39. This rod is adapted to undergo vertical adjustment in guides 40 mounted upon an elongated stationary plate 41. Near its upper extremity the rod 39 is provided with a transverse notch 42, which notch is adapted to receive a spring latch 43, thus maintaining the rod 41 in an elevated position. The latch 43 is adapted to be released by the rearward motion of the belt shift rod 11, said shift rod being provided with a trip blade 44, having a curved surface adapted to deflect the latch 43 horizontally. The latch 43 is provided with a vertical arm 46 against which the trip plate bears as the trip lever is rearwardly displaced. A groove 45 is provided in the underside of the trip lever, through which groove the portion 46 of the trip lever 43 passes when the trip lever has reached its rearward limit of travel. The trip plate 44 thus temporarily removes the spring latch 43 from the notch 42 in the rod 39, and immediately after the rod 39 has dropped the latch 43 is again released.

In setting the machine into operation the operator first throws off the brake by pressing downward on the foot lever 37. This produces a partial rotation of the spindle 35, relaxing the upward pressure brought to bear upon the arm 33 by the forward extremity of the lever 34, and causing the rod 39 to be elevated to such a height that the latch 43 engages the notch 42. The brake is thus prevented from acting until the latch 43 is released. The operator now pulls the belt shift rod 11 forward, throwing the belt on the driving pulley 9 and causing the latch 15 to engage the notch 16. The machinery is thus set into operation and continues to operate until the latch 15 is released. The operator may now direct his attention to other matters until the trip lever 23 has traveled from its position of first adjustment to the zero point, where it will encounter the spring latch 15 and disengage the same from the notch 16. Owing to the expansion of the spring 14 the belt shift rod 11 will now be rearwardly displaced, throwing the belt from the driving pulley 9 onto the loose pulley 10, and at the same time causing the spring latch 43 to be released. The power will thus be cut off from the machine and at the same time the rod 39 will drop causing the brake to be applied to the pulley 4.

It is obvious that the hereindescribed time cut-off and brake mechanism might be applied to other machines than laundry extractors without departing from the spirit of the invention or sacrificing its advantages. Also various changes might be made in the form and proportion of the parts and

details without altering the principles of my invention. I therefore reserve the right to make such changes and alterations in this device as fairly come within the scope of the following claims:

What I claim is:

1. In a device of the character described the combination with the driving shaft of a machine, of a fast and a loose pulley adjacent upon said shaft, a belt shift rod mounted adjacent to said pulleys transversely thereof, belt guides secured to said shift rod, a spring acting upon said rod tending to hold the belt guides normally opposite to the loose pulley, means adapted to hold the shift rod against the action of said spring with the belt guides opposite to the fast pulley, a revoluble trip lever adapted to contact with the aforesaid means and release the same, mechanism by which a rotation may be communicated to said trip lever from the power shaft, a trip blade secured to the belt shift rod, a rod adapted to undergo vertical displacement provided with a transverse notch, a spring latch adapted to engage in the notch of the aforesaid rod and adapted to be released by the aforesaid trip blade, a brake adapted to retard the operation of the machine, and mechanism for applying said brake adapted to be operated by the falling of the aforesaid vertical rod.

2. In a device of the character described the combination with the driving shaft of a machine, of a fast and a loose pulley adjacent upon said shaft, a belt shift rod mounted adjacent to said pulleys transversely thereof and provided with a transverse notch, belt guides carried by said rod, a coiled spring upon said rod tending to hold it positioned with the belt guides normally opposite to the loose pulley, a spring latch adapted to enter said notch in the shift rod, holding said rod with the belt guides opposite the fast pulley, a revoluble trip lever adapted to contact with said spring latch and displace the same from the notch, a stationary dial about which said trip lever travels, and a mechanism adapted to impart a rotation of reduced velocity to said lever from the power shaft.

3. In a device of the character described the combination with the driving shaft of a machine of a fast and a loose pulley adjacent upon said rod, a belt shift rod mounted adjacent to said pulleys transversely thereof, said rod being provided with a transverse notch, a pair of belt guides carried by said rod, a coiled spring mounted upon said rod tending to hold the same normally in a position such that the belt guides are opposite to the loose pulley, a spring latch adapted to engage said notch to hold the shift rod against the action of said spring in a position such that the belt guides are opposite to the fast pulley, a revoluble trip

lever adapted to contact with said spring latch and displace the same from the notch, a dial traveled by said trip lever, mechanism adapted to impart a rotation of reduced velocity from the driving shaft to said trip lever, a brake adapted to retard the operation of the machinery, and a mechanism causing said brake to be set by a displacement of said shift rod from the fast pulley toward the loose one.

4. In a device of the character described the combination with the driving shaft of a machine, of a fast and a loose pulley adjacent upon said shaft, a belt shift rod mounted adjacent to said pulleys transversely thereof, said rod being provided with a transverse notch, a pair of belt guides carried by said rod, a coiled spring upon said rod tending to hold the same in a position such that the belt guides are opposite to the loose pulley, a spring latch adapted to engage the notch of the shift rod, holding this rod against the action of said spring in a position so that the belt guides are opposite to the fast pulley, a revoluble trip lever adapted to contact with said spring latch and displace the same from said notch, a mechanism adapted to communicate a rotation of reduced velocity from the driving-shaft to said trip-lever, a dial traveled by said trip lever, a brake adapted to retard the operation of the machine, a mechanism adapted to set said brake, a vertical rod having a transverse notch in its upper portion, said rod being adapted to undergo vertical displacement and to set said brake when allowed to drop, a spring latch adapted to engage the notch of said rod, and a trip blade carried by the shift rod adapted to displace said spring latch from the notch.

5. In a device of the character described, the combination with the driving shaft of a machine, of a rod slidably mounted parallel to said shaft, means for establishing communication of rotation to the shaft, means carried by the rod engaging the last named means and adapted to set up or interrupt the communication of rotation when the rod is adjusted longitudinally, a spring acting upon said rod tending to hold it normally in such a position as to interrupt communication of rotation, means adapted to hold the rod against the action of said spring in a position to maintain communication of rotation, a revoluble trip lever adapted to contact with the last named means and release the same, mechanism by which a rotation may be communicated to said trip lever from the power shaft, a trip blade secured to the rod, a rod adapted to undergo vertical displacement provided with a transverse notch, a spring latch adapted to engage in the notch of the aforesaid rod, and adapted to be released by the aforesaid trip blade, a brake adapted to retard the opera-

tion of the machine, and mechanism for applying said brake adapted to be operated by the falling of the aforesaid vertical rod.

6. In a device of the character described, the combination with the driving shaft of a machine, of a rod slidably mounted parallel to said shaft, means adapted to establish a communication of rotation to the shaft, means carried by the rod engaging the last named means and adapted to interrupt the communication of rotation through longitudinal adjustment of the rod, a spring coiled upon said rod tending to hold it normally in a position to interrupt the communication of rotation, a spring latch adapted to enter a notch in the shift rod, holding said rod in a position adapted to establish communication of rotation to the driving shaft, a revoluble trip lever adapted to contact with said spring latch and displace the same from the notch, a stationary dial upon which said trip lever travels, and a mechanism adapted to impart a rotation of reduced velocity to said lever from the power shaft.

7. In a device of the character described, the combination with the driving shaft of a machine, of a rod slidably mounted parallel to said shaft, means adapted to establish a communication of rotation to the shaft, means carried by the rod engaging the last named means and adapted to interrupt the communication of rotation through a longitudinal adjustment of the rod, a coiled spring mounted upon said rod adapted to hold the same normally in such a position that the communication of rotation is interrupted, a spring latch adapted to engage in a notch in the rod and hold the same against the action of the spring in a position to establish communication of rotation, a revoluble trip lever adapted to contact with the spring latch and displace the same from the notch, a dial traveled by the trip lever, a mechanism adapted to impart rotation of a reduced velocity from the driving shaft to the trip lever, a brake adapted to retard the operation of the machinery, and a mechanism causing said brake to be applied by a displacement of the rod in such a direction as to interrupt a communication of rotation.

8. In a device of the character described, the combination with the driving shaft of a machine, of a rod slidably mounted parallel to said shaft, means adapted to establish communication of rotation to the shaft, means carried by the rod engaging the last named means and adapted to interrupt the communication of rotation through a longitudinal displacement of the rod, a spring coiled upon said rod tending to hold the same in such a position as to prevent the communication of rotation to the driving shaft, a spring latch adapted to engage a notch in the rod and thus hold the rod against the action of said spring in a posi-

tion such that communication of rotation is established to the driving shaft, a revoluble trip lever adapted to contact with said spring latch and displace the same from the notch, a mechanism adapted to communicate a rotation of reduced velocity from the driving-shaft to said trip-lever, a dial traveled by the trip lever, a brake adapted to retard the operation of the machine, a mechanism adapted to set said brake, a vertical rod having a transverse notch in its upper portion, said rod being adapted to undergo vertical displacement, and to set said brake when allowed to drop, a spring latch adapted to engage the notch of said rod, and a trip blade carried by the shift rod adapted to displace said spring latch from the notch.

9. In a device of the character described, the combination with the driving-shaft of a machine, of a fast and a loose pulley adjacent upon said shaft, a belt shift-rod mounted adjacent to said pulleys, transversely thereof, said rod being provided with a transverse notch, a pair of belt guides carried by said rod, a spring acting upon said rod, tending to hold the same in a position such that the belt guides are opposite to the loose pulley, a spring latch adapted to engage the notch of the shift-rod, holding this rod against the action of said spring, in a position such that the belt guides are opposite to the fast pulley, a revoluble trip-lever adapted to contact with said spring latch, and to displace the same from said notch, a dial traveled by said trip-lever, a brake adapted to retard the operation of the machine, said brake being slidably mounted, a spring acting on said brake tending to hold it in an inoperative position, a pivoted arm adapted by angular displacement to apply the brake, a rockshaft mounted adjacent to said pivoted arm, a pair of levers projecting rigidly from said rock-shaft in opposite directions, one of which levers is adapted to produce angular displacement of the pivoted arm when the rock-shaft is rocked, a vertical rod, with the lower extremity of which the other of said levers has pivotal connection, said rod being adapted to undergo vertical displacement and to drop when unsupported, a resilient means adapted to support said vertical rod in a raised position, and a trip-blade carried by the shift rod adapted to displace said resilient means during displacement of the shift-rod from the fast toward the loose pulley.

10. In a device of the character described, the combination with the driving shaft of a machine, of a rod slidably mounted parallel to said shaft, means adapted to establish communication of rotation to the shaft, means carried by the rod engaging the last named means and adapted to interrupt the communication of rotation through a longitudinal displacement of the rod, a spring

acting upon said rod, tending to hold the same in such a position as to prevent the communication of rotation to the driving shaft, a spring latch adapted to engage the rod and hold the same against the action of said spring in a position such that communication of rotation is established to the driving shaft, a revoluble trip-lever adapted to contact with said spring latch and displace the same from engagement with the rod, a dial traveled by the trip-lever, a slidably mounted brake adapted to retard the operation of the machine, a spring acting upon said brake tending to hold the same in an inoperative position, a pivoted arm adapted by angular displacement to apply the brake, a rock-shaft mounted adjacent to said pivoted arm, a pair of levers projecting rigidly from said shaft in opposite directions, one of which levers is adapted to

produce angular displacement of the pivoted arm when the rock-shaft is rocked, a vertical rod with the lower end of which the other of said levers has pivotal connection, said rod being adapted to undergo vertical displacement, and to drop when unsupported, a resilient means adapted to support said vertical rod in a raised position, and a trip-blade carried by the shift-rod adapted to displace said resilient means during a displacement of the shift-rod, such as will discontinue communication of rotation to the driving shaft.

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

ROBERT MARION MOORE.

Witnesses:

D. J. MURPHY,
OSCAR TEMPLETON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."