

N. G. AUGIR.
STREET SIGNAL FOR CARS.
APPLICATION FILED DEC. 12, 1908.

Patented June 6, 1911.

3 SHEETS—SHEET 1.

994,363.

Fig. 1.

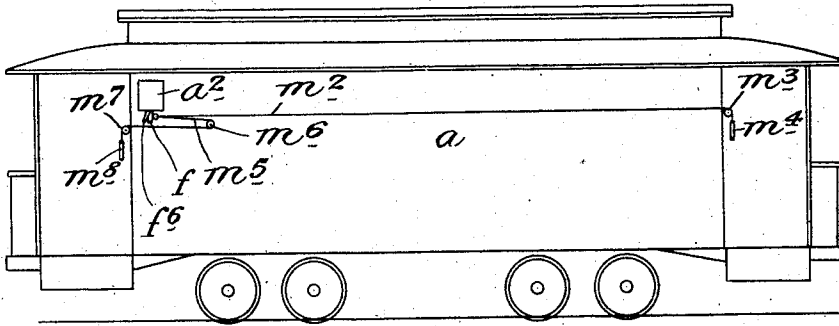


Fig. 2.

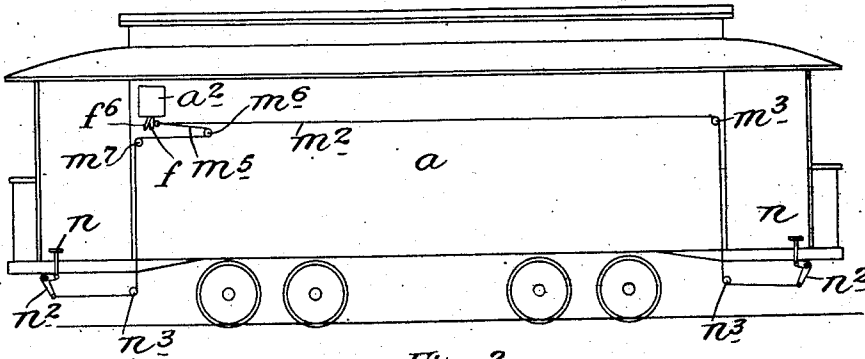


Fig. 3.

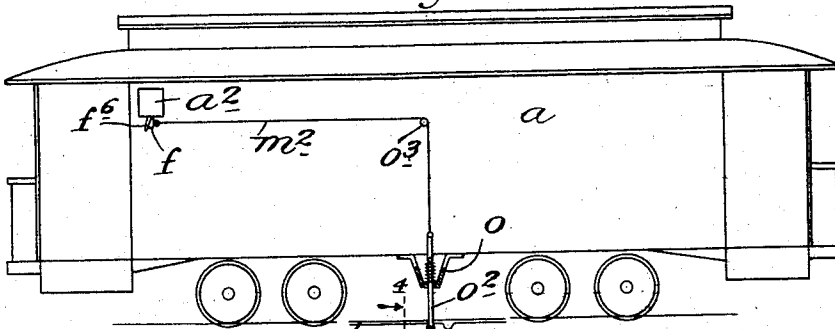
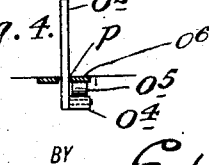


Fig. 4.



WITNESSES

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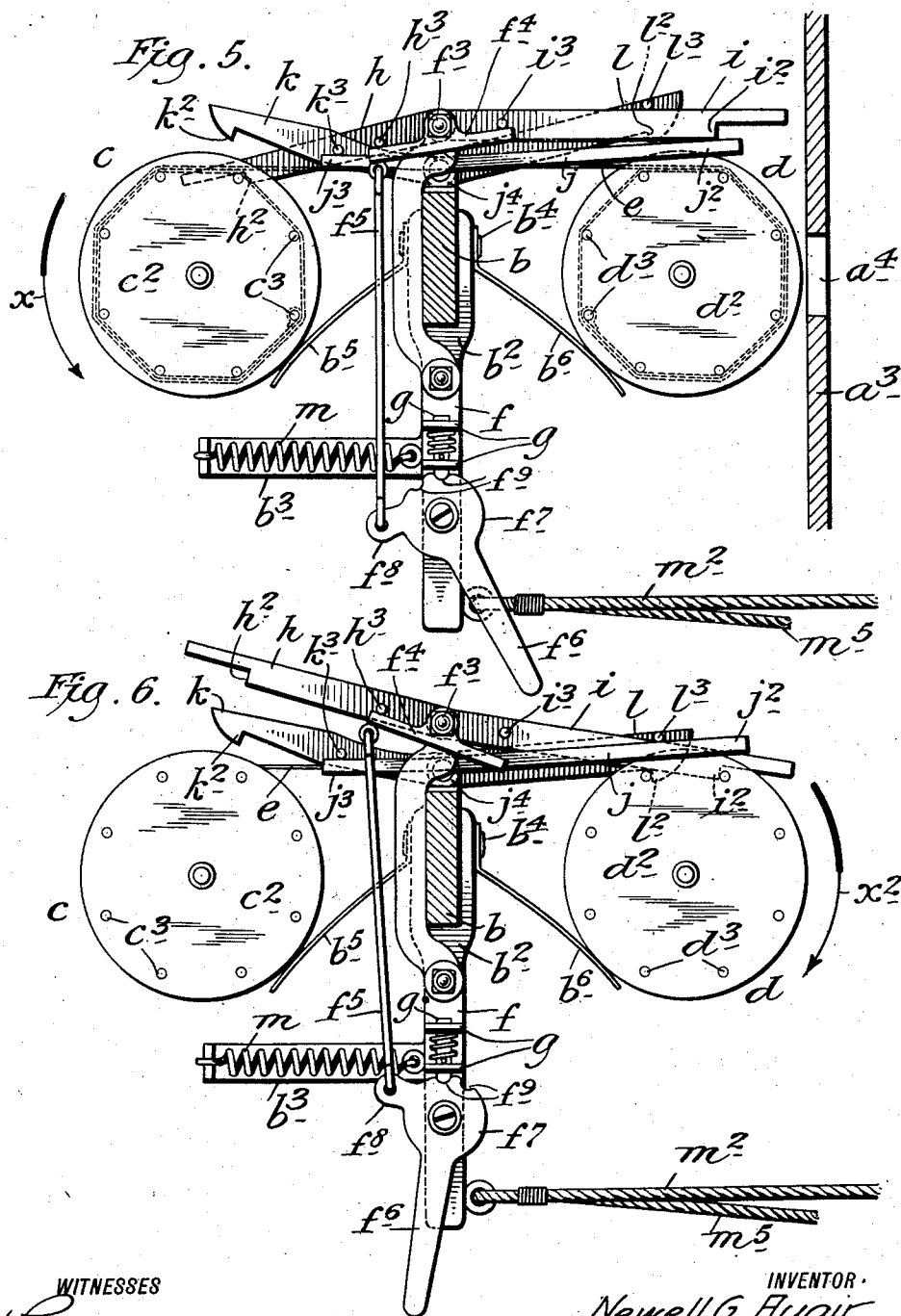
ATTORNEYS.

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3 SHEETS—SHEET 2.

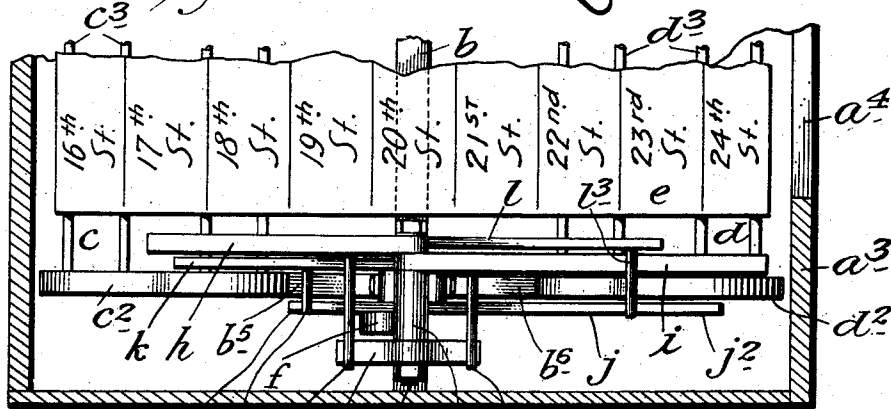
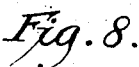


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3 SHEETS—SHEET 3.



WITNESSES *J³ K³ h³ f⁴ f³ f² i³* INVENTOR.
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UNITED STATES PATENT OFFICE.

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STREET-SIGNAL FOR CARS.

994,363.

Specification of Letters Patent.

Patented June 6, 1911.

Application filed December 12, 1908. Serial No. 467,152.

To all whom it may concern:

Be it known that I, NEWELL G. AUGIR, a citizen of the United States, and residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Street-Signals for Cars, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to tramways and tramway cars, and the object thereof is to provide an ordinary tramway car with an improved apparatus for visually signaling or indicating to passengers within the names or numbers of cross streets or avenues which cross the line of the tramway or the street in which the tramway is located as the car approaches such cross streets or avenues, and the object thereof is to provide an improved apparatus of this class which is simple in construction and operation and comparatively inexpensive, and which may be applied wherever such apparatus is desired, and which may also be used for advertising or similar purposes if required.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which:—

Figure 1 is a diagrammatic side view of a car provided with my improved advertising apparatus and indicating the method of operating the same from either end of the car by hand operated devices, Fig. 2 a similar view but indicating the method of operating the apparatus by foot operated devices, Fig. 3 a similar view but indicating the method of operating the apparatus when the tram car is run by an underground trolley apparatus, Fig. 4 a section on the line 4—4 of Fig. 3, Fig. 5 a sectional side view of the apparatus and showing a part of the front of a box or case in which it is placed, Fig. 6 a view similar to Fig. 5 but showing the parts in a different position, Fig. 7 a view similar to Fig. 5 but showing the parts in still a different position, and;— Fig. 8 a sectional plan view of one end of

the box or case in which the apparatus is placed and showing one end portion of the apparatus and a suitable apron of flexible material on which, in practice, the numbers 55 or names of the streets are placed.

In the drawings forming part of this specification, reference being made to Figs. 1 to 3 inclusive, I have shown at *a* an ordinary tramway car, in one end portion of 60 which is placed a box or case *a*² containing the operative apparatus which I employ. The box or case *a*² is provided with a front *a*³ in which is an aperture *a*⁴.

Mounted transversely of the box or case 65 is a stationary bar *b* to which is secured a depending L-shaped bracket *b*² having a horizontal backwardly directed arm *b*³. The head portion of the bracket *b*² is yoke-shaped in form, and said bracket is secured to the 70 bar *b* by a bolt *b*⁴, or in any desired manner, and connected with the head of said bracket are two downwardly and outwardly directed spring brake devices *b*⁵ and *b*⁶.

Mounted parallel with the bar *b* and on 75 the opposite sides thereof are two rollers *c* and *d* of the style usually known as lantern rollers and comprising respectively end disks *c*² and *d*² connected by rods *c*³ and *d*³ arranged in a circle, and in the accompanying drawings only the left hand ends of the 80 rollers *c* and *d* are shown, and mounted on said rollers is a sheet or apron *e* of flexible material which is secured to said rollers and wound thereon in opposite directions as 85 clearly indicated in Fig. 5, and on which is placed the numbers or names of the cross or intersecting streets as indicated in Fig. 8.

Pivoted to the vertical portion of the bracket *b*² is a rock lever *f* having a long 90 transverse tubular head *f*², and said lever is normally in a vertical position as shown in Figs. 5 and 6, and the upper end portion thereof is provided with an off-set or bend adapted to receive the bar *b* when said lever 95 is in a vertical position. Passing through the head *f*² of said lever is a pivot pin or bolt *f*³ on which is mounted a rock bar *f*⁴, to the rear end portion of which is hinged 100 or loosely connected a link rod *f*⁵ extending downwardly parallel with said lever, and pivoted to the lower end portion of said le-

ver is an arm f^6 provided with a circular head f^7 having at one side a projecting lug or member f^8 with which the lower end of the link rod f^5 is connected. The upper edge portion f^7 of the arm f^6 is provided with notches or recesses f^9 , and the arm f is provided above said arm f^6 with two keepers g in which is mounted a spring depressed bolt g^2 which is adapted to engage said notches or recesses, and hold the arm f^6 in a predetermined position.

Pivoted on the bolt f^3 which passes through the head f^2 of the lever f is a backwardly ranging push dog h , and a forwardly ranging push dog i , and the push dog h is provided on the under side thereof and at a predetermined distance from the free end thereof with a shoulder h^2 , and the push dog i at a predetermined distance from the end thereof with a shoulder i^2 , and said push dogs h and i are provided respectively and at a predetermined distance from their pivotal support with projecting pins h^3 and i^3 in connection with which the rock bar f^4 operates. The upper end portion of the lever f is also provided with a trip bar j which is secured to the inner side thereof transversely thereof and which ranges forwardly and backwardly and the front end portion j^2 of which is much longer than the rear end portion j^3 .

Secured to the top surface of the stationary bar b is a fixed support j^4 to which is pivoted a backwardly ranging check dog k and a forwardly ranging check dog l , and these dogs are provided respectively and on the lower side of the free end portions thereof with hooks k^2 and l^2 , and the dog k is provided about midway of its length with a pin k^3 in connection with which the trip bar j operates, and the dog l is provided near its free end with a pin l^3 which operates in connection both with the trip bar j and the push dog i .

The arm or horizontal portion b^3 of the bracket b^2 is provided with a spiral spring m , one end of which is secured to the outer end portion of said arm, and the other to the rock lever f , and in practice I connect with the lower end portion of said lever, in the form of construction shown in Fig. 1, a cord m^2 which passes forwardly through the top portion of the car and through the front end portion of said car and over a roller m^3 , and is provided with a handle m^4 by which said cord may be operated by the motorman or driver of the car, and another cord m^5 is also connected with the lower end portion of said lever and passed forwardly over a suitably supported roller m^6 and then backwardly through the rear end of the car and over a roller m^7 and is provided with a handle m^8 whereby said cord m^5 may be operated from the rear platform

by the conductor of the car. The lower end of the lever f passes down through the bottom of the box or case a^2 , as does also the arm f^6 as clearly indicated in Fig. 1. In Fig. 2 the cords m^2 and m^5 are so arranged as to be operated by pedal devices n at the ends of the car, said devices consisting of pins passed downwardly through the platforms of the car and connected with bell cranks n^2 , and the cords m^2 and m^5 being passed downwardly through the bottom of the car and around rollers n^3 and then connected with the bell cranks n^2 .

In Fig. 3, the cord m^2 only is employed, and secured beneath the bottom of the car centrally thereof is a suitable bracket or hanger o through which passes a spring supported bar o^2 , and the cord m^2 is passed around a pulley or roller o^3 arranged centrally of one side of the car and connected with the upper end portion of said bar, and the lower end portion of said bar passes downwardly through the plow slot p in the track and is provided at its lower end with a laterally directed roller o^4 adapted to operate in connection with lugs or projections o^5 on the bottom of one of the slot rails, and it will be understood that, in practice, these lugs or projections o^5 may be arranged at any desired point and are usually arranged at or immediately after leaving the street crossings.

The operation will be readily understood from the foregoing description when taken in connection with the accompanying drawings and the following statement thereof.

It will be understood that the operative parts of the apparatus are normally in the position shown in Fig. 5, in which position the push dog h is in engagement with one of the rods c^3 of the roller c , and the check dog k is held in a raised position by the pin k^3 which rests on the rear end of the trip bar j , and the push dog i is held in a raised position by the front end of the rock bar f^4 which operates in connection with the pin i^3 , and the check dog l is held in a raised position by the push dog i which operates in connection with the pin l^3 . If now, the lower end of the lever f be pulled forwardly from either end of the car, the parts will be thrown into the position shown in Fig. 7 and the push dog h will turn the roller c one step in the direction of the arrow x , and the roller d will also be turned one step by means of the sheet or apron e and in the same direction and the name of one of the streets will appear on the roller d at the aperture a^4 in the front wall a^3 of the box or case a^2 . At the end of the above described pull and movement of the parts referred to, the check dog k engages one of the rods c^3 and stops the movement of the rollers c and d , and at the end of this movement the pull on either

of the cords m^2 or m^5 is released and the spring m returns the various parts operated by the lever f to the position shown in Fig. 5, and this operation is repeated at each street crossing, or immediately after leaving each street crossing so as to bring the number or name of the next street into view through the aperture a^4 in the front wall a^3 of the box or case a^2 . When the end of the line is reached and the car starts back, the arm f^6 is swung into the position shown in Fig. 6, and in this operation the link rod f^5 raises the rear end of the rock bar f^4 and throws the dogs k and h and the dogs l and i into the position shown in Fig. 6, in which position the push dog i engages one of the rods d^3 of the roller d , and the check dog l another of said rods and a pull on either of the cords m^2 or m^5 will raise the check dog l out of engagement with the rod d^3 with which it is engaged, and the push dog i will be drawn backwardly until the shoulder i^2 thereof drops back of said rod, and when the pull on the cords m^2 or m^5 is released the spring m will pull the lever f into the position shown in Fig. 6, and the push dog i will turn the roller d one step in the direction of the arrow a^2 and the name of the street will appear at the aperture a^4 in the front wall a^3 of the case a^2 , and this operation may be repeated until the end of the line is reached, and when the car starts on another return trip the arm f^6 is thrown back into the position shown in Figs. 5 and 7.

With the construction shown in Figs. 3 and 4 the cord m^2 only is employed as hereinbefore described, and this cord is operated by the spring supported bar o^2 , and the lugs or projections o^5 on one of the slot rails o^6 , the operation of the spring m being the same as hereinbefore described.

In the above described operation the spring brake devices b^5 and b^6 bear on the disk or end portions of the rollers c and d and regulate the movement thereof, and prevent any unnecessary movement, and it will be understood that the check dogs k and l are also intended to aid in regulating the movement of said rollers and to cause said movement to be stopped exactly at such time as to permit the names or numbers of the streets to be seen through the aperture a^4 in the box or case a^2 , and it will be apparent that the check dogs are not an absolutely essential feature of my construction, as the spring brake devices b^6 may be so employed as to regulate the movement of the rollers c and d as herein described, or other brake devices may be used.

In the foregoing description the part b is described as a bar arranged transversely of the box or case a^2 , but said part only forms a support for the hanger or bracket b^2 and

other parts of the apparatus, and any suitable support may be employed for this purpose.

This apparatus, as will be seen, is simple in construction and operation and well adapted to accomplish the result for which it is intended, and the said apparatus may also be used for advertising purposes if desired, in which case the apron or sheet e will be provided with various advertisements which may be seen through the aperture a^4 in the box or case a^2 .

My invention is not limited to the details of construction herein shown and described, and various changes therein and modifications thereof may be made, within the scope of the appended claims, without departing from the spirit of my invention or sacrificing its advantages.

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

1. In an apparatus of the class described, a suitable case or support, two rollers mounted therein, a stationary member secured between said rollers, a hanger connected with said stationary member and provided with a horizontal arm, a lever pivoted to said hanger below said stationary member and extending above and below the same, a tension spring connected with the outer end of said arm and with the lower end portion of said lever, check dogs pivoted to the top of the stationary member and extending in opposite directions and adapted to engage said rollers, and push dogs pivoted to the top portion of said lever and extending in opposite directions and also adapted to engage said rollers, whereby a pull on the lower end of said lever in a direction opposite to the pull of said spring will cause one of said push dogs to engage the corresponding roller and move it one step and the corresponding check dog to engage said roller.

2. In an apparatus of the class described, two parallel rollers, a stationary member between said rollers, a hanger secured to said member and provided with a horizontal arm, a lever pivoted to said hanger and extending above and below said member, a tension spring connected with the outer end of said arm and with the lower end portion of said lever, check dogs pivoted to said member and extending in opposite directions and adapted to engage said rollers, push dogs pivoted to the top portion of said lever and extending in opposite directions and adapted to engage said rollers, one of said push dogs being normally in engagement with the corresponding roller, and the other push dog and both check dogs being normally out of engagement with their corresponding rollers, whereby a pull on the

lower end portion of said lever in a direction opposite to that of the pull of said spring will cause the push dog which is in engagement with its roller to turn said roller one step and the corresponding check dog to engage said roller.

3. In an apparatus of the class described, two parallel rollers, a stationary member between said rollers, a hanger connected with said member and provided with a horizontal arm, a lever pivoted to said hanger and extending above and below said member, a tension spring connected with the outer end of said arm and with the lower end portion of said lever, check dogs pivoted to the top of said member and adapted to engage said rollers, push dogs pivoted to the top end portion of said lever and adapted to engage said rollers, a rock bar pivoted to the top end portion of said lever, an arm pivoted to the lower end portion of said lever, a link member connecting one end portion of said rock bar with the head portion of said arm, a spring depressed bolt mounted on said lever and adapted to engage said arm and hold it in different positions, pins connected with the push dogs and in connection with which the rock bar operates, a trip bar secured to the top end portion of said lever, and pins connected with the check dogs and in connection with which the trip bar operates.

4. In an apparatus of the class described, two parallel rollers, a stationary member mounted between said rollers, a hanger connected with said member, a lever pivoted to said hanger below said member and extending above and below the same, push dogs pivoted to the upper end portion of said lever and extending in opposite directions and adapted to engage said rollers, check dogs pivoted to the top of said member and adapted to engage said rollers, and one of said push dogs being normally in engagement with its corresponding roller, means for moving the lower end portion of said lever in opposite directions, the movement of said lever in one direction causing the push dog which is in engagement with its roller to turn said roller one step and the corresponding check dog to engage said roller.

5. In an apparatus of the class described, two parallel rollers, a stationary member between said rollers, a lever pivoted beneath said member and extending above and below the same, push dogs pivoted to said lever and extending in opposite directions and adapted to engage said rollers, and check dogs pivoted to said member and extending in opposite directions and adapted to engage said rollers, one of said push dogs being normally in engagement with the corresponding roller, whereby the movement of said

lever in one direction will cause said push dog to turn said roller one step and the corresponding check dog to engage said roller.

6. In an apparatus of the class described, two parallel rollers, a flexible sheet or apron connected with said rollers and wound thereon in opposite directions, a stationary member between said rollers, a lever pivoted below said member and extending above and below the same and adapted to swing in a vertical plane, push dogs pivoted to said lever and extending in opposite directions and adapted to engage said rollers, and check dogs pivoted to said member and extending in opposite directions and adapted to engage said rollers, one of said push dogs being normally in engagement with the corresponding roller, whereby the movement of the lower end portion of said lever in one direction will cause said push dog to turn said roller one step.

7. In an apparatus of the class described, two parallel rollers, a vertically positioned lever pivoted between said rollers, check dogs pivoted between said rollers and extending in opposite directions and adapted to engage said rollers, and push dogs pivoted to the upper end portion of said lever and extending in opposite directions and adapted to engage said rollers, one of said push dogs being normally in engagement with the corresponding roller, whereby the movement of the lower end portion of said lever in one direction will cause said push dog to move said roller one step and the corresponding check dog to engage said roller.

8. In an apparatus of the class described, two parallel rollers, a vertically ranging lever pivoted between said rollers, push dogs pivoted to the upper end portion of said lever and extending in opposite directions and adapted to engage said rollers, one of said push dogs being normally in engagement with the corresponding roller, whereby the movement of the lower end portion of said lever in one direction will cause said push dog to turn said roller one step, means for checking the movement of the said rollers and devices for regulating said movement.

9. In an apparatus of the class described, two parallel rollers, a stationary member between said rollers, a vertically ranging lever pivoted between said rollers, push dogs pivoted to the upper end portions of said lever and extending in opposite directions and adapted to engage said rollers, one of said push dogs being normally in engagement with the corresponding roller, a rock bar pivoted to the upper end portion of said lever, an arm pivoted to the lower end portion of said lever, means for holding said arm in different positions, a link rod connecting one end of the rock bar with the head portion of

said arm, whereby a pull on the lower end
portion of said lever in one direction will
cause the push dog which is in engagement
with its roller to turn said roller one step,
5 means for checking the movement of said
rollers and devices for regulating the move-
ment of said roller.

In testimony that I claim the foregoing as

my invention I have signed my name in
presence of the subscribing witnesses this 10
24th day of November 1908.

NEWELL G. AUGIR.

Witnesses:

A. R. APPLEMAN,
C. E. MULREANY.

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