M. D. LOONEY.

ADVERTISING MACHINE.

APPLICATION FILED JUNE 25, 1912.

1,067,932.

Patented July 22, 1913.

2 SHEETS—SHEET 1.

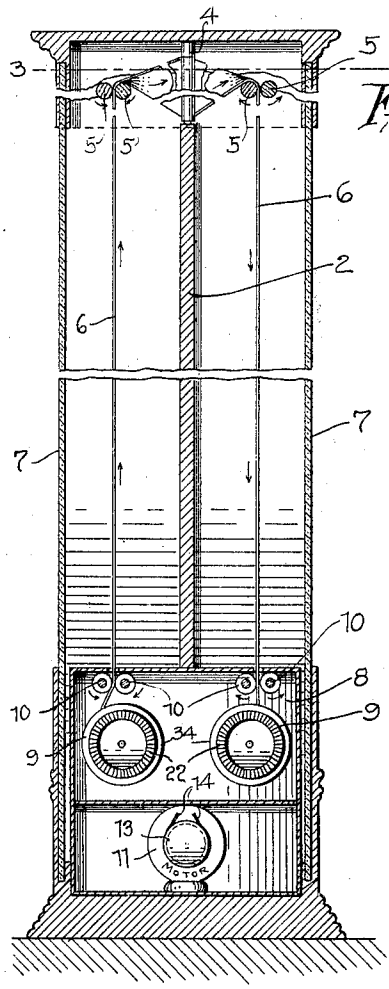


Fig. 1

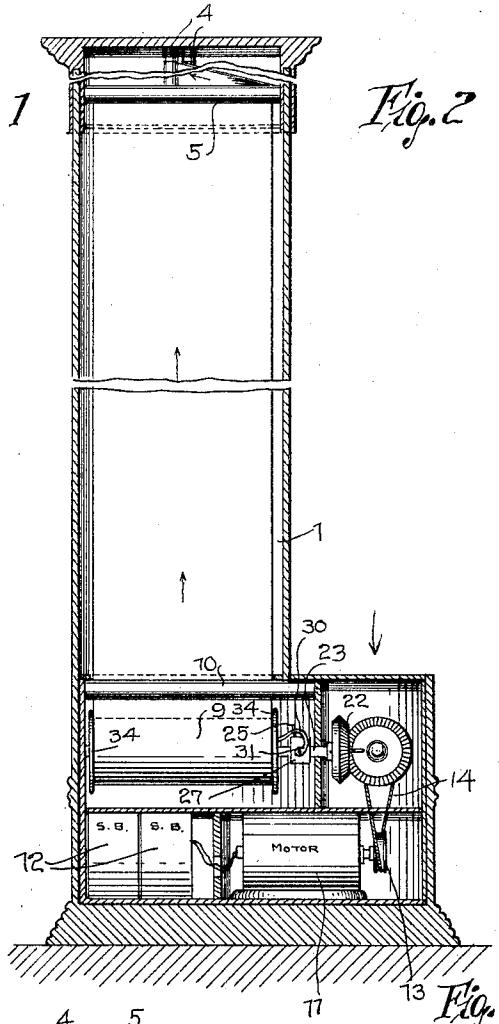


Fig. 2

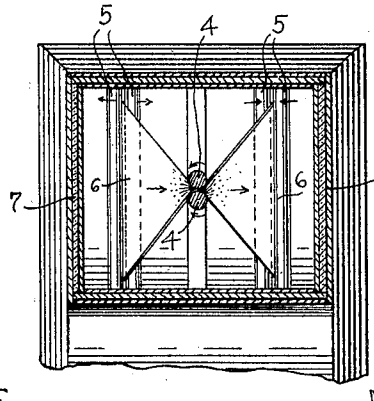


Fig. 3

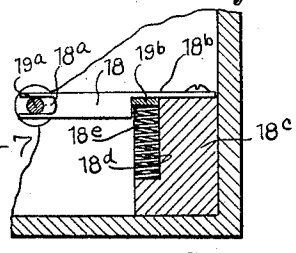


Fig. 7

Witnesses
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2 SHEETS—SHEET 2.

Fig 4

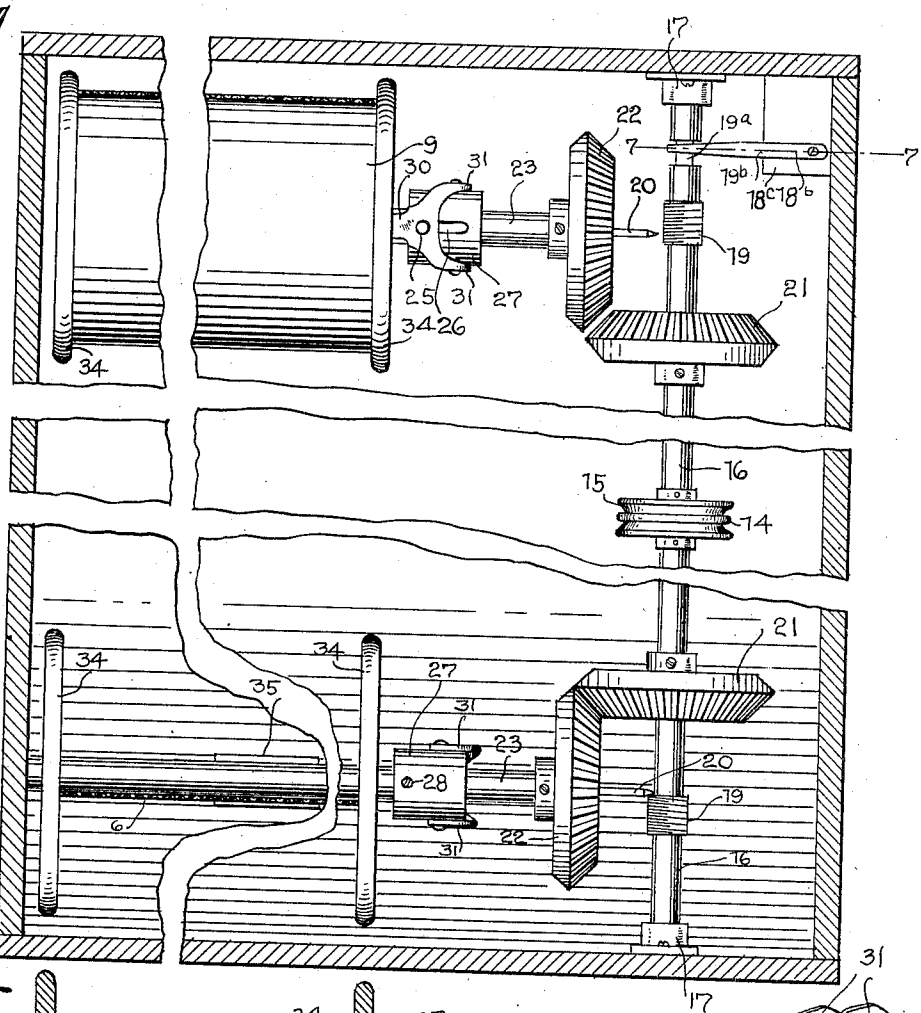


Fig. 5

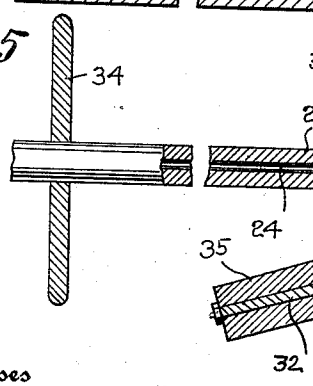
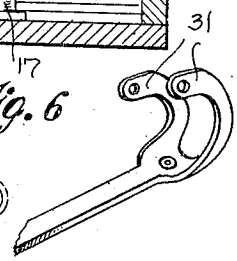


Fig. 6



Witnesses

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UNITED STATES PATENT OFFICE.

MARMA DUKE LOONEY, OF SNYDER, TEXAS.

ADVERTISING-MACHINE.

1,067,932. Specification of Letters Patent. Patented July 22, 1913.

Application filed June 25, 1912. Serial No. 705,828.

To all whom it may concern:

Be it known that I, MARMA D. LOONEY, a citizen of the United States, residing at Snyder, in the county of Scurry and State of Texas, have invented certain new and useful Improvements in Advertising-Machines, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to advertising machines, and has for its object the production of devices for reversing the travel of the endless apron which is used in connection therewith, and upon which the display sign is printed.

Another object of this invention is the production of a simple and efficient reversing mechanism which will effectively operate so as to immediately reverse the driving mechanism, as soon as the endless apron has been entirely unwound from one of the rollers.

With these and other objects in view, this invention consists of certain novel constructions, combinations, and arrangements of parts, as will be hereinafter fully described and claimed.

In the drawings:—Figure 1 is a vertical section taken just inside of the casing showing the gears for operating the winding rollers in elevation. Fig. 2 is a central vertical section through the machine, taken at right angles to Fig. 1. Fig. 3 is a transverse section through the machine taken on the line 3—3 of Fig. 1. Fig. 4 is an enlarged top plan view of the reversing apparatus used in connection with the present device. Fig. 5 is an enlarged detail sectional view of the automatic reversing levers carried by the rollers. Fig. 6 is a detail perspective of the lower end of the weight carrying arm. Fig. 7 is a section taken on line 7—7 of Fig. 4.

By referring to the drawings, it will be seen that the present device is positioned within a casing 1 which is provided with a central partition 2, upon which is positioned a plurality of guiding or turning rollers 4. A pair of apron guiding rollers 5 are positioned upon each side of the partition 2, and the indicator apron 6 passes therebetween.

The casing 1 is provided upon each side with a glass channel 7 for allowing the sign appearing upon the apron 6 to appear therethrough.

A motor containing casing 8 is carried by the lower end of the casing 1, and a pair of winding rollers 9 are carried within the casing 8. A plurality of guiding rollers 10 are positioned above the rollers 9, and these guide rollers assist in holding the apron 6 taut, and prevent the apron from becoming twisted.

The apron passes over the upper rollers 5, and passes through the guiding or turning rollers 4, and is then twisted in an opposite direction so as to expose the opposite side of the curtain. The desired signs are printed upon the opposite side of the curtain so that the sign may be read from both sides of the casing 1.

A motor 11 is carried at the bottom of the casing 8, and is run by storage batteries 12 or any other desired source of supply. The motor 11 carries a drive pulley 13, over which a belt 14 passes, which belt in turn passes over a drive pulley 15 carried by the shaft 16. The shaft 16 is journaled at each end in a collar 17. The shaft 16 is also supported by means of the bracket 18, and is provided near each end with a worm threaded portion 19 adapted to receive a pointed end of the plungers 20 carried by each of the driving rollers 9. The shaft 16 also carries a pair of beveled gears 21, and this shaft 16 is capable of having a longitudinal movement so as to shift the gears 21 into and out of engagement with the respective gears 22 carried by the shafts 23 of the winding rollers 9. Each of the shafts 23 of the winding rollers 9 is provided with a longitudinally extending aperture 24, and in this aperture 24 works a longitudinally movable plunger rod 20 which is provided with a laterally extending arm 25 working in the slot 26 formed in the shaft 23. A collar 27 is carried by each of the shafts 23. This collar 27 carries a key bolt 28 which key bolt firmly grips the shaft 23, as indicated at 29. It will, therefore, be seen that this collar will be held against longitudinal movement upon the shaft 23.

It should be understood that as the winding shafts are rotated, the apron will be wound upon the shaft and in so doing it will be understood that the apron will wind around the shaft in such a manner as to draw the lever 30 up close to the shaft 23. In this manner it will be understood that the lever will be so held in close contact with the shaft as to hold the plunger rod 24 in a contracted relation relative to the shaft 23 until

the apron has become again unwound from one of the spools or shafts sufficiently to allow the lever 30 to swing outwardly to the position shown in Fig. 5.

A weight supporting arm 30 is carried by the collar 27, and is provided with a pair of spaced straddling legs 31 which terminate in a weight supporting arm 32. This weight supporting arm 32 passes through an aperture 33 which is formed in one of the guiding disks 34

From the foregoing description it will be seen that the driving shaft 16 will be caused to move longitudinally, as soon as the apron has been entirely unwound from the spool, or winding rollers. It will be seen further that as the apron is released from the winding roller, the weight 35 will cause the weight carrying arm 30 to swing downwardly and thereby push the pin 20 longitudinally within the shaft 23, so as to engage the worm threads 19 upon the shaft.

Since the outer end of the plunger rod 20 will so engage the threads 19, it will be seen that the shaft 16 will be moved longitudinally so as to cause the beveled gear 21 to engage the opposite gear wheel 22, thereby driving the opposite roller and beginning to wind the apron back upon the roller which has just been emptied. It will, therefore, be seen that a complete automatic device has been produced for reversing the apron as soon as the same has reached the end and it will not be necessary to manually reverse the sign owing to the fact that an efficient reversing mechanism has been produced.

It should be understood that this invention may be modified in its detail mechanical structure, without departing from the spirit of the invention as defined in the appended claims.

The bracket 18 is provided with a bifurcated end 18^a near its outer end which straddles a reduced portion 19^a upon the shaft 16. This bracket 18 is provided with a narrow rear portion 18^b which is secured to the upper end of the supporting block 18^c. The supporting block 18^c is provided with a socket 18^d in which is placed the coil spring 18^e, which spring supports a stop catch 19^b. This stop catch 19^b engages the under face of the bracket 18 and normally exerts an upward pressure thereon. This spring will cause the bracket 18 to frictionally engage the shaft 16 as indicated in Fig. 7, and prevent the accidental rotation of the shaft 16, in case the mechanism should be jarred.

What is claimed is:—

1. A reversing mechanism for a sign comprising a support, a driving shaft carried by said support and capable of longitudinal movement thereon, driving means carried by said shaft, winding rollers coöperating with said shaft, shifting means carried by said winding rollers, means carried by said shaft and adapted to be engaged by said shifting means for moving said shaft longitudinally, and a display apron carried by said winding rollers and adapted to be alternately wound upon and unwound from said winding rollers as said shaft is moved longitudinally.

2. A reversing mechanism for an endless apron comprising a support, a driving shaft carried by said support and capable of longitudinal movement thereon, worm means carried by said shaft, winding rollers carried by said support, means carried by said driving shaft and coöperating with said winding rollers for rotating said winding rollers, and means carried by said winding rollers and adapted to automatically be thrown into engagement with said worm means carried by said driving shaft for causing said driving shaft to move longitudinally whereby the rotation of one roller will be stopped and rotary movement will be imparted to the other roller.

3. A reversing mechanism for an endless apron comprising a support, a driving shaft carried by said support and capable of having longitudinal movement thereon, threads formed upon said driving shaft, gears carried by said driving shaft, a plurality of winding rollers, a winding roller supporting shaft supporting each winding roller, an apron wound upon said rollers, a weighted lever carried by each winding roller supporting shaft and adapted to be held in engagement with said rollers by means of said apron, a longitudinally movable plunger rod carried by said supporting shaft for said winding rollers, said lever engaging said longitudinally movable plunger rod for moving said plunger rod longitudinally as said lever is swung away from said winding roller supporting shaft and moving said plunger rod into engagement with said threads upon said longitudinally movable shaft, a gear carried by each winding roller supporting shaft and adapted to be alternately thrown into engagement with said gears carried by said driving shaft as said driving shaft is moved longitudinally for causing said apron to alternately travel in an opposite direction

4. A reversing mechanism of the class described comprising a support, a drive shaft carried thereby and longitudinally movable thereon, drive gears carried by said shaft, worm threads carried by said shaft, winding roller supporting shafts carried by said support, winding rollers carried thereby, drive gear wheels carried by each winding roller supporting shaft and capable of being alternately engaged by said drive gears carried by said drive shaft, a collar carried by each winding roller supporting shaft, a longitudinally movable plunger rod carried by each of said winding roller supporting shafts

having a laterally extending arm, a weight supporting arm pivotally secured to each of said collars straddling the same, a weight carried by each of said weight supporting arms, said laterally extending arm of said longitudinally movable plunger rod passing through said weight supporting arm and capable of being reciprocated within said winding roller supporting shaft, as said weight drops away from said winding roller supporting shaft, whereby said longitudinally movable plunger rod will be thrown into engagement with said worm threads for causing said drive shaft to move longitudinally for causing one of said drive gears upon said driving shaft to engage the drive gear carried by the opposite winding roller supporting shaft and an apron wound upon said rollers and adapted to hold said weights in close engagement with said rollers.

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

MARMA DUKE LOONEY.

Witnesses:
R. C. GRANTHAM,
A. F. COLE.

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