(No Model.)

J. M. LONG.

ENDLESS SIGN.

No. 526,905. Patented Oct. 2, 1894.

Fig. 3.

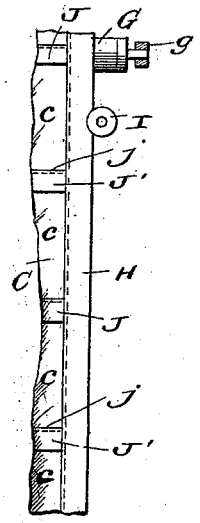


Fig. 1.

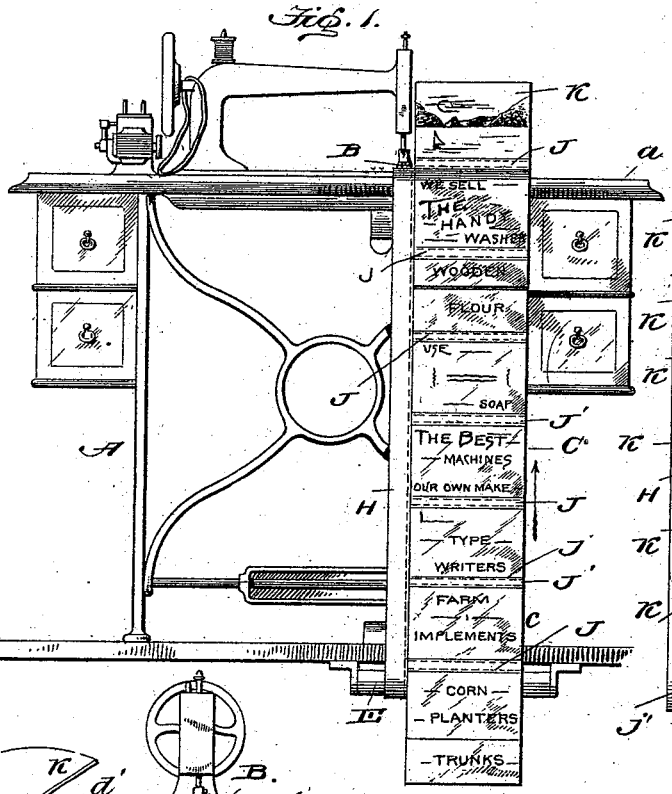
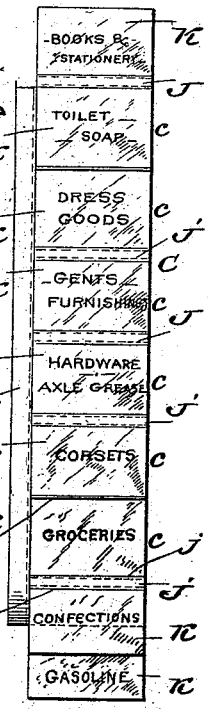


Fig. 4.



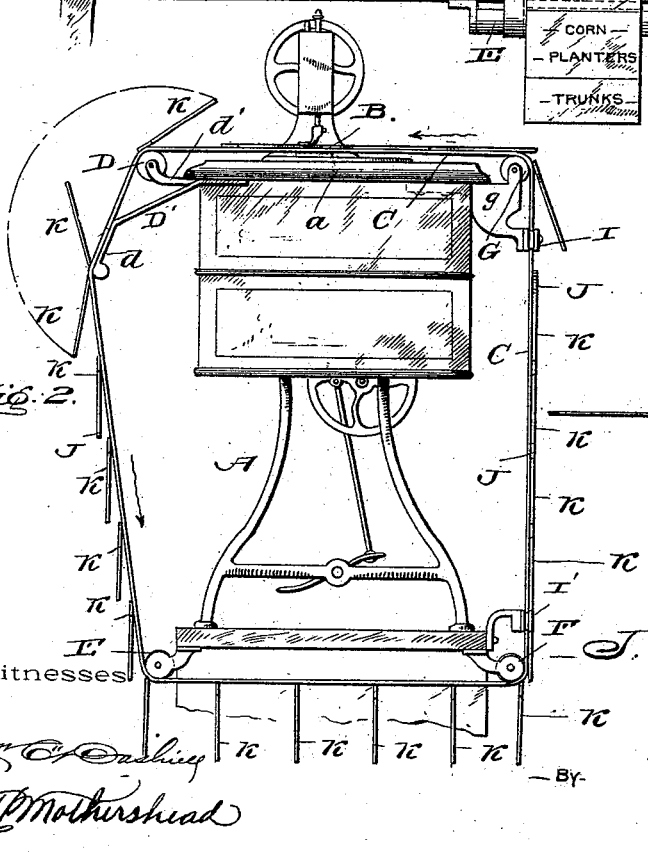
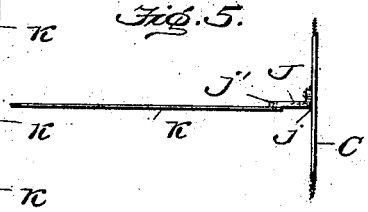


Fig. 2.

Fig. 5.



Witnesses

Wm. C. Dashiell

R. N. Mothershead

J. M. Long
Inventor.

By Edson Bros.
Attorneys

UNITED STATES PATENT OFFICE.

J. MILTON LONG, OF MUNCIE, INDIANA, ASSIGNOR OF ONE-HALF TO ENOCH L. DUNLAP, OF SANDUSKY, OHIO.

ENDLESS SIGN.

SPECIFICATION forming part of Letters Patent No. 526,905, dated October 2, 1894.

Application filed April 21, 1894. Serial No. 508,468. (No model.)

To all whom it may concern:

Be it known that I, J. MILTON LONG, a citizen of the United States, residing at Muncie, in the county of Delaware and State of Indiana, have invented certain new and useful Improvements in Endless Advertising-Signs; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The nature of this invention is a display novelty by which diverse advertisements are brought to the attention of the public in connection with a suitable motor mechanism.

In this invention I utilize an endless web or apron which is supported in such relation to the motor power mechanism as to be propelled or operated thereby, and on this endless band or apron advertisements are so arranged and adapted as to best utilize the space or surface of the band, and also on a series of flaps or cards both sides of which are utilized for the display of advertisements, photographic scenes or pictures. The cards are caused to reverse in such a manner as to attract the attention of the lookers on, and present to view three times the surface of the belt.

When the endless traveling band is to be used in connection with a sewing machine, I provide the band or apron at one edge thereof with a detachable web which is moved under and in engagement with the feed mechanism of the sewing machine, whereby as the machine is operated the web and band will be driven or operated by such feed mechanism, and said web can be detached and replaced when it becomes worn to such an extent as to be incapable of use. On the surface of the belt is inscribed in any suitable way a series of advertisements of different kinds, and between the lines of division of the advertising matters a series of cards or flaps is attached to the apron or belt, the arrangement and manner of connecting the flaps being such that they will move freely at their connections with the band, and thus cause them to lie closely to the belt while it and the cards are traveling in perpendicular and inclined paths and thus cover the advertisements on the band, and to fall over or to reverse when the direction of the belt is changed from an incline to substantially a perpendicular direction in its downward path, and thus automatically expose advertisements in the spaces on the belt, also the reverse side of the cards to view. With this endless traveling band are combined certain guide rollers that cause the band and web to travel in a horizontal, inclined and perpendicular direction so as to cause the flaps or cards to lie flat against the same; and certain edgewise bearing guides are also provided to guide the band and its edge-web in proper relation to the feed mechanism of the sewing machine so that the detachable web will be engaged at all times by the feed devices of such sewing machine; and the invention further consists in the novel combination and construction of parts which will be hereinafter more fully described and claimed.

The accompanying drawings fully illustrate my improvements in connection with a sewing machine, although I would have it understood that I do not limit the use of my improvements to a machine of this character, as other power operated machines may be equipped with my improved advertising display.

Figure 1 is a front elevation of a sewing machine and my advertising belt. Fig. 2 is a side elevation thereof. Fig. 3 is a detail view showing a portion of the endless belt and a set of the edgewise guide rollers. Fig. 4 is an enlarged detail view of the endless belt or apron, and Fig. 5 is a view illustrating the connector by which one of the turning flaps or cards is attached to the belt or apron within the line of the detachable web for the sewing machine feed to engage therewith.

Like letters of reference denote corresponding parts in all the figures of the drawings, referring to which—

A designates a sewing machine which may be of any ordinary or preferred construction, and I may employ a machine having a feed

mechanism B which has an alternate start and stop motion to impart to the endless belt or band C a corresponding start and stop feed. This endless belt or band C is led around a series of guides or rollers by which it is held in proper alignment with the feed mechanism.

At the front side of the sewing machine, on a level with the top *a* thereof, is provided one guide roller D and below this roller is arranged an inclined guide D′ which extends downward and outward from the top *a* and the top roller D, said guide D′ having its inclined part *d* and outer edge terminating in a vertical line beyond the plane in which the roll D lies so as to cause the belt to travel in an inclined direction or path as it descends and passes downward from the top *a*. At the bottom of the machine frame are provided the lower guide rollers E, F, which are parallel to each other, and situated at the front and rear sides of the frame respectively, to properly direct the belt or band C horizontally across the bottom part of the machine frame, and on the rear side of the frame another roller G is provided on practically the same level as the table *a* and the upper front guide roller D, the two rolls D, G, serving to guide the belt or band across the top and to properly deflect the same over the edges of the table *a*. The upper front roller D has its shaft or trunnions journaled in the bearings or brackets *d′* which are fixed to the front side of the machine frame in a manner to project the front roller beyond the line of the front edge of the table *a*. The lower front and rear rollers E, F, are likewise journaled in suitable bearings or brackets which may be fixed to a floor or platform on which the machine A stands, and the upper rear roller G has its shaft or trunnions journaled in bearings *g*, *g*, which are fixed to the rear side of the machine frame A, as clearly shown by Fig. 2. This endless belt C may be made of canvas or any other material suitable for the purpose, and when it is to be used in connection with a feed mechanism of a sewing machine as herein described, this endless belt C is provided at one edge with a detachable web H which is also endless and united in any suitable way to the belt C so that it can be detached when worn by the action of the feed mechanism thereon and replaced by a new web.

In order to guide the belt so that the web will always be properly fed to the feed mechanism B, I provide the grooved guide rollers I, I′, which are set or arranged to have edgewise contact with the detachable web of the belt. These edge guides I, I′, are provided on the rear side of the machine frame, at the top and bottom thereof, respectively, and said rollers I, I′, prevent the web H from moving laterally in one direction to a position where the web will not be properly fed under the feed mechanism B of the machine, whereby such feed mechanism B is adapted to engage only with the web and not injure or interfere with the belt or its advertising flaps or cards.

The belt or band C is divided into suitable spaces *c* on which can be inscribed suitable advertisements, and at lines between these spaces *c*, *c*, are attached the connectors, J J′, by which the folding cards or flaps K are attached to the endless belt. Each connector may consist of a doubled strip of fabric, which is united at one edge, *j*, transversely across the endless belt C in any suitable way, thus leaving the other edge *j′* of the connector free; and to this free edge of the connector is attached a flap or card K, whereby the flap has one edge connected to the belt C by the connector J or J′ and the other edge of the flap is free to enable the flap to automatically fold over the advertisement on the face *c* of the belt and thus also expose the advertisement in the space *c* to view.

The sewing machine may be propelled by an electric motor or other suitable power, and the feed mechanism B engages with the web H to propel the web and belt.

The endless belt travels around the machine and the rollers in the direction indicated by the arrow in Fig. 2, and the upper part of this belt lies horizontally and flat upon the table *a*, with the web H engaged by the feed mechanism B of the machine. The flaps or cards on this upper part of the apron lie flat against the same, and after the cards or flaps have passed with the apron over the upper front guide roller D and as they pass down over the inclined guide D′, the flaps are turned outward from the apron and swing in an arc of a circle as shown by Fig. 2, whereby the advertisement on the face of the belt and the advertisement on one face of the flap are exposed as the apron and flap travel from the roller D to the lower free edge of the inclined guide. It will be seen that when the horizontal part of the apron travels around the roller D, one of the cards K is raised at that point about the time that the preceding card passes the lower free edge of the inclined guide, and thus the part of the apron passing over the inclined guide has the advertisement on its face exposed to view, while the card just passing the roller D has one face exposed to view, and that the preceding card as it passes the lower edge of the guide is inverted, turned over or dropped to a perpendicular position to expose the advertisement on the reverse face of the same. As the flap is carried by the apron past the lower edge of the inclined guide D′ the flap drops or falls against the apron which now travels in a perpendicular path down to the lower front roller E, so that the flaps are caused to drop over into a perpendicular position and thus expose the advertisements on the rear faces of the flaps and conceal the advertisements on the surfaces of the apron; and the apron then passes to a horizontal position between the lower rollers E, F, with the cards or flaps

hanging downward therefrom, and then the apron passes again in a perpendicular direction on the rear side of the machine, from the lower rear roller F to the upper rear roller G, with the flaps lying flat against the apron, and finally the apron again passes over the top *a*. It will thus be seen that I have devised an advertising display by which both surfaces of each card or flap and the advertisements on the belt are displayed to the spectator as the apron and cards are carried downward at the front side of the sewing machine.

The cards or flaps are attached to the belt at one side of the detachable web, and as the web H is the only part of the endless belt that is engaged by the feed mechanism B, the cards or flaps pass by the feed mechanism and the arm of the sewing machine without injury.

I am aware that changes in the form and proportion of parts and in the details of construction of the mechanisms herein shown and described as an embodiment of my invention can be made without departing from the spirit or sacrificing the advantages of my invention, and I therefore reserve the right to make such modifications as fairly fall within the scope of my invention.

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

1. In an advertising display apparatus, the endless apron and a series of advertising cards flexibly attached at intervals to the apron across the surface thereof, in combination with guides to direct the apron in horizontal and perpendicular paths, and means for imparting movement to said apron, whereby the cards are reversed as the direction of the apron is changed from a horizontal to a perpendicular direction, substantially as set forth.

2. In an advertising display, an endless belt or apron, a series of connectors attached at suitable intervals across the exposed face of the apron, and a series of advertising cards each attached at one edge to one of the connectors, in combination with guides to direct the apron or belt in horizontal and perpendicular paths, and means for moving said apron, said connectors permitting the free edges of the cards to hang downward when the apron is traveling in perpendicular directions, substantially as and for the purposes described.

3. In an advertising display, the endless apron provided with the advertising spaces, *c*, and a series of advertising cards flexibly attached to the apron across the exposed surface thereof, in combination with guides to direct the apron in horizontal and perpendicular paths, whereby the cards are automatically reversed and the surface of the apron exposed as the direction of the belt is changed from a horizontal to a perpendicular path, as set forth.

4. In an advertising display apparatus, the combination with a suitable motor, of an endless apron provided on its surface with a series of spaces *c* designed to receive advertisements and carrying a series of cards which are attached thereto on lines between said spaces, and means, substantially as described, for guiding said apron in horizontal, inclined, and perpendicular paths, for the purposes described, substantially as set forth.

5. In an advertising display apparatus, the combination with a suitable motor, of an endless apron having a series of cards flexibly attached thereto at intervals by connectors which permit the cards to hang downward when the apron is traveling in a vertical path, and guides arranged to direct the apron, in horizontal and perpendicular paths, substantially as and for the purposes described.

6. In an advertising display, the combination of an endless apron or belt provided with a series of advertising cards each of which is flexibly attached at one edge to the apron across the surface thereof, guides, as D, G, to direct the apron in a horizontal path, and another guide below the first mentioned guides to direct the apron in perpendicular paths, substantially as described.

7. In an advertising display, an endless belt or apron provided with a series of advertising cards, and a feed-web projecting beyond one edge of said apron, substantially as described, for the purposes set forth.

8. In an advertising display, the combination with a suitable motor, of an endless apron carrying a series of flaps or cards, and guide rollers which are spaced and direct the apron to travel in horizontal and perpendicular paths, for the purposes described, substantially as set forth.

9. In an advertising display, the combination with a suitable motor mechanism, of lower guide rollers, an upper rear roller, an upper front roller, an inclined guide in a plane at one side of the front rollers, and an endless apron or belt having a series of flaps attached thereto, substantially as and for the purposes described.

10. In an advertising display apparatus, the combination with a suitable motor mechanism, of a series of spaced guide rollers, an endless apron or belt engaging with said rollers and provided at one edge with an endless web to engage with said motor mechanism, and grooved guides in contact with the opposite edge of said endless apron or belt, substantially as and for the purposes described.

11. In an advertising display, the combination with a feed mechanism, of a series of guide rollers, an endless belt or apron provided with a web at one edge thereof to engage said feed mechanism and with a series of foldable flaps which are attached to the apron at one side of the web, and grooved guide rollers in contact with the edge of said apron, substantially as and for the purposes described.

12. In an advertising display, an endless

belt or apron provided with a series of spaces, *c*, a series of advertising cards or flaps, and a like series of pliable connectors each having one edge attached to a card or flap and its other edge attached to said apron on a line between said spaces, *c*, thereon, in combination with guides arranged to direct the apron in horizontal, inclined and perpendicular paths, and a suitable motor to move the apron, substantially as described, for the purposes set forth.

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

J. MILTON LONG.

Witnesses:
JAMES BINGHAM,
W. L. LYONS.