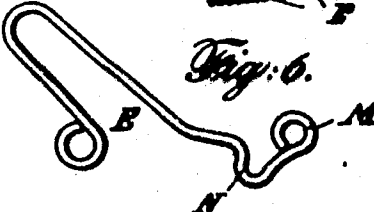
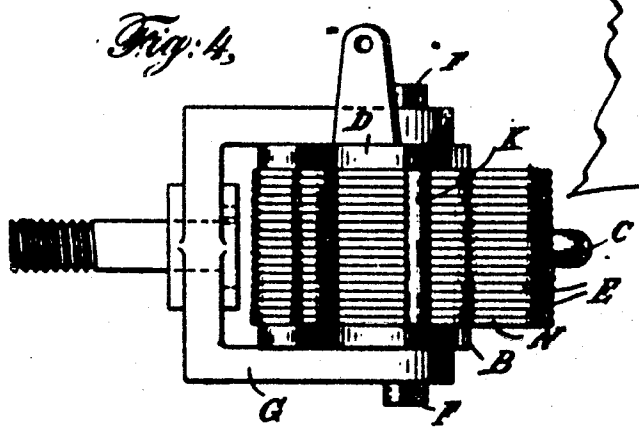
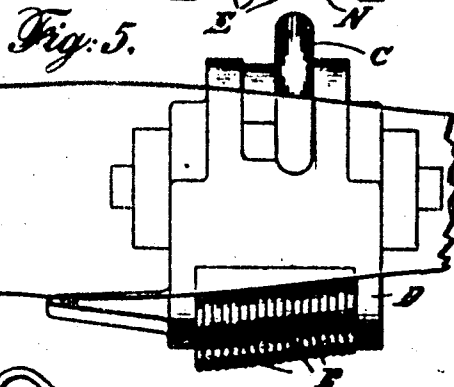
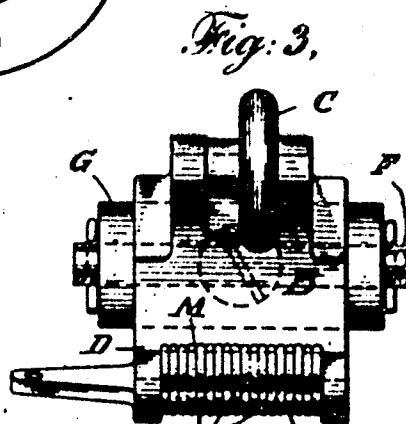
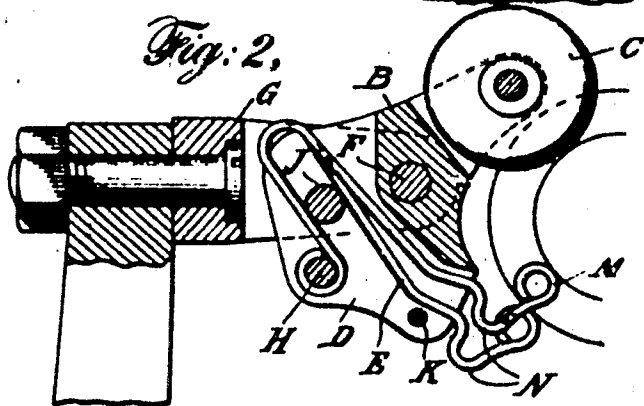
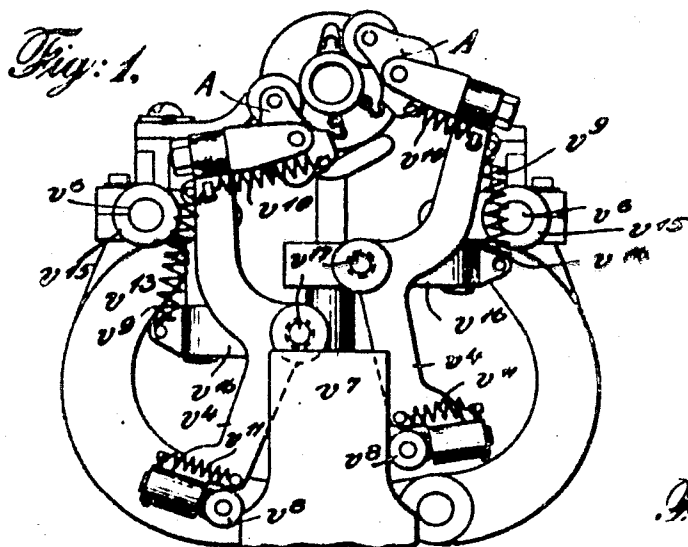


E. ERMOLD.
WIPER FOR BOTTLE LABELING MACHINES.
APPLICATION FILED MAR. 2, 1910.

966,536.

Patented Aug. 9, 1910.



Witnesses:
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Paul H. Frank

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UNITED STATES PATENT OFFICE.

EDWARD ERMOLD, OF NEW YORK, N. Y.

WIPER FOR BOTTLE-LABELING MACHINES.

986,533.

Specification of Letters Patent.

Patented Aug. 9, 1910.

Application filed March 2, 1910. Serial No. 546,829.

To all whom it may concern:

Be it known that I, EDWARD ERMOLD, a citizen of the United States of America, residing at New York, in the borough of Manhattan, county and State of New York, have invented certain new and useful Improvements in Wipers for Bottle-Labeling Machines, of which the following is a specification.

This invention relates to wipers such as are used in bottle labeling machines, for applying labels to bottles, such a bottle labeling machine being shown in my Patent No. 923,501, dated June 1, 1909, and the objects of the invention are to improve upon the construction of such wipers, and increase their efficiency of operation, with simplicity of parts and cheapness of manufacture.

Other objects of the invention are to provide wiper-strips which permit of a large range of movement so as to conform to irregularly shaped bottles, further objects of the invention being to provide means for preventing the wiper strips from becoming entangled one with the other.

Referring to the drawings: Figure 1 is a detail front elevation of a pair of wipers made according to the present invention applying a looped neck-label to the neck of a bottle, the operating mechanism for operating the wipers being a portion of the mechanism shown and described in my Patent No. 923,501, dated June 1, 1909. Fig. 2 is a detail view of one of the wipers in cross-section. Fig. 3 is a detail end view of one of the wipers. Fig. 4 is a detail bottom view of one of the wipers. Fig. 5 is a view similar to Fig. 3, showing a portion of a bottle in position in front of one of the wipers. Fig. 6 is a detail view of one of the wiper-strips.

In the drawings A designates the wiper which in the present instance consists of an elbow-shaped knuckle B one end of which is provided with a guide roller C, the other end of the knuckle being provided with a recessed portion D in which are secured the wiper-strips E. The knuckle B is suitably pivoted by means of a pin F to a forked member G, in the usual manner, so as to permit of freedom of movement of the knuckle to adjust itself to the surface of the bottle.

In the present instance the wiper-strips E are made of wires or small rods usually

of spring-brass, bent as shown in Fig. 6, the wiper-strips E being secured in the recessed portion D of the knuckle by means of the pin H, suitable pins J and K being provided for limiting the movement and holding the wiper-strips in position, as well as regulating the spring action of the wiper-strips E. The wiper-strips E are preferably bent at their engaging ends in the shape of a small ring as shown at M so as to present a rounded surface to the face of the label. The general shape of the wiper-strips, in the present instance, is a U-shape, one arm of the wiper-strip being a little shorter than the other. The wiper-strips E are also provided with a bent or humped portion N which acts to prevent the engaging ends from riding over each other so as to become entangled. The tangling of the wiper-strips is very apt to happen when the bottle to which the label is being applied is of irregular form, which necessitates some of the wiper strips being held in a different plane from the others as shown in Figs. 2 and 5.

The whole neck-wiper device is suspended from pins v^a which are attached to the upper ends of the body-wiper supporting levers so that the neck-wipers make the same combined motion as the body-wipers. To this motion is added a third one by means of a stationary cam-plate v^b which acts on yielding rollers v^c at the lower ends of the neck-wiper levers, so that their upper ends are forced to make an inward motion during their descending motion and produce the wiping action on the neck-label by guiding the neck-wipers by their rollers around the bottle-neck. The suspension of the neck-wiper levers from the body-wiper levers is effected by means of suspending rods v^{12} and v^{14} which are clamped to the pins v^a by means of split sleeves v^{13} , as shown in Fig. 1, and extend downward from said pins, carrying at their lower ends laterally extending brackets v^{16} to the inner ends of which the neck wiper levers v^d are pivoted intermediately of their length by means of pivot-pins v^{17} . It will be noted that one of the neck-wiper levers is located higher than the other, as shown in Fig. 1, and the suspending rod v^{14} for the higher one is shorter than the suspending rod v^{12} of the other lever. Springs v^e are arranged between the upper ends of the neck-wiper levers and the suspending brackets v^{16} for the same, and serve

to hold the yielding rollers ²³ at the lower ends of the neck-wiper levers in contact with the cam-plate. The springs ²¹ interposed between the wiper-knuckles and the wiper-levers serve to bring the wiper-knuckles back into the former position after the wiping operation is finished, while springs ²¹ between the lower ends of the neck-wiper levers and pins on the shanks of the yielding rollers ²³ impart a certain flexibility to the neck-wiper levers and their rollers.

From the above description it will be seen that the wiper-strips E are so constructed that a great amount of flexibility is provided for, which permits of the wiper-strips E assuming a large range of movement so as to adapt themselves to a great variety of irregularly shaped bottles. The wiper-strips are also made of small wire or rods which permits of a larger number of wiper-strips for a given surface than is at present possible with wiper-strips such as shown in my aforesaid patent.

While the invention has been described with particular reference to the details of construction it is not to be considered as limited thereto, as many changes may be made and still fall within the scope of the following claims.

I claim:

1. In a bottle-labeling machine, a wiper provided with guiding means and with a plurality of resilient wiper-strips each of said wiper-strips being formed of spring material and being provided with means for

preventing adjacent wiper-strips from overlapping each other.

2. In a bottle-labeling machine, a wiper provided with guiding means and with a plurality of wiper-strips each of said wiper-strips being made of a strip of metal of approximate U-shape and provided with extensions in the plane of motion for preventing adjacent wiper-strips from overlapping each other.

3. In a bottle-labeling machine, a wiper provided with guiding means and with a plurality of wiper-strips each of said wiper-strips being made of a strip of metal of approximate U-shape and having an extension formed by bending the strip in the plane of motion for preventing adjacent wiper-strips from overlapping each other.

4. In a bottle-labeling machine, a wiper provided with guiding means and with a plurality of wiper-strips each of said wiper-strips being made of a strip of metal of approximate U-shape and secured at one end to said wiper the other end of each of said wiper-strips being rounded, each of said wiper-strips being also provided with means for preventing adjacent wiper-strips from overlapping each other.

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

EDWARD ERMOLD.

Witnesses:

S. L. MOODY,
LEO J. MARRY.