(No Model.)

E. E. MAGEE.

CAN LABELING MACHINE.

No. 539,280. Patented May 14, 1895.

Fig. 1.

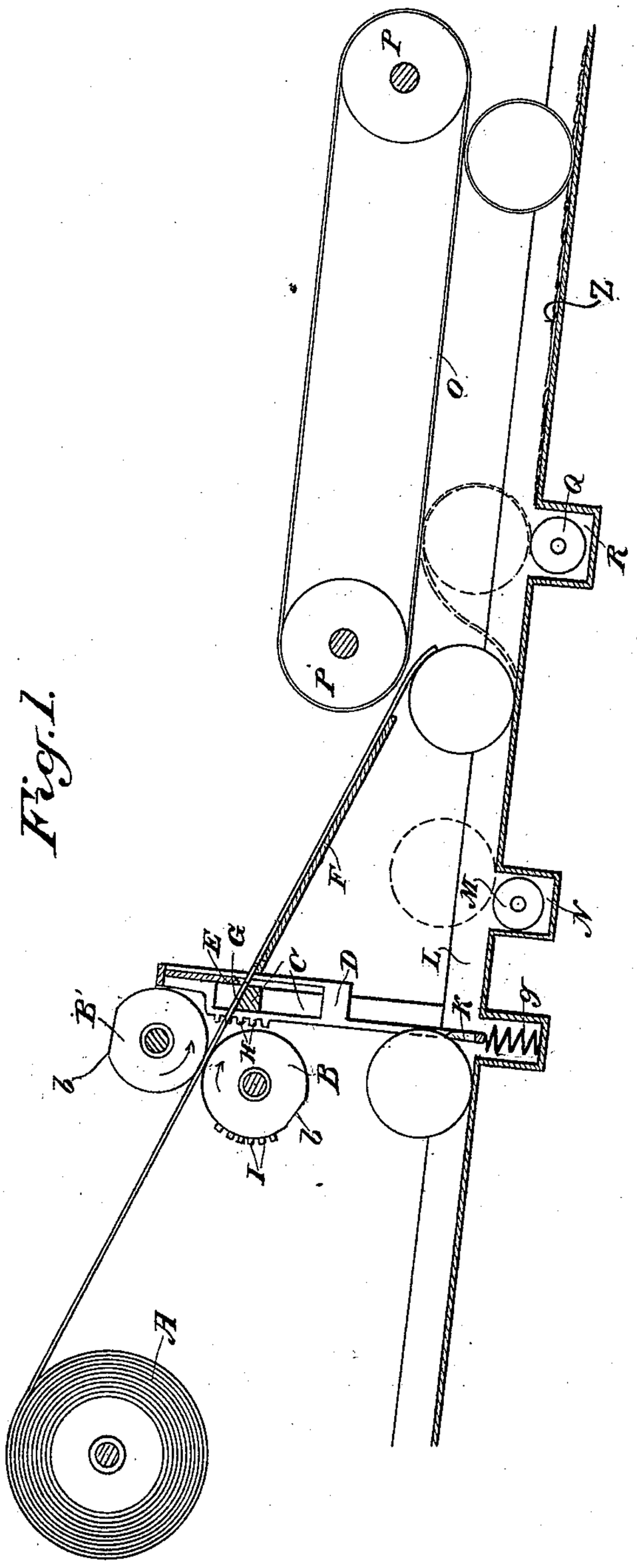
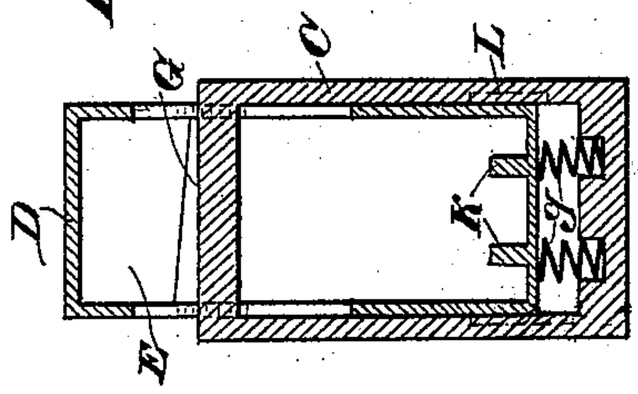


Fig. 2.



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UNITED STATES PATENT OFFICE.

EMMETT E. MAGEE, OF SAN JOSÉ, CALIFORNIA.

CAN-LABELING MACHINE.

SPECIFICATION forming part of Letters Patent No. 539,280, dated May 14, 1895.

Application filed July 21, 1894. Serial No. 518,262. (No model.)

To all whom it may concern:

Be it known that I, EMMETT E. MAGEE, a citizen of the United States, residing at San José, Santa Clara county, State of California, have invented an Improvement in Can-Labeling Machines; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to a machine for placing labels upon cans.

It consists in certain details of construction which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a side elevation of the apparatus. Fig. 2 is a transverse section showing the guides and knife-carrying frame and can-stops.

In carrying out my invention I employ a roll A upon which the labels which are printed upon a continuous strip are coiled. From this roll the labels pass between feed rollers B B′, and are fed forward in the usual manner. These rollers are connected with any suitable mechanism, not here shown, by which they are caused to rotate and may have toothed gears upon the ends of their shafts engaging each other so that the rollers will move in unison.

C is a vertical frame situated close to the rollers, and having a vertically moving traveler D slidable in guides upon the frame.

E is a knife or cutter fixed across the vertically moving frame or traveler, and G is a fixed metallic blade, the edge of which is in such a position that when the cutter blade moves downward, the two act as a pair of shears to sever the label which passes through the frame and between the two cutting edges. The label thus severed is left lying upon a table F beyond the cutter, with the lower end projecting slightly beyond the lower end of the table for a purpose to be hereinafter described.

The vertically moving frame has rack-teeth upon it, as shown at H, and the lower roller B has corresponding teeth forming what is termed a "mutilated" gear, so that as the roller revolves the teeth I are brought into engagement with the teeth of the rack, and this moves the frame and the cutter blade downward so as to sever the label at each revolution of the rollers.

The diameter of the rollers is such that the cutting will always take place at a point between the labels and will always sever them so that they will be of the same length.

In order to prevent the labels moving forward while the cutter is acting I have shown a flattened space *b* between the rollers B, which two spaces, arriving opposite each other just before the knife descends, will cease to press upon the label sheet, and the latter will temporarily cease from advancing. During this time the cutter descends and severs the label, and the teeth of the pinion then passing out of engagement with the rack teeth springs *g* situated below the frame will immediately force it up to its normal position.

The length of that portion of the rollers which does not press upon the label is so calculated that the label will remain stationary while the knife is descending and returning to its position, and will be immediately grasped again by the rollers and advanced during the remainder of their revolution until the same point has been again reached when the label sheet will again remain stationary until a label has been severed.

Connected with the vertically moving slide frame are the stops or pins K which project upwardly through the inclined floor or pathway L upon which the cans are allowed to roll. The first of the cans is arrested by these pins, but when the label is being severed by the knife these pins pass downward below the level of the pathway or track and thus allow one can to pass beyond them. The pins are again returned to act as a stop for the next can as soon as the pinion and gear are disengaged, and the springs allowed to act to return the cutter. The can which has passed the stops now rolls down the incline beneath the table upon which the label lies, and in doing so passes over a roller M which rotates within a paste receptacle N and this roller applies the line of paste from one end to the other of the can as it passes. The positions of this roller and paste receptacle with relation to the lower end of the table and the severed label lying thereon are such that when the can has made a partial revolution as

it rolls on down the inclined track, this pasted surface will form contact with the end of the label which projects beyond the table, and at this instant the can passes beneath an endless belt O which extends around the rollers or drums P at such a height above the track that the can will press slightly against the belt, and will thus paste the end of the label firmly and evenly upon the can. These drums or rollers are caused to rotate by a suitable connecting belt or gears so that the endless traveling belt continues to roll the can down the inclined pathway or track, pressing the label smoothly and evenly upon its surface, and during this movement the side of the can again comes in contact with another paste roller Q which rotates in a paste receptacle R, and applies another line of paste to the can. The can now continuing its motion brings this line of paste beneath the last end of the label which is then rolled down upon the can by the action of the endless belt, and the label will be firmly pasted upon the can. The can continues its motion down the track until it is delivered beyond the lower end of the endless belt.

The track upon which the can rolls after the label begins to be applied is made of some soft or compressible material like felt or rubber Z so as to allow some elasticity, and to relieve the pressure upon the can while at the same time making it even.

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

1. In a can labeling machine, feed rollers between which the sheet passes and by which it is advanced, said rollers being flattened at one point in their circumference so that they will not press upon the label, and the latter will remain stationary during the passage of that portion of the rollers, a vertically reciprocating cutter beneath which the label sheet passes after leaving the rollers, a toothed rack upon the cutter frame which carries the knife and a mutilated pinion driven from the feed rollers whereby the rack is engaged and the knife moved downward to sever the label at the instant the sheet ceases its motion.

2. In a can labeling machine, feed rollers between which the label sheet passes and by which it is advanced, a vertically reciprocating knife, a toothed rack upon the frame which carries the knife, a mutilated pinion driven by the feed rollers adapted to engage the rack and move the knife downward to sever the label, and springs by which the knife and frame are returned to their normal position as soon as the pinion passes out of engagement with the rack.

3. In a can labeling machine, feed rollers between which the sheet passes and by which it is advanced, said rollers being flattened at one point in their circumference to relieve the pressure upon the sheet at one point in their revolution, whereby the sheet remains temporarily stationary, a vertically reciprocating knife, a toothed rack fixed upon the frame which carries the knife, a mutilated pinion driven by the feed rollers engaging the knife carrying frame whereby a label is severed from the sheet at each revolution of the feed rolls, springs by which the knife frame is returned to its normal position, a table upon which the severed label is delivered with its lower end projecting beyond the end of the table and an inclined track with a paste receptacle over which the cans move so as to pass beneath the projecting end of the label and apply it to the can.

4. In a can labeling machine, the feed rollers by which the label sheet is advanced, a table upon which the advancing sheet lies, a vertically reciprocating cutter and mechanism by which it is moved to sever the labels successively from the sheet, an inclined track over which the cans are movable by gravitation, stops by which the cans are arrested, said stops being movable in unison with the reciprocating cutter whereby they are depressed and a single can allowed to pass at the instant that each label is severed, a paste receptacle and roller in the line of travel of the cans whereby a strip of paste is applied along one side of the can so that as the can rolls along the track this pasted side is brought in contact with the end of the label projecting beyond the lower end of the table from which it is supported, an endless traveling belt beneath which the can passes whereby the label is pasted firmly upon the can and is caused to advance as the can rolls along and is pressed smoothly upon the can.

5. In a can labeling machine, mechanism for cutting the labels singly from a continuous sheet and delivering them upon a table with their lower ends projecting beyond the lower end of the table, an inclined track situated beneath the cutter and the table over which the cans roll by gravitation, stops actuated in unison with the movement of the cutter whereby a single can is allowed to pass when each label is severed from the sheet, a paste receptacle and roller in the pathway of the can by which a strip of paste is applied to one side of the can so as to engage the projecting end of the label, an endless traveling belt between which and the can the label is received so as to press it upon the can and draw it off the table while the can continues its rotation, a second paste receptacle and roller by which another strip of paste is applied to receive the opposite end of the label, the label being pressed down upon the can by the endless traveling belt as described.

In witness whereof I have hereunto set my hand.

EMMETT E. MAGEE.

Witnesses:
J. N. MAGEE,
A. E. CALBICK.