J. MacLAURIN.

SEALING MACHINE.

APPLICATION FILED JUNE 23, 1915. RENEWED FEB. 23, 1917.

1,257,009. **Patented Feb. 19, 1918.**

Fig. 1.

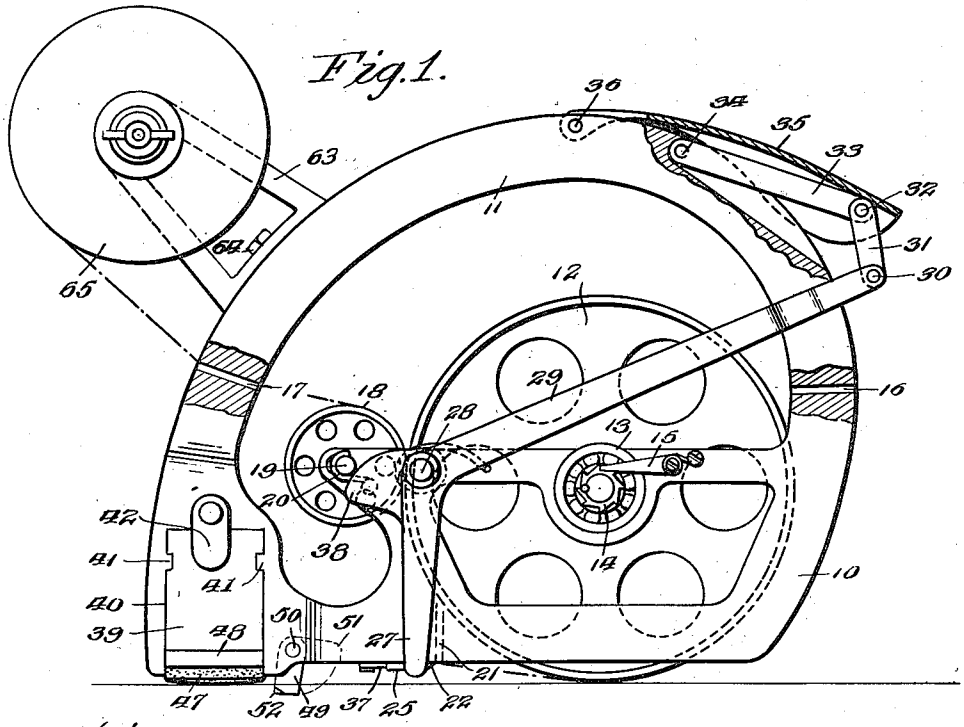


Fig. 2.

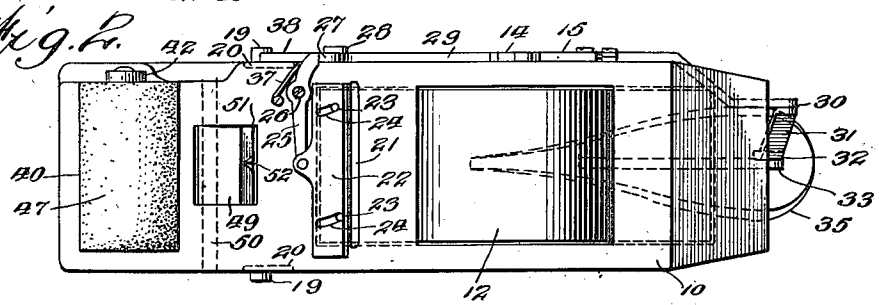


Fig. 3

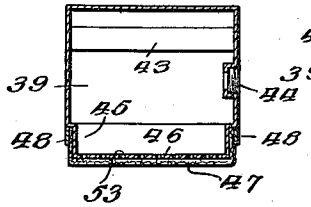


Fig. 4.

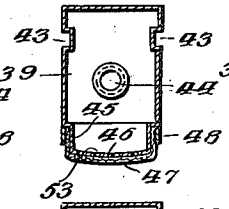


Fig. 5

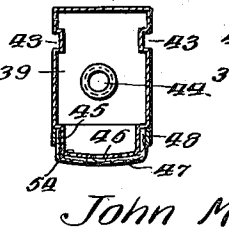


Fig. 6.

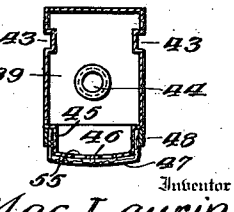
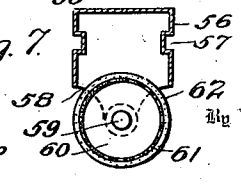


Fig. 7.



Witnesses

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SEALING-MACHINE.

1,257,009. Specification of Letters Patent. Patented Feb. 19, 1918.

Application filed June 23, 1915, Serial No. 35,946. Renewed February 23, 1917. Serial No. 150,615.

To all whom it may concern:

Be it known that JOHN MacLAURIN, a subject of the King of England, residing at Brookfield, in the county of Worcester and State of Massachusetts, has invented certain new and useful Improvements in Sealing-Machines; and he does hereby 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.

This invention relates to sealing machines for applying binding tape to packages and the like and more particularly to that type wherein the binding tape is fed from a suspended reel through the machine from where it is applied to the packages.

An object of this invention is to provide a light and portable machine which may be easily handled.

A further object of this invention is a provision of means for restricting the movement of the machine to one direction.

A further object of this invention is the improved means for severing the tape when the desired amount has been applied to a package.

A further object of this invention is the provision of an improved means for applying the tape in which the moistening liquid is applied to a package and the gummed tape is then applied to the moistened surface and pressed thereon to form an effective seal.

A further object of this invention is the provision of interchangeable units for applying the moisture to packages for accommodation of the degrees of porosity of the different kinds of wrapping paper.

Further objects will be apparent from the following specification, appended claims and drawing in which,

Figure 1 is a side elevation of a machine constructed in accordance with this invention, showing parts thereof broken away for the sake of clearness,

Fig. 2 is a bottom view of the machine, and

Figs. 3, 4, 5, 6 and 7 are vertical sectional views through different forms of moistening units for the wrapper of a bundle.

Heretofore, sealing machines have been provided to receive a strip of binding tape to moisten the gummed face of said binding tape during the passage of said binding tape through the machine but in my invention I alter the mode of application by applying the moisture to the wrapper of a package and then pressing the sealing tape on the moistened surface which produces the same effect in the application of the tape, but this permits a more convenient handling of the tape because in the dry state up to its application and in view thereof, it is more easily cut where desired as there is no possibility of portions of the gummed surface coming into contact with parts of the machine to thereby clog or interrupt the action of the machine.

Referring to the drawings in which the elements of this invention are shown, 10 indicates a frame having a handle 11 thereon for the convenience of the operator. An enlarged applying wheel 12 is journaled in this frame in having each end of its shaft supported by a ball bearing 13 and the rotation of this wheel is restricted to one direction as by the ratchet wheel 14 secured to the shaft thereof with its coöperating pawl 15 pivoted to the frame. As this machine is intended to handle a gummed binding tape which will be fed from a suspended reel, the frame 10 is slotted as at 16 and 17 to admit the tape to the operative parts of the machine either from the front or rear of the machine as desired. A pressure roller 18 is movably mounted in the frame 10 as upon the shaft 19 which is normally retracted toward the roller 12 as by the springs 20 so that as the paper is fed between the rollers 12 and 18 and the machine advanced across a package, the binding tape is advanced through the machine for application. The frame is slotted as at 21 to provide an outlet for the tape and coöperating with one of the walls of the slot is a knife 22 supported by the pins 23 which operate in the slots 24 to give said knife a shearing action as it is advanced to sever the tape passing from the slot 21. This knife is pivoted to a lever 25 which is fulcrumed as at 26 to the frame and has its opposite arm extend into the path of an arm 27 of a lever which is fulcrumed as at 28 to the

frame. The opposite arm of this lever 29 is pivotally connected as at 30 to one end of a link 31 which has its opposite end pivotally connected as at 32 to one end of a link 33 and this link is pivoted as at 34 to the handle 11. These links form a toggle for the operation of the bell crank lever and the joint 32 is depressed by a handle 35 which is pivoted as at 36 to the handle 11. When the desired amount of tape has been fed through the machine and applied to a package, depression of the handle 35 will cause the knife 22 to sever the tape as when the machine has reached the end of the seam to be fastened with the binding tape. The lever 25 is returned to a normal position as by a spring 37 and likewise the bell crank lever comprising the arms 27 and 29 is normally returned by a spring which is partly coiled about the pivot pin 28.

When it is desired to sever the tape, and then apply the remaining end of the cut portion, it may be desired to discontinue feeding the tape to prevent the severed end of the tape extending over the path of the moistened surface, so to accomplish this purpose a cam 38 is formed on the arm 27 of the bell crank lever and is so positioned as to engage the extending end of the shaft 19 when the arm 27 is swung to actuate the knife 22. This moves the roller 18 away from contact with the roller 12 from the gummed paper between these rollers and prevents further advancement of the tape of which the end extends into the slot 21 but is prevented from passing therethrough by the knife 22 which closes this passage.

Various means may be employed to moisten the surface of the wrapper in advance of the applying wheel 12 and it is thought that invention is not involved in the substitution of well known equivalents for the type shown herein, in which the numeral 39 indicates a receptacle slidable in a recessed portion 40 of the frame which has guides 41 formed in the walls thereof to retain the receptacle in said recessed portion. A turn button 42 is carried by the frame to prevent longitudinal movement of the receptacle 39 until otherwise desired. The container 39 which is shown in the sectional views 3, 4, 5 and 6, has its side walls depressed to form guides 43 and it is also provided with a filling opening 44 which will be normally plugged to prevent the admission of air or the escape of the moistening liquid. The lower end of this container is reduced as at 45 and has the bottom wall 46 thereof perforated to permit small quantities of the liquid within the container to escape as by seepage to saturate a felt covering 47 which may be retained upon the reduced portion 45 as by a band 48.

It is apparent that if the machine was placed upon an absorptive surface when not in use, the liquid in the container 39 would be absorbed by the supporting surface for the machine if the covering 47 was allowed to contact with the surface, so normally when not in use, the container 39 is held in raised position over the supporting surface as by a swinging leg 49 which is pivoted as at 50 to the frame in such a manner that when the machine is in operation, this leg may fold in a recessed portion 51 of the frame, or it may drag over the surface being moistened until the operation is completed when the forward end of the machine may be raised to allow this leg to fall vertically as by gravity. To prevent the edge of the leg 49 from interfering with the moistened surface on the wrapper, a portion of the forward edge extends beyond the remainder thereof as shown at 52, so that a limited portion of this forward edge contacts with the paper.

As this machine will be used on various materials having different absorptive qualities, it is desired to have interchangeable containers 39 from which the moistening liquid may be drawn in different degrees so as shown in Figs. 3 and 4 small perforations 53 are formed in the bottom walls 46 of the containers to permit a restricted amount of water or moistened liquid being applied upon a wrapper of a glazed nature. Fig. 5 shows perforations 54 of slightly larger size and Fig. 6 shows perforations 55 of a considerably larger size for use upon wrappers which absorb water freely.

In Fig. 7, there is shown a modification in which a drum is supported by the frame so that water or other moistening liquid may be delivered from that drum upon the surface of the wrapper as heretofore described. In this figure, there is shown a frame 56 having the slotted side walls 57 of which the ends depend as at 58 to form bearings for a shaft 59 upon which the drum 60 is mounted and this drum has its periphery perforated as at 61 to permit the seepage of water through the side wall to saturate a felt or other covering 62 from which the moistening liquid is transmitted to the wrapper.

In most instances, this machine will be used upon the counter of a store and will receive the tape from a suspended reel having its point of suspension movable to accommodate the movement of the frame, but it will very frequently occur that the machine will have to be moved from place to place and in view thereof, it may be desired to provide a self-contained unit which includes a roll of sealing tape supported by the frame. In this event, a supplemental frame 63 may be bolted or otherwise secured to the handle 11 as at 64 and this supple-

nental frame supports a roll of sealing tape ndicated at 65.

It is clearly seen that as the machine is run across the meeting edges of a wrapper for a bundle the felt covering 47 applies a film of moisture over said meeting edges and before said film of moisture has been absorbed, the applying roller 12 deposits the binding tape on the moistened surface and through the weight of the machine and the pressure of the operator's hand the gummed face of the tape softens and causes the tape to firmly set and form an effective seal and when the desired amount of tape has been applied, manipulation of the handle 35 will cause the knife 22 to sever the tape and at the same time discontinue the advancement of the tape.

Various modifications may be made within the scope of this invention without departing from the spirit thereof and the drawings are submitted for illustrative purposes only.

Having thus described my invention, I claim:—

1. In a sealing machine, an applying roller, a pressure roller co-acting therewith, for advancing a binding tape, a cutter for severing the advanced binding tape and means for actuating said pressure roller from advancing contact with said sealing tape.

2. In a sealing machine, a frame, an applying roller journaled therein, a movable pressure roller journaled in said frame, means for normally engaging said pressure roller with said applying roller or an interposed tape, a knife carried by said frame, a lever for actuating said knife, and means carried by said lever for disengaging said pressure roller from said applying roller or the interposed tape.

3. In a sealing machine, a frame, an applying roller journaled therein, said applying roller having restricted movement in one direction, a pressure roller movably journaled in said frame, a knife carried by said frame, a lever fulcrumed to said frame for actuating said knife and disengaging said pressure roller from said applying roller, and a moistener carried by said frame in advance of said applying roller.

4. In a sealing machine, a frame, an applying roller journaled therein, a moistener carried thereby in advance of said applying roller and means carried by said frame for automatically forming a temporary support to maintain said moistener from contact upon slightly raising the forward end of said frame.

5. In a sealing machine, a frame, an applying roller, a moistener carried by said frame in advance of said applying roller disposed to contact with the surface supporting said sealing machine, said moistener comprising a receptacle having a sealed upper portion, a foraminous bottom, a fibrous covering over said bottom and means for retaining said fibrous covering to said receptacle.

6. In a sealing machine of the class described, a frame, a bottom face of said frame being recessed, a moistening receptacle slidable in said recess, said moistener comprising a receptacle having a sealed upper end, a foraminous bottom and a fibrous covering over the foraminous bottom of said receptacle, said fibrous cover absorbing the moistening liquid from the interior of said receptacle and distributing said moistening liquid upon the surface supporting the sealing machine.

7. A sealing machine comprising a hand grip, a roller rotatable in and sustaining said grip, and operating to apply tape to a surface, means to guide said tape into feeding contact with said roller, a tape severing device, means to guide tape from said point of feeding contact with said roller to said severing device, and means carried by said grip to apply moisture to a surface to which said roller is adapted to apply said tape.

8. A sealing machine comprising a hand frame, a moistener mounted at the forward under portion of said frame, a tape applying roller journaled in said frame, on which said frame may travel, releasable means to guide and maintain tape in feeding contact with said roller, mechanism to release said tape guiding means, and a cutter positioned to cut the tape at a point after said tape leaves said guiding means, said guiding means being retractive to hold the main portion of said tape against said applying roller.

9. A sealing machine comprising a hand grip frame having a guide through which adhesive tape from a source exterior of said frame may pass, a traction tape drawing and applying roller rotatably mounted in said frame, means to guide said tape to said roller, and a moistener carried by said frame to deliver moisture to the path in which the tape is drawn and applied by said roller.

10. A sealing machine for applying tape in indeterminate lengths comprising a hand grip frame, a frame sustaining roller rotatable in said frame, a moistener spaced from said roller and adapted to apply moisture to the path in which said roller travels in the progressive movement of said frame, and means to guide tape into contact with said roller at a point distant from its tread whereby said roller acts to feed said tape and may thereafter act to press said tape against said moistened path.

11. A sealing machine for applying tape in indeterminate lengths comprising a hand grip frame, a frame sustaining roller rota-

table in said frame, a moistener spaced from said roller and adapted to apply moisture to the path in which said roller travels in the progressive movement of said frame, means to guide tape into contact with said roller at a point distant from its tread whereby said roller acts to feed said tape and may thereafter act to press said tape against said moistened path, and means operative to sever said tape at a point intermediate the parts thereof against which said roller acts.

In testimony whereof he affixes his signature in presence of two witnesses.

JOHN MacLAURIN.

Witnesses:
EMMONS W. TWICHELL,
CHARLES T. GUNN.