No. 781,659. PATENTED FEB. 7, 1905.

J. G. KENNEDY & W. W. LASKER.

GUMMING MACHINE.

APPLICATION FILED MAY 12, 1904.

2 SHEETS—SHEET 1.

Fig. 1.

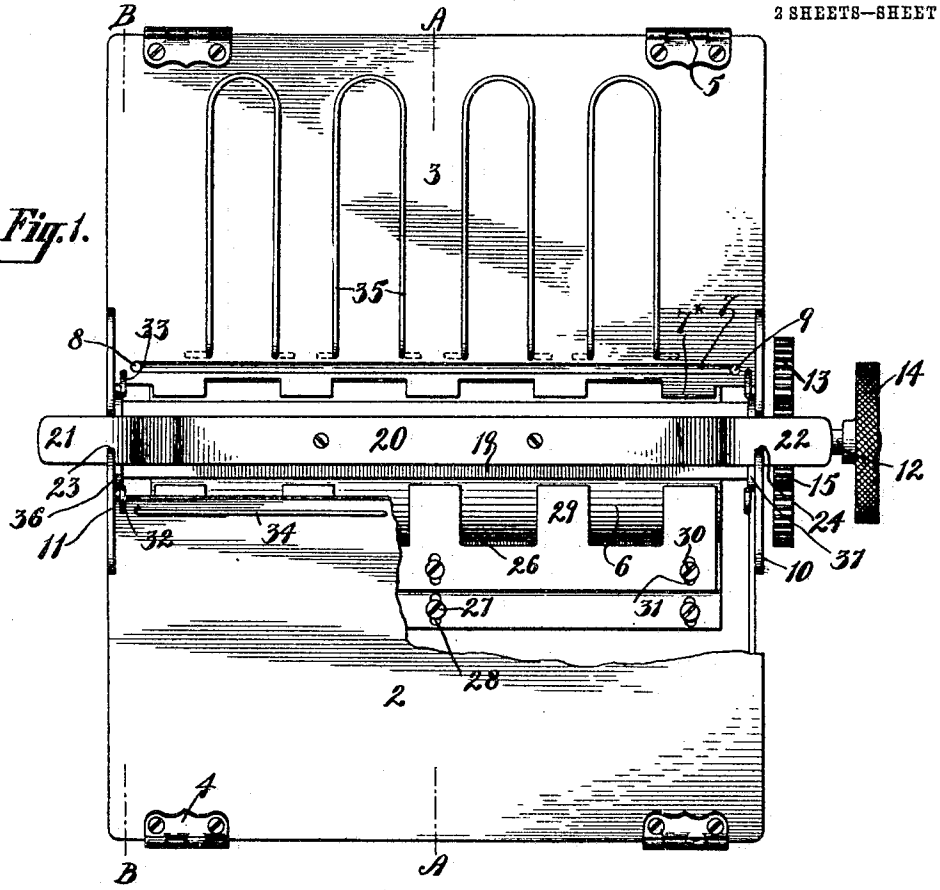
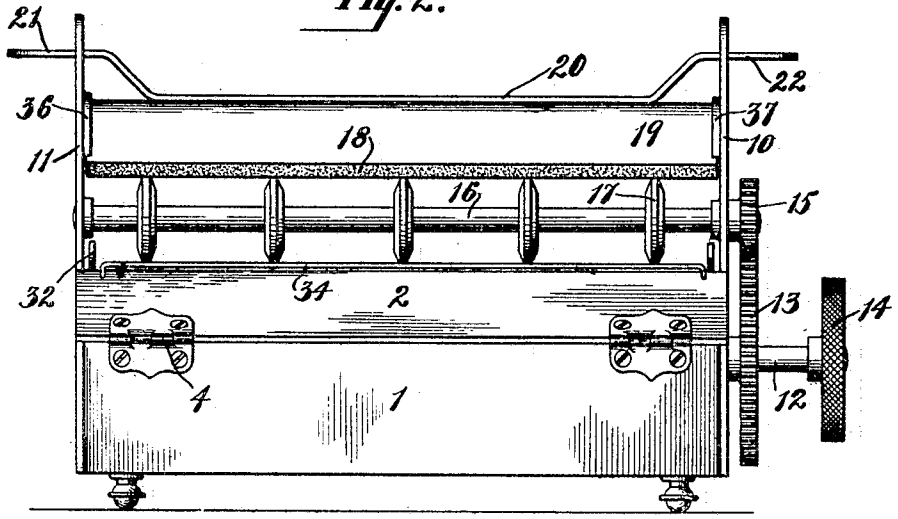


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

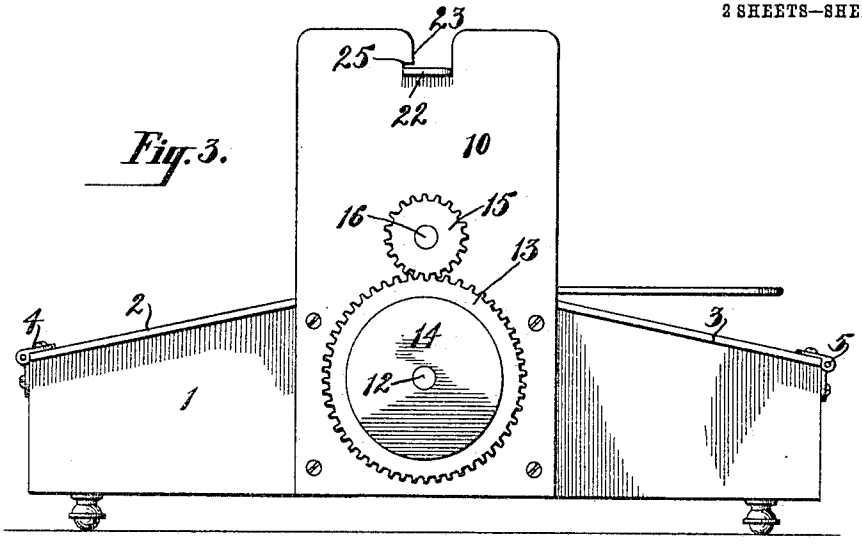


Fig. 4.

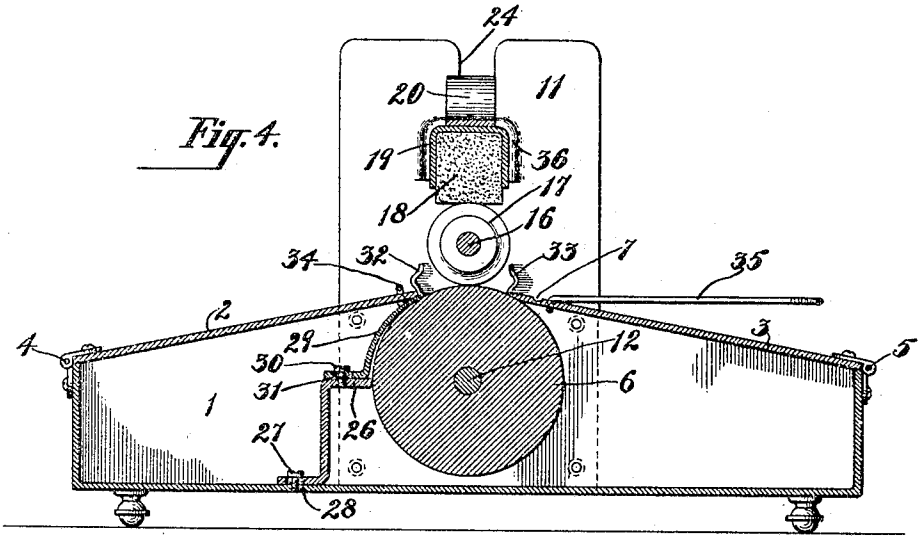
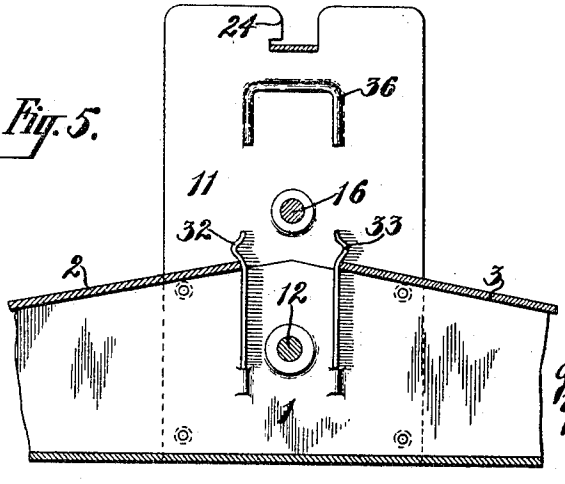


Fig. 5.



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No. 781,659. Patented February 7, 1905.

UNITED STATES PATENT OFFICE.

JOHN G. KENNEDY AND WILLIAM W. LASKER, OF NEW YORK, N. Y., ASSIGNORS TO GEORGE WHITE, OF JERSEY CITY, NEW JERSEY.

GUMMING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 781,659, dated February 7, 1905.

Application filed May 12, 1904. Serial No. 207,534.

To all whom it may concern:

Be it known that we, JOHN G. KENNEDY and WILLIAM W. LASKER, citizens of the United States, and residents of the borough of Brooklyn, in the city and State of New York, have invented a new and useful Gumming-Machine, of which the following is a specification.

Our invention relates to a gumming-machine, with the object in view of providing means for neatly, expeditiously, and efficiently applying gum to one side of a sheet of paper or other thin sheet.

A practical embodiment of our invention is represented in the accompanying drawings, in which—

Figure 1 is top plan view of the machine, one of the lids or covers of the gum box or well being partially broken away to show the parts below it. Fig. 2 is a view of the machine in front elevation. Fig. 3 is a view of the machine in end elevation. Fig. 4 is a vertical transverse section in the plane of the line A A of Fig. 1, and Fig. 5 is a partial transverse section in the plane of the line B B of Fig. 1.

The box or well in which the liquid solution of gum is contained is denoted by 1. It may be of any suitable size and shape, but is here shown as rectangular in plan and has two lids or covers (denoted by 2 and 3) hinged at the front and back of the machine, as shown at 4 and 5, and extending thence on an upward incline toward the central portion, where they are separated by a central space through which the gumming-roller 6 comes in contact with the sheet of paper or other material to be operated upon. One of the lids, in the present instance 3—viz., the one over which the gummed sheet passes—is preferably serrated on its edge toward the gumming-roller and is provided in proximity to the gumming-roller with a groove 7, extending along its outer face (see Fig. 1) and opening at its opposite ends by means of perforations 8 and 9 through the lid to permit any free gum which may slide onto the outer face of the lid 3 from working its way along down the surface of the lid by collecting it and directing it through the perforations 8 and 9 into the interior of the gum well or box. The projections 7* on the serrated edge of the lid 3 are located opposite the feed-disks, to be hereinafter described, and act as strippers to remove the gummed sheet from the roller 6. At its opposite ends the gum well or box 1 is provided with upwardly-extended plates, (denoted by 10 11,) fixed to the ends of the box 1 and forming a support for the feeding and wiping mechanism.

The gumming-roller 6 is mounted within the box 1 by means of a shaft 12, which extends through the opposite ends of the box and preferably through the standards 10 and 11, the said shaft being provided on one end with a master gear-wheel 13, which is rotated by means of a hand-wheel 14, secured on the end of the shaft. The master-wheel 3 is in gear with a pinion 15, mounted on a shaft 16, the latter mounted in slightly-elongated holes in the uprights 10 and 11 and carrying a series of disks 17 the peripheries of which move in proximity to the surface of the gumming-roller 6 to feed the sheet of paper between the two.

Above the disks 17 on the shaft 16 there is located a wiper consisting of a body 18, of yielding material—such, for example, as felt—which is held in a U-shaped holder 19, having attached to its back a spring-bar 20, the ends 21 22 of which are intended to be received in notches 23 24, formed in the tops of the uprights 10 and 11, respectively, the said notches being undercut, as shown at 25, Fig. 3, to retain the spring-bar in position. It is intended that the wiper 18 shall rest with more or less pressure on the disks 17 in order to keep them clean, so that any gum carried up by them on the rear side will be removed before they come in contact with the upper or non-gummed side of the sheet. This required pressure is obtained by making the spring ends 21 22 of the bar 20 normally occupy when free a position a little farther away from the holder 19 than they do when forced into the notches 23 24.

The holder 19 is held against lateral dis-

placement by means of U-shaped guard-ribs 36 37, under which the holder 19 may be adjusted by springing the uprights 10 and 11 slightly apart in adjusting the wiper.

A considerable portion of the gum carried upwardly by the rotation of the gumming-roller 6 is scraped from the sides of the roller by means of the scraper 26, attached by means of set-screws 27 to the bottom of the box 1, and this scraper 26 may be adjusted toward and away from the periphery of the roller 6 by means of the elongated slot 28, through which the set-screw 27 extends into the bottom of the box. The gum carried by the roller 6 past the scraper 26 may be still further removed to a greater or lesser extent by means of a scraper 29, fixed to the top of the scraper 26 by means of set-screws 30, which extend through elongated slots 31 in the base of the scraper 29 to permit the scraper 29 to be adjusted toward and away from the surface of the roller 6. The scraper 29 is serrated, as shown clearly in Fig. 1, so that the gum shall be reduced in quantity at intervals along the surface of the gumming-roller opposite the disks, this having been found by us to be a very effective means for preventing the gum from attaching to the disks in any great quantity and also from creeping over the edges of the gummed sheet because of permitting it to spread more readily along those streaks or portions where it has been to a greater extent removed by the serrated scraper.

The lids 2 and 3 are conveniently held in their closed positions by means of spring-catches 32 33, attached to the inner faces of the uprights 10 and 11, and for the purpose of handling sheets of paper which have been more or less wrinkled we provide a guard 34, consisting in the present instance of a wire fixed to the lid or cover 22 in proximity to its free edge and extending along the outer surface of the lid, spaced a little distance from it to admit the sheet of paper between it and the outer surface of the lid.

To prevent the gummed paper from falling onto the lid and so smearing it, and hence producing a tendency to make the paper fold over its advance edge by retarding that edge, we provide a skeleton support 35, consisting in the present instance of wire bent back and forth and having its ends inserted in holes in the lid in such position as to hold the support 35 away from the lid 3, as clearly shown in the drawings. This support may be removed and adjusted at pleasure, as may be found necessary.

In operation the paper having been introduced under the guide or guard 34 with its free edge on the roller 6 will be carried by the turning of the hand-wheel 14 between the disks 17 and the gumming-roller, receiving a thin coating of gum from the roller 6, and will pass on out of the machine either over the lid 3 or on the table 35, and the disks 17 will be wiped continuously by the pressure of the pad 18 against them, so that they will present clear peripheries to the non-gummed side of the sheet.

It is obvious that changes might be resorted to in the form, construction, and arrangement of the several parts without departing from the spirit and scope of our invention. Hence we do not wish to limit ourselves strictly to the structure herein set forth; but

What we claim is—

1. A gumming-machine comprising a receptacle for liquid gum, a liquid-gumming roller mounted in the receptacle, a set of disks arranged to coact with the gumming-roller to draw a sheet of material to be gummed between the disks and gumming-roller, and a wiping-pad in contact with the disks.

2. A gumming-machine comprising a receptacle for the gum, a gumming-roller mounted in the receptacle, a series of disks arranged to coöperate with the gumming-roller to draw the sheet to be gummed between them and the gumming-roller, a main scraper for removing surplus gum from the roller and an auxiliary scraper for removing the gum at intervals corresponding to the feeding-disks from the gumming-roller.

3. A gumming-machine comprising a receptacle for the liquid gum, a gumming-roller mounted in the receptacle, a series of disks arranged to coact with the gumming-roller to draw the sheet to be gummed along in contact with the gumming-roller and a scraper arranged to contact with the gumming-roller at intervals to remove the surplus gum from the gumming-roller.

4. A gumming-machine comprising a receptacle for the liquid gum, a gumming-roller mounted in the receptacle, a series of disks arranged to coact with the gumming-roller to draw the sheet to be gummed along in contact with the gumming-roller, a scraper arranged to contact with the gumming-roller at intervals to remove the surplus gum from the gumming-roller, and means for adjusting the scraper toward and away from the surface of the gumming-roller.

5. A gumming-machine comprising a receptacle for the liquid gum, a gumming-roller mounted in the receptacle, a series of disks arranged to coact with the gumming-roller to draw the sheet to be gummed along in contact with the gumming-roller, a main scraper adjustably secured to the gum-retaining box and an auxiliary scraper adjustably secured to the main scraper.

6. A gumming-machine comprising a receptacle for the liquid gum, a cover for the said receptacle, a gumming-roller mounted in the receptacle and projecting through a space in the cover and means for feeding a sheet to be gummed in engagement with the gumming-roller, the said receptacle-cover being pro-

vided with a groove in proximity to the gumming-roller and on the delivery side thereof for collecting any surplus gum on the cover.

7. A gumming-machine comprising a receptacle for liquid gum, a gumming-roller mounted therein, a series of disks arranged to coact with the gumming-roller to feed the sheet to be gummed in contact with the gumming-roller, a wiper arranged to engage the peripheries of the disks and a spring-bar carrying the wiper and removably engaged with the receptacle.

8. The combination with the gum-receptacle, the gumming-roller and the feed mechanism arranged to coact therewith, of a bodily-removable skeleton table or support secured to the top of the receptacle in proximity to the delivery of the roller to hold the gummed sheet away from the top of the receptacle.

9. In combination, the gum-receptacle, the gumming-roller, the feed mechanism arranged to coact therewith, the gum-receptacle being provided with a serrated edge in proximity to the gumming-roller to act as a stripper and means for holding the said serrated edge in proper relation to the roller.

10. In combination, the gum-receptacle, the gumming-roller, the feed mechanism arranged to coact therewith and a guard or guide in proximity to the front of the exposed part of the gumming-roller for directing and smoothing a wrinkled sheet.

In testimony that we claim the foregoing as our invention we have signed our names, in presence of two witnesses, this 9th day of May, 1904.

JOHN G. KENNEDY.
WM. W. LASKER.

Witnesses:
FREDK. HAYNES,
C. S. SUNDGREN.