No. 807,467. PATENTED DEC. 19, 1905.

J. D. HUMPHREY.

AUTOMATIC MACHINE FOR FEEDING, MOISTENING, AND CUTTING LABELS OR STICKERS IN FILLET FORM.

APPLICATION FILED SEPT. 24, 1904.

2 SHEETS—SHEET 1.

Fig. 1.

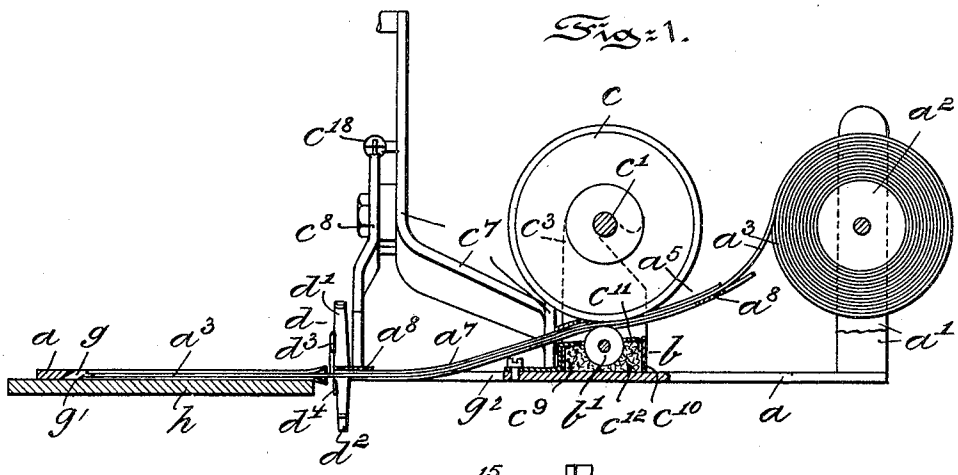


Fig. 2.

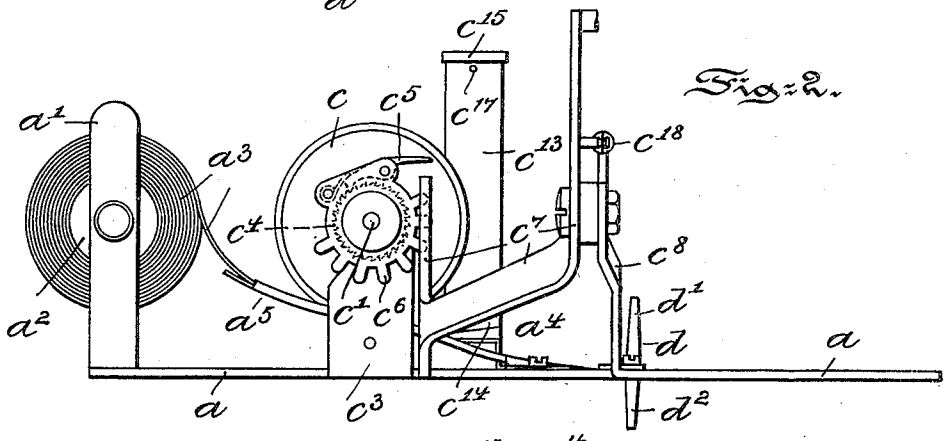
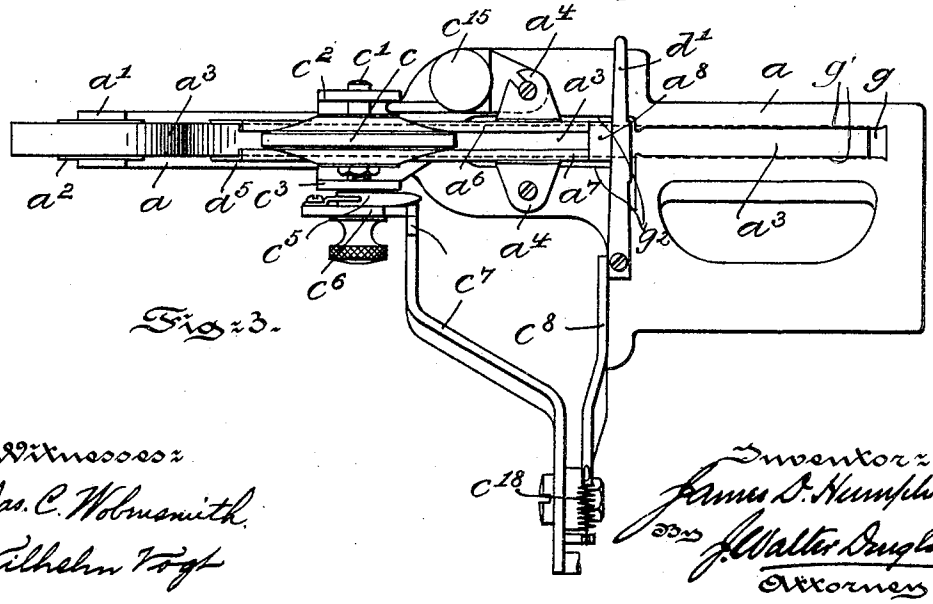


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 4.

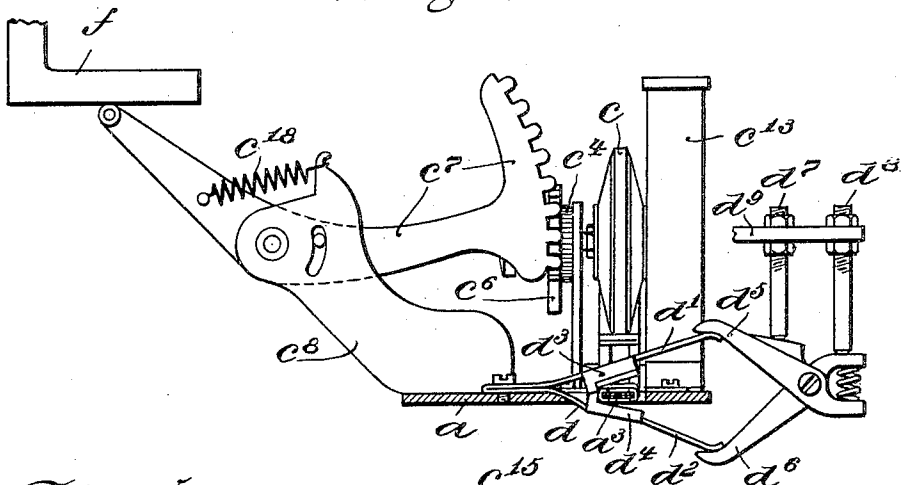


Fig. 5

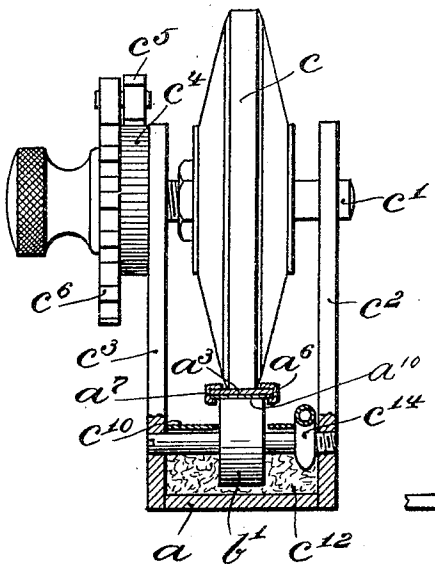


Fig. 6.

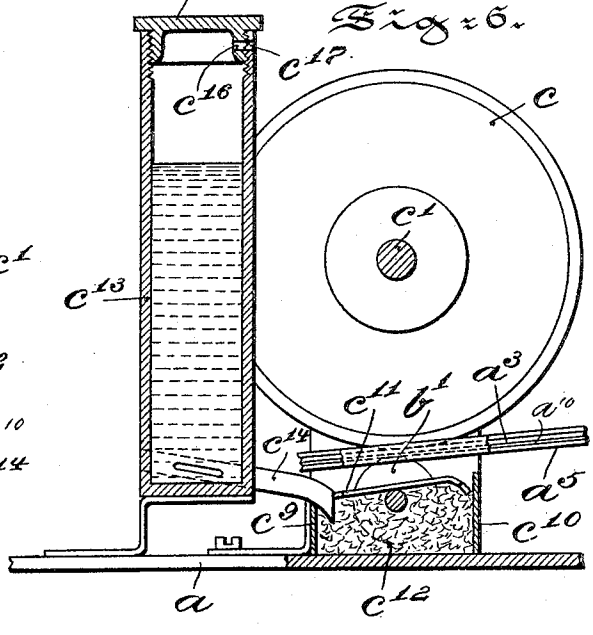
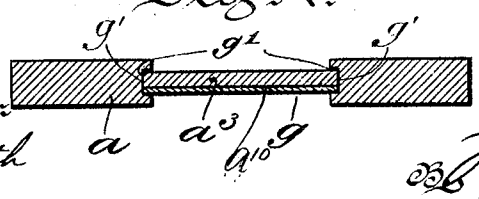


Fig. 7.



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UNITED STATES PATENT OFFICE.

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AUTOMATIC MACHINE FOR FEEDING, MOISTENING, AND CUTTING LABELS OR STICKERS IN FILLET FORM.

No. 807,467. Specification of Letters Patent. Patented Dec. 19, 1905.

Application filed September 24, 1904. Serial No. 225,861.

To all whom it may concern:

Be it known that I, JAMES D. HUMPHREY, a citizen of the United States, residing at Towanda, in the county of Bradford and State of Pennsylvania, have invented certain new and useful Improvements in Automatic Machines for Feeding, Moistening, and Cutting Labels or Stickers in Fillet Form, of which the following is a specification.

My invention has relation to an automatic machine for feeding, moistening, and cutting a label or sticker in the form of a fillet of paper or the like; and in such connection the invention relates to the construction and arrangement of such a machine for the performance of the different operations for the said purposes.

The nature, scope, and characteristic features of my invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, in which—

Figure 1 is a view in side elevation and in section of a machine embodying main features of my invention. Fig. 2 is a side view of the machine. Fig. 3 is a top or plan view thereof. Fig. 4 is a view in front elevation of the machine, partly sectioned, showing the shear cutter and the means for feeding the fillet toward the cutter of the machine. Fig. 5 is a front elevational view, enlarged, in detail of the feed-wheel for the fillet of paper and also the moistening device therefor. Fig. 6 is a view in side elevation and in vertical central section of the feed-wheel for the fillet and liquid-tank and moistener; and Fig 7 is a cross-sectional view of a certain portion of the base of the machine, illustrating an opening therein for the reception and support of the fillet.

Referring to the drawings, a is the base or support for the machine, provided with standards a' for supporting a reel a^2, upon which is adapted to be wound paper or other material a^3 in fillet form. Adjacent to said reel a^2 and secured to the base a by brackets a^4 is arranged a guide a^5, consisting of grooved or channeled strips a^6 and a^7, preferably united to each other by bridge-pieces a^8 and held by the brackets a^4 within a slot g^2, arranged in the base a opposite the contracted portion g of the slot g^2, as shown in Figs. 1 and 3, for a purpose to be hereinafter more fully described. The said guide a^5 is adapted to receive the fillet of paper or other suitable material and to guide the same over a moistening device b, located underneath a feeding device c and between a cutter d. Preferably intermediate of the ends of the guide a^5 and engaging a space between the strips a^6 and a^7 is arranged a roller b', mounted within the moistening device b, over which said fillet passes to be moistened. The under side of the fillet a^3 adjacent to the roller b' is provided with a coating or layer of gummy or sticky material a^{10}.

The feeding device c consists of, preferably, a rubber wheel or roller supported on a shaft c'. This shaft c' is journaled in standards or brackets c^2 and c^3. To one end of the shaft c' is secured a ratchet-wheel c^4, engaged by a spring-controlled pawl c^5. This pawl is secured to a gear-wheel c^6, loosely mounted on the shaft c'. A sector c^7 under the tension of a spring c^{18} is pivotally secured to a standard c^8, and when actuated, for instance, by an arm f, operated by means not shown, is adapted to rotate the gear-wheel c^6, and by means of the spring-controlled pawl c^5 is transmitted a movement to the ratchet-wheel c^4, and by the same the shaft c' and feed-wheel c are rotated to cause the said wheel to feed the fillet a^3 over the moistening-roller b' in the device b for a distance dependent upon the movement of the sector c^7 in one direction.

The moistening device b consists, preferably, of a trough or receptacle formed in the present instance by the standards c^2 and c^3 and side pieces c^9 and c^{10}. The trough or receptacle thus formed is provided with a slotted cap c^{11} as a cover and through the slot of which cover the roller b' is afforded its rotary movement. In the trough is placed spongy, fibrous, or absorbent material c^{12}, adapted to contain a liquid, such as water or the like. This absorbent material supplies the moisture to the roller b', which applies the same to the gummed or sticky coating or layer a^{10} of the fillet a^3, of paper or other material, conducted over the roller b' by means of the feeding device c and therefrom in the direction of the cutter d. The liquid is supplied to the absorbent material c^{12} in the re-

ceptacle b by means of an elevated tank c^{13}, leading thereto, by means of a pipe connection c^{14}, as clearly illustrated in Figs. 5 and 6. The tank c^{13} is closed by a removable cap c^{15}, provided with an opening c^{16}, which in the operative position of the cap registers with an opening c^{17} of the tank c^{13}. Said openings when in communication permit of the entrance of air into the tank and also form the means of regulating the flow of the fluid from the tank c^{13} to the moistening device b. The fillet a^3, the coating or layer a^{10} of which is thus moistened, is conducted, by means of the guide a^5, into the opening g^2 of the base a between a shear-cutting device d, partially passing through the opening g^2, which in the present instance consists of two arms d' and d^2, provided with projecting cutter-blades d^3 and d^4. The arms d' and d^2 preferably consist of a single piece of spring-steel secured to the base a of the machine, as illustrated in Fig. 4. These arms may be moved toward each other by any suitable mechanism—for instance, by spring-controlled pivotal tongs d^5 and d^6, which may be actuated to sever the fillet by two bolts d^7 and d^8, carried by a bracket d^9, actuated by means not shown. The feed-wheel c shifts the fillet a^3 into the contracted portion g of the slot g^2, as will be readily understood in conjunction with Fig. 1 of the drawings. The walls of the base a adjacent to the slot g are provided with grooves g', which in the same manner as the guide a^5 support the moistened portion of the fillet a^3 by engaging the same at its edges only, as shown in Figs. 3 and 7. Beneath the base a and opposite the slot extension g may be placed the article h, upon which the cut portion of the fillet, having been severed from the remaining fillet by the cutting device d, is applied by means not shown.

Having thus described my invention in general and one mode of operation of the same, what I claim as new, and desire to secure by Letters Patent, is—

1. In a machine of the character described, a base having an opening with grooved walls, a guide for receiving and supporting a fillet at its edges to expose the upper and under side thereof and adapted to feed the fillet into said opening, a coacting feed-roller and moistening-roller for engaging the fillet at opposite sides within the guide to feed and moisten the fillet in its passage through the guide and prior to its introduction into said opening, and means adapted to permit of the severing of said fillet.

2. In a machine of the character described, means for guiding and feeding a fillet, and a cutting device consisting of spring-arms with projections having cutting-surfaces.

3. In a machine of the character described, means for guiding, feeding and moistening a fillet, and a cutting device, consisting of spring-arms with cutting-surfaces.

4. In a machine of the character described, a base having an opening with partially-grooved walls, a guide for engaging a fillet terminating in the opening and held in alinement with the grooved walls thereof, and means for engaging and moistening the fillet within the guide to moisten the same prior to its introduction by the guide into the opening.

5. In a machine of the character described, a base having an opening with partially-grooved walls, a guide for engaging a fillet at its edges and terminating in the opening and held in alinement with the grooved walls thereof, cutting means partially passing through said opening and interposed between the guide and grooved portion of the opening, and means for moistening the fillet and for feeding the same through the guide and cutting means and into the grooved walls of the opening.

6. In a machine of the character described, a guide for engaging a fillet at its edges and portions adjacent thereto, a base having an opening forming the continuation of the guide, cutting means interposed between the guide and opening, means for moistening the fillet, and means for feeding the same through the cutting means and into the opening, certain of the walls forming said opening supporting the fillet.

7. In a machine of the character described, grooved strips for engaging a fillet at its edges, a base having an elongated opening with partially-grooved walls to form the continuation of the strips, cutting means interposed between the strips and the grooved walls of the opening, rollers for moistening the fillet and for feeding the same through the cutting means and into the grooved walls of the opening to support the portion of the fillet severed by the cutting means.

8. In a machine of the character described, a base having an elongated opening, a reel for supporting a fillet, a curved guide formed of grooved strips interposed between the reel and terminating in the opening for guiding the fillet into a portion of the opening, cutting means partially passing through the opening for severing the portion of the fillet fed into the opening, a feed-roller, and means for moistening the fillet, in combination with a fluid-receptacle and a pipe for conducting the fluid to said moistening means.

In testimony whereof I have hereunto set my signature in the presence of two subscribing witnesses.

JAMES D. HUMPHREY.

Witnesses:
Jos. G. Pratt,
I. B. Humphrey.