O. HARTENFELS.

GUMMING DEVICE FOR ENVELOP MACHINES.

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1,056,023. Patented Mar. 18, 1913.

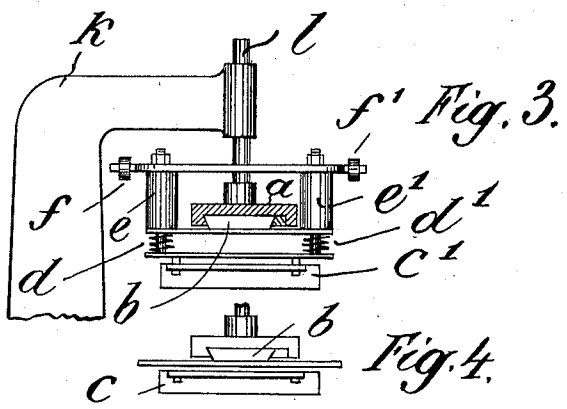


Fig. 3.

Fig. 4.

Fig. 1.

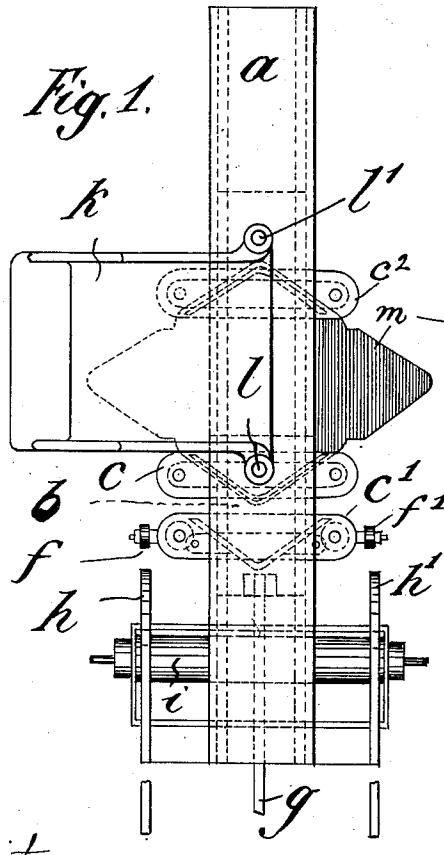
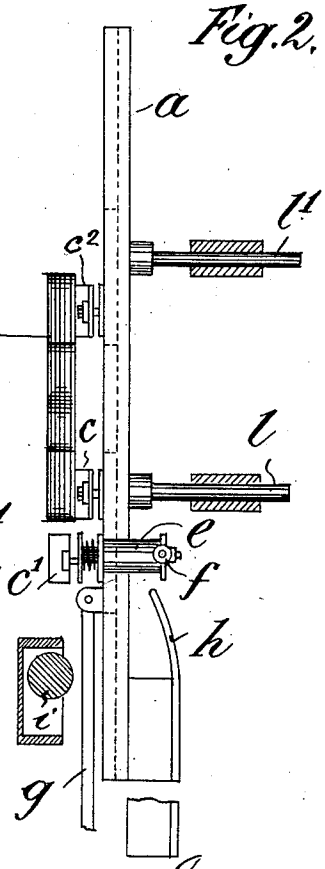


Fig. 2.



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GUMMING DEVICE FOR ENVELOP-MACHINES.

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To all whom it may concern:

Be it known that I, OSCAR HARTENFELS, engineer and manufacturer, a subject of the German Emperor, and residing at 20/21 Alte Jakobstrasse, Berlin, Kingdom of Prussia, Germany, have invented certain new and useful Improvements in Gumming Devices for Envelop-Machines, of which the following is a specification.

The present invention relates to apparatus for gumming the flap of envelops and is remarkable for the extremely uniform and thick layer of gum applied, in consequence of which the gumming apparatus is particularly suited for papers with a rough surface and great absorbing power.

The apparatus is shown in the accompanying drawing.

Figure 1 is a plan, Fig. 2 is a side view, Figs. 3 and 4 are front elevations of one constructional form of the apparatus.

In the drawing, m (Figs. 1, 2,) represents a block of envelop blanks to be gummed.

According to the constructional form shown in Figs. 1 to 4, b is a slide moving in a guide a. To slide b are attached two gummers c and c^1 respectively corresponding in shape to that of the closing flap of the envelop and a third gummer c^2 corresponding to the shape of the base flap. The gummer c^1 is vertically adjustable in slide b and is guided by means of guide pins e and e^1, d and d^1 are springs which tend to keep the gummer c^1 pressed down. The guide pins e and e^1, which are rigidly fitted into lugs attached to the slide b, are coupled at the top by a cross bar. This cross bar has at each of its two ends a roller f and f^1 respectively. If now the slide b in consequence of a pull acting on the connecting rod g moves toward the ways h, h^1, the rollers f and f^1 will ride on the curved ways h and h^1 respectively, whereby the gummer will be raised. The highest point of these ways is so high, that when the rollers f and f^1 have reached these highest points, the lower surface of the gummer c^1 will be in the same level with the lower surface of the gummers c and c^2, which are rigidly connected to slide b and spaced apart to correspond to the base flap and the closing flap of the envelop blanks. In the same level is also the uppermost point of the gumming roller i, over which the gummers pass in order to receive their supply of gum. When the gummers have been supplied with gum the whole guide a, which is itself guided in the bracket k by means of guide rods l and l^1, is raised. While the guide is raised, the slide b together with the gummers will travel toward their position above the envelop blanks. At the end of its stroke the gummer c^1 will be vertically above the part of the envelop flap to be gummed. When the gummer c^1 has reached this position, the guide a is lowered by any suitable means (not shown) acting upon the guide rods l, l^1, so that the gummer c^1 will come down on the part of the envelop flap to be gummed. Now the gummer c^1 moves toward ways h, h^1 after applying the gum to the flap. When during the return stroke of the slide b the gummer c is above the part to be gummed the guide a will be further lowered so that also the gummer c comes down on the paper and applies a second layer of gum to the closing flap while the gummer c^2 applies a layer of gum to the base flap. The gum applied by the gummer c^1 will in the meantime have soaked into the paper and on the top of it now a second layer of gum is applied by the gummer c, for avoiding ridges in the gumming the gummer c^1 is preferably made a little narrower than the gummer c.

The hereinbefore described constructional form is intended to only exemplify the present invention, which may also be carried out in any other manner. Furthermore also three or more gummers may be employed operating in series.

I claim:

1. In an envelop machine, means for repeatedly gumming the flaps, comprising a single gummer and a pair of gummers spaced apart to correspond to the base flap and the closing flap; a common supporting means for the gummers said gummers being adapted to be depressed upon the envelop blank; said single gummer being normally at a lower level than the other gummers, whereby it is adapted to apply a preliminary supply of gum to the closing flap, before the other gummers apply their supplies of gum.

2. In an envelop machine, an apparatus for gumming the flaps and applying a dual supply of gum to the closing flap, comprising three associated gummers, a slide upon which said gummers are mounted, whereby they may be brought to and from position over the surfaces to be gummed and means permitting vertical movement of said gum-

mers; two of said gummers being spaced apart to correspond to the base and closing flaps and the third gummer being in position to impart a preliminary supply of gum to the closing flap in advance of the arrival of the two first named gummers into the gumming position.

3. In an envelop machine, gumming mechanism adapted to gum the base and closing flaps and also to apply a preliminary supply of gum to the closing flap, comprising three gumming devices, a slide upon which said gumming devices are associated, said slide being adapted to be depressed toward the envelop blank to be gummed; the preliminary gumming device being normally in a plane nearer the envelop blanks than the other two gumming devices, and said slide being movable to first bring the preliminary gumming device over the closing flap and thereafter to bring the other two gumming devices respectively above the closing flap and base flap.

4. In an envelop machine, gumming mechanism adapted to gum the base and closing flaps and also to apply a preliminary supply of gum to the closing flap, comprising a plurality of gumming devices, a slide upon which said gumming devices are associated, and said slide being adapted to be depressed toward the envelop blank to be gummed; the preliminary gumming device being normally in a plane nearer the envelop blanks than the other gumming devices, and said slide being movable to first bring the preliminary gumming device over the closing flap and thereafter to bring the other two gumming devices respectively above the closing flap and base flap; a common gum supplying means to supply gum to the several gumming devices, said slide having a further throw to bring the gumming devices into contact with the gum supplying means, and said preliminary gumming device being independently movable upon the slide to bring all the gumming devices into one plane, whereby they may receive a supply of gum from the gum supplying means.

The foregoing specification signed at Berlin, Germany, this eighth day of June, 1911.

OSCAR HARTENFELS.

In presence of—
HENRY HASPER,
WOLDEMAR HAUPT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."