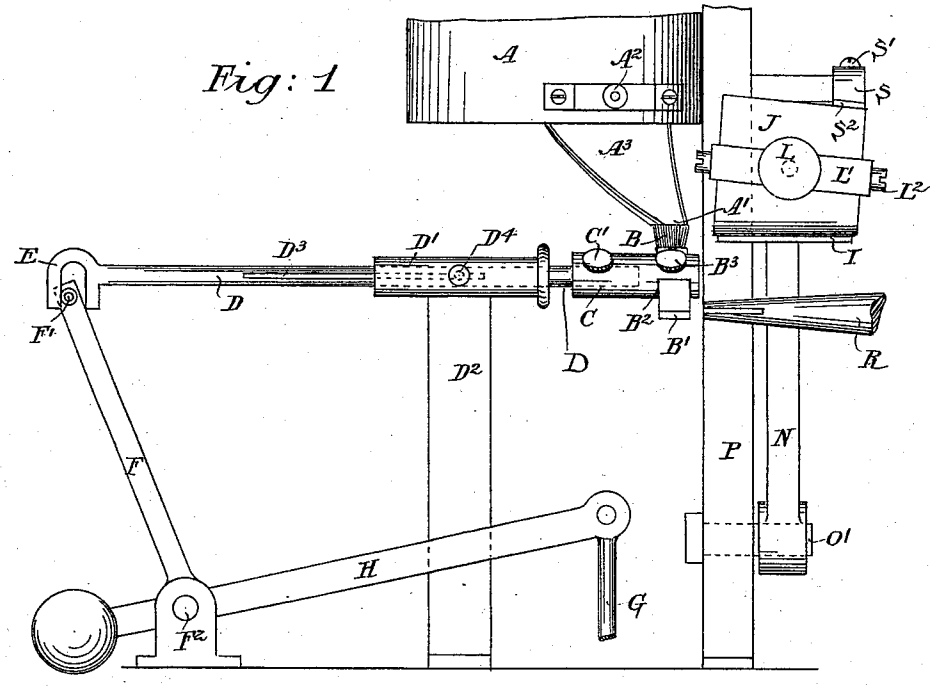
(No Model.)

J. S. BEEMAN.

PASTING MECHANISM FOR CIGARETTE MACHINES.

No. 571,061. Patented Nov. 10, 1896.

Fig: 1



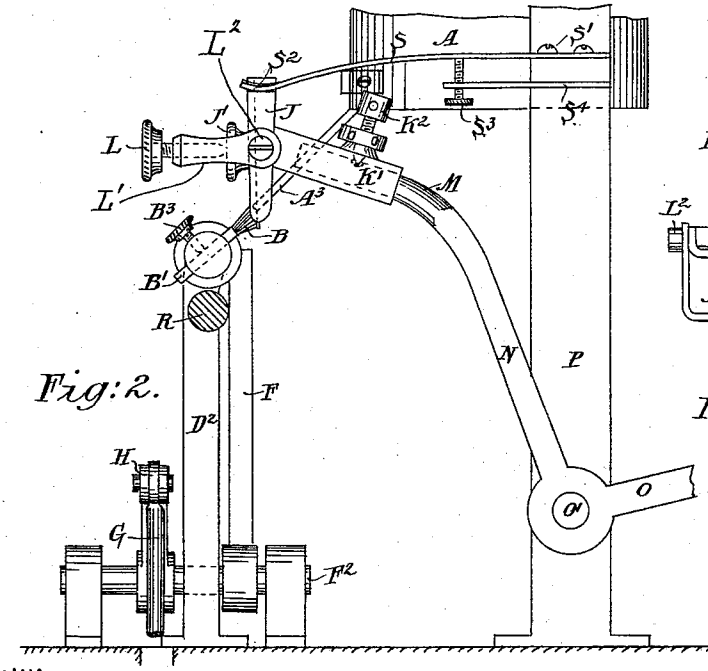


Fig: 2.

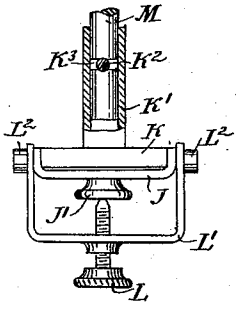


Fig: 3.

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JOSEPH S. BEEMAN, OF MELBOURNE, VICTORIA.

PASTING MECHANISM FOR CIGARETTE-MACHINES.

SPECIFICATION forming part of Letters Patent No. 571,061, dated November 10, 1896.

Application filed November 26, 1895. Serial No. 570,224. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH SAMUEL BEEMAN, a subject of the Queen of Great Britain, and a resident of Station Street, Camberwell, Melbourne, in the Colony of Victoria, have invented certain new and useful Improvements in Pasting Mechanism for Cigarette-Machines, of which the following is a specification.

This invention has reference to certain parts of apparatus or machinery (used in the manufacture of mouthpieces for cigarettes and the like) wherein strips of paper are shaped by mechanism, said shape being retained by fastening the end of the paper by the application of a suitable adhesive medium.

The invention has special reference to the mechanism or means for, first, the intermittent conveyance of the paste ("paste" being used for the sake of convenience in lieu of the words "adhesive medium") from the source of supply to the mechanical contrivance (hereinafter called, for sake of convenience, the "paster") used for depositing the paste on the desired portion of the paper blank, and, second, to the mechanical contrivance (the paster) for depositing the paste on the desired portion of the paper blank.

My invention is equally efficacious whether the paste be liquid, like a thin solution of gum, or very thick, like thick-boiled starch.

By the employment of my invention a more uniform and reliable film of paste is insured than is the case with existing appliances, that is to say, the apparatus embodied in my improvements insures a more even quantity and certain distribution of the paste upon the paper, and, further, the supply of paste is not constant, but intermittent, that is to say, the supply of paste is only furnished intermittently.

In order that my invention may be the more easily understood, reference may be made to the accompanying drawings, in which—

Figure 1 is a front view of apparatus embodying my improvements. Fig. 2 is a side view of same. Fig. 3 is a detailed illustration of one of the parts shown in both above-mentioned figures.

In the drawings, A represents a convenient source of supply of paste.

A^3 is a chute or duct onto which paste may drop from the paste-reservoir A through a suitable adjustable plug-valve A^2. (Not shown in detail.)

B represents what I call a "conveying-distributer," and is composed of any suitable material capable of receiving by contact paste from the end A′ of A^3 and holding the said paste and giving up the major portion of the paste held by it to any object with which it comes in contact before receiving a fresh supply of paste.

In the drawings, B represents a suitable form of conveying-distributer, and is a brush mounted in a metal holder B′ of such a size as to pass freely through the hole B^2 in the sleeve C. The holder B′ of the brush B is retained in any desired position in the hole B^2 by the aid of a set-screw B^3, said set-screw being carried by C. The sleeve C has a countersunk hole, (shown by dotted lines,) said hole being for the purpose of receiving the end of rod D. The sleeve C is held and adjusted in any desired position to D by means of the thumb-screw C′. I can employ any suitable mechanism to move B so as to travel between and alternately come in contact with A′ and I, to be referred to hereinafter, suitable mechanism being the rod D, which works in a slide-bearing D′ on top of the standard D^2, D′ being bored to receive the said rod D and allow it to slide therein.

D^3 is a horizontal slot cut in the rod D and in which pointed screw-key D^4 is inserted in such a manner that when the rod D moves horizontally backward and forward the key D^4 prevents the rod turning.

E is a fork arranged to receive the thumb F′ of a lever, as F. The said thumb F′ is preferably constructed in the form of an anti-friction-roller and is set at right angles to the arm or lever F.

G is a connecting-rod for conveying motion to the lever-arm H from any convenient source of power, such as a foot-pedal or the like, the whole being so arranged that when the said rod G is pulled downward the inclined lever F will rotate upon its pivot F^2 and push the fork E, rod D, and brush B to the required distance in such a manner that the said brush B will rub or smear along the edge of the paste-applying strip I, thereby

transferring a portion of the paste held by B onto I. This latter, I, is a piece of thick flannel or cloth held in position between the two plates J and K, which latter are squeezed or held tightly together by the screw-bolt L, working in a hinged piece L′, centered on the screw-pins L^2 L^2. (See Fig. 3.)

J′ is a simple butt-piece of metal situated in the front and at the center of J and is simply for receiving the thrust or pressure at the point of the screw L.

K′ is a tube or sleeve, being an integral part of K, for connecting the latter with the bent portion M of the lever N. (See Figs. 2 and 3.) The said sleeve K′ is provided with a screw-pin K^2 for holding the said sleeve K′ in position on the bent arm M.

O is a lever centered at O′ upon the pedestal P and is operated from any convenient source of mechanism, such as a cam or crank employed in the cigarette-mouthpiece machine.

In Figs. 1 and 2, R represents a mandrel such as is usually employed for curling the papers, and it will be noticed that the bottom of the flannel paster I can (after having been first smeared with paste by the brush B in the latter's forward-and-backward motion) descend and touch the paper (coiled around the mandrel) with an even line of paste at the exact spot required, a synchronous motion for this purpose having been imparted to the lever O by the mechanism appertaining to the mandrel R.

I would specially desire to call attention to the top portion of K. (See Fig. 2.)

S is a plate-spring kept in position by screws S′ and provided with an adjustment-screw S^3, carried by a plate S^4, attached to a standard P, to increase or decrease the pressure of S upon the plate K below the same. S exercises sufficient downward pressure upon the plate K at S^2 to bring the flanneled edge I into line parallel with direction of line of advance of conveying-distributer B in order for it, I, to receive a regular smear of paste from the brush B, and I also desire it to be noted that when the bent arm M N descends, carrying with it the plate K, the latter escapes from the pressure of spring S, and on coming in contact with the inclined mandrel R the flanneled edge I adjusts itself to the inclination of the said mandrel. For this purpose a small radial play is provided in a direction around M. The screw-pin K^2 has free movement (see Figs. 2 and 3) in the small lateral slot K^3, so that the sleeve K′ may oscillate the requisite distance to alter the level of the flanneled edge I when in operation, as aforesaid. It will be understood that the spring serves to turn the swiveled holder J K of the pasting-strip I upon the lever M, so that the edge of the strip when the same is retracted will be in line with the movement of the brush B. The spring merely lies in the path of the plate K and contacts therewith as the same is retracted.

Reverting again to the paste-box or reservoir A, I desire it to be understood that the parts A^2, A^3, and A′ are for the purpose of permitting and adjusting the supplying of a convenient amount of very fluid paste that is required by the brush B when in operation; but I may in some cases, in lieu of A A^2 A^3 A′, employ a roller or an endless band revolving or working in a box of prepared paste. The paste in these cases may be thick-boiled starch and so arranged that the brush B may receive its required supply of paste from the said roller or band; or I may feed the said brush B with the sticking medium from any other convenient source of supply.

In cases where the paper blanks have had their edges gummed previous to being supplied to the mandrel the brush B and the flannel edge I would be simply supplied with water, (preferably hot water,) that is to say, that in lieu of the brush B taking pasty matter from the reservoir A it (the brush) would simply receive a wetting of water and communicate or distribute such water along the edge of I, so that the latter would simply fulfil the function of moistening the dry gummed edge of the paper blank upon the mandrel, as previously set forth.

Reverting again to the paster composed of parts K, J, I, L, L′, K′, and K^2, I desire it to be understood that I do not arbitrarily limit myself to this form of paster, as in place of flannel I, I could use a brush or piece of india-rubber or sponge fastened to a block of wood, said piece of wood being firmly fastened to the lever N. In such a case the rod D instead of moving parallel with the axis of the mandrel would preferably move parallel with the outside of the mandrel.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. In combination, the mandrel, the paster having a paste-applying edge extending longitudinally of the mandrel, a reciprocating support for the paster to which said paster is connected by a swivel and a paste-conveyer reciprocating endwise in line parallel with the axis of the mandrel and between the same and the paster, substantially as described.

2. In combination in a pasting-machine, the conveying-distributer as B means for supplying B with paste or water the lever N O sleeve K′ plates K and J hinged piece L′ and screw L substantially as and for the purposes set forth.

3. In a pasting-machine and in combination, the conveying-distributer as B means for supplying B with paste or water the sleeve K′ and plate K with means for supporting the sleeve and plate the spring S and the regulating-screw S^3 substantially as and for the purposes set forth.

4. In combination, the mandrel, the paste-applying strip, the reciprocating lever, the carrier for the paste-applying strip swiveled

to the lever and the reciprocating paste-conveyer moving to the paste-applying strip when the same is retracted from the mandrel, substantially as described.

5. In combination, the mandrel, the paster with its reciprocating support, a paste-applying edge extending lengthwise of the mandrel, and a paste-conveyer reciprocating endwise and longitudinally of the paster when the same is retracted from the mandrel, said conveyer moving in between the mandrel and paster, substantially as described.

Signed this 5th day of October, 1895.

J. S. BEEMAN.

Witnesses:
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