May 21, 1940. J. R. BEDELL 2,201,516

APPLICATOR

Filed Feb. 2, 1939

Fig-1

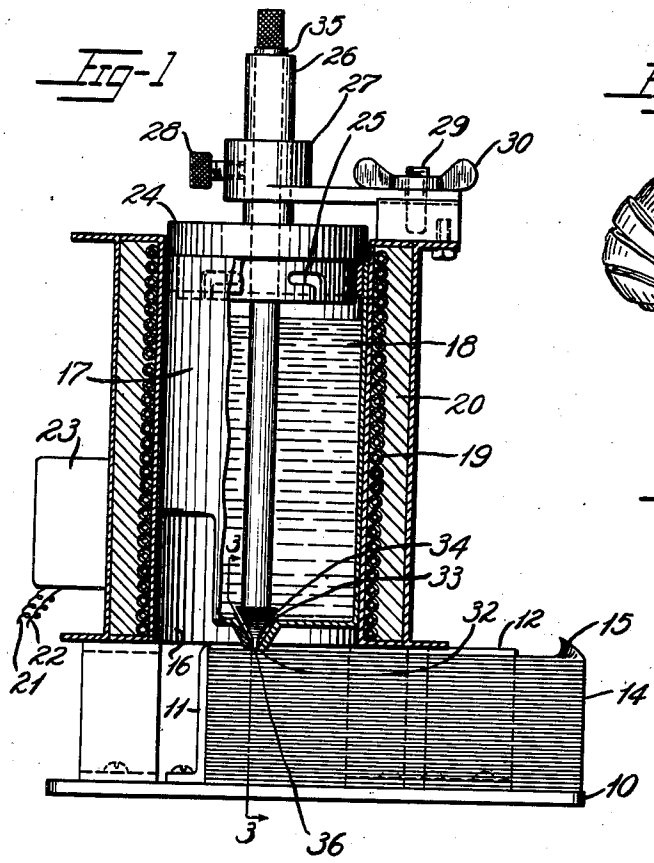


Fig-5

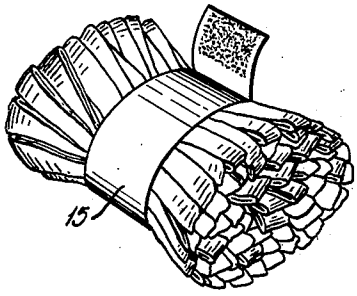


Fig-4

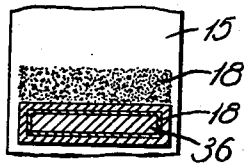


Fig-3

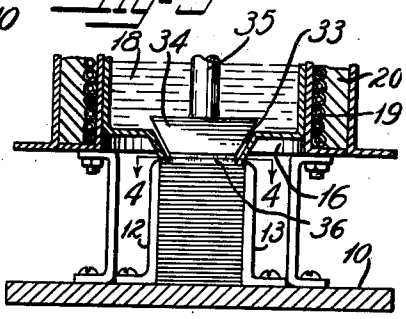
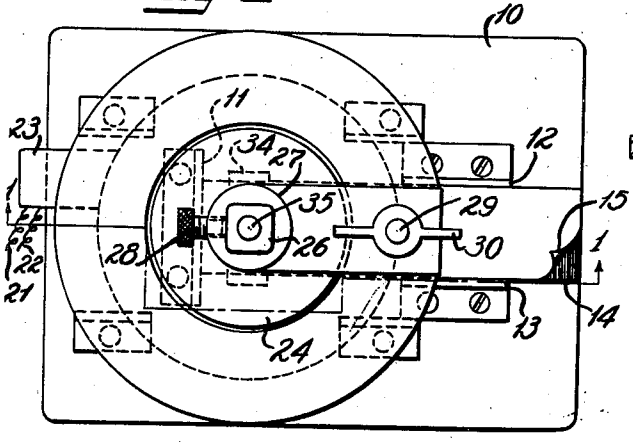


Fig-2



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UNITED STATES PATENT OFFICE

2,201,516

APPLICATOR

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Application February 2, 1939, Serial No. 254,199

2 Claims. (Cl. 91—43)

This invention relates to apparatus for applying coating material to articles and is especially useful in applying adhesive to labels or bands.

In marketing many articles, such as rubber bands it is desirable to package the articles by applying a band label about one or more of the articles usually arranged in a bundle. The bands or labels must have an adhesive applied to one of the overlapping ends thereof.

The present invention provides means for applying the adhesive to the bands one at a time as they are withdrawn from a stack of bands.

The principal objects of the invention are to provide automatic application of coating material, especially adhesive, to provide even distribution of the same, to provide for keeping the material at the correct temperature, to keep the material from contamination, to provide automatic discontinuance of material delivery when the material container is raised above the labels or bands, to provide positive control of the area of application, and generally to provide simplicity of mechanism and reliability of operation.

These and other objects will appear from the following description and the accompanying drawing.

Of the drawing:

Fig. 1 is a cross-sectional elevation of the apparatus, taken on line 1—1 of Fig. 2 showing a stack of labels or bands in place.

Fig. 2 is a plan view of the same.

Fig. 3 is a sectional detail view, taken on line 3—3 of Fig. 1.

Fig. 4 is a sectional detail view, taken on line 4—4 of Fig. 3 showing a part of one of the bands in plan with the adhesive partially applied thereto.

Fig. 5 is a perspective view of a bundle of rubber bands with a label band applied thereto.

Referring to the drawing, the numeral 10 designates the base of the apparatus upon which are mounted fixed or adjustable fences 11, 12, 13 for properly locating a stack 14 of labels or bands 15. Supported from the base above the labels is a hollow cylindrical guideway 16 within which a tank 17 of adhesive 18 is slidably mounted for vertical movement. The guideway 16 is preferably made double walled with heating means between the walls for warming the adhesive. In the form of apparatus shown the heating means comprises a coil 19 of resistance wire and a layer of heat insulation 20 thereabout. The heating coil is supplied by current through wires 21, 22, and a thermostat 23 may be provided to regulate the temperature.

The tank 17 has a cover 24 removably attached thereto, as by a bayonet joint 25 and the cover has a tubular extension 26 slidably mounted in a bracket 27 and adapted to be locked against sliding by a thumb screw 28. Bracket 27 is removably secured to the guideway by a stud 29 and wing-nut 30.

To provide for release of adhesive from the tank 17, a slot 32 slightly narrower than the labels is formed in the bottom of the tank in alignment with the tubular extension 26 of the cover. The walls surrounding the aperture are angularly turned outwardly to form a prismatic seal 33 for a combination adhesive spreader and valve 34 of similar form. The valve 34 is fixed to a rod 35 vertically slidable in the tubular extension 26 of the cover. The rod 35 terminates below the valve 34 in a doctor blade or adhesive spreader 36 adapted to contact with the top label of the stack and to loosely fit the slot 32. The arrangement is such that when the tank 13 rests on the top the label closes the opening and the valve is raised so that the spreader also rests on the label and a rectangular area of the adhesive contacts with the label and is applied thereto as the label is withdrawn from the stack 14, but when the tank is raised from the labels, the valve 34 closes the slot so that the adhesive does not drop or run out. The rectangular form of the aperture in the tank assures application of adhesive entirely across the label, if desired, and prevents the valve from turning relative to the tank, and the tubular extension 26 of the lid is of substantially square cross section to prevent the tank from rotating with respect to the label stack.

In use, the fences 11, 12, 13 are arranged to align the labels so that the aperture in the tank extends across the top label and a distance from its end corresponding to the length of the label to which adhesive is to be applied. The tank is filled with adhesive. If the adhesive requires heating, the electric current is applied to the tank. The labels are withdrawn from the stack, one at a time, and the adhesive is automatically applied as they are withdrawn.

If desired, the electric heating coil may be omitted and the guideway may be heated by steam or hot water circulated between its double walls.

Variations may be made without departing from the scope of the invention as it is defined by the following claims:

I claim:

1. Apparatus for applying an adhesive to a

portion of one face of an article, said apparatus comprising means for supporting and aligning a vertical stack of the articles, a tank of adhesive liquid having a delivery opening at its bottom and adapted to rest on the top article of the stack with its delivery opening in contact with said article, means contacting with a wall of the tank for guiding the tank with relation to the stack of articles, and heating means associated with said guide means for maintaining the contents of the tank at the proper temperature irrespective of its position along the guide means while permitting removal of the tank from the guide and heating means.

2. Apparatus as defined by claim 1 in which the guide means surrounds the tank in contact with an extensive area of its walls.

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