

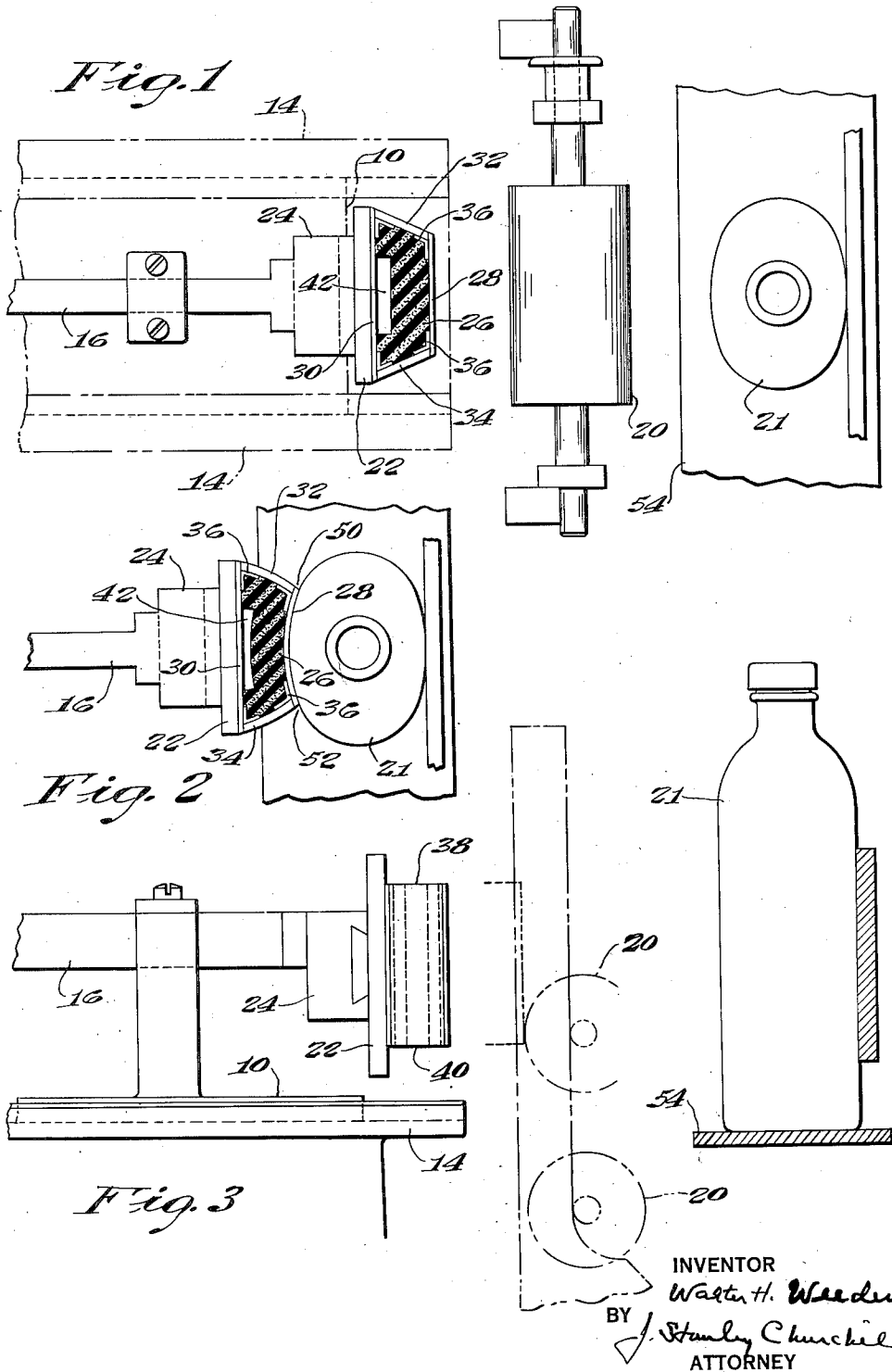
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LABELING MACHINE

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LABELING MACHINE

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This invention relates to a labeling machine for applying labels to containers and the like.

The invention has for an object to provide a novel and improved flexible adhesive applying pad for a labeling machine which is particularly adapted to apply adhesive to a curved or irregular surface of an article whereby the pad will conform to such irregular surfaces and assure a uniform distribution of adhesive thereto.

Another object of the invention is to provide a novel and superior construction of a flexible adhesive applying pad for a labeling machine, whereby a pad may be produced which possesses greater flexibility and more ability to withstand wear as compared with other prior constructions of labeling pads of this type.

With these objects in view and such others as may hereinafter appear, the invention consists in the flexible adhesive applying pad and in the various structures, arrangements and combinations of parts hereinafter described and particularly defined in the claims at the end of this specification.

In the drawing illustrating the preferred embodiment of the invention, Fig. 1 is a plan view illustrating a portion of a labeling machine embodying the present invention; Fig. 2 is a similar view with the pad shown in a different position of operation; and Fig. 3 is a side elevation of the portion of the machine shown in Fig. 1.

In general, the present invention aims to provide a novel and improved adhesive applying pad of such novel and superior construction as to enable the pad to withstand excessive wear under long continued periods of service and at the same time, the pad is provided with qualities which permit a great degree of flexibility. In practice it has been found that the usual forms of flexible adhesive applying pads were either too hard and so did not give great enough flexibility or they were too soft so that they did not stand up under severe conditions of use.

In accordance with the present invention, the adhesive applying pad herein illustrated is constructed in such a manner as to combine the features of flexibility and ability to withstand wear by providing a pad in which the outer surfaces arranged to engage the article are made of a tough pure gum rubber while the inner core is made up of a sponge rubber. In order to enable the pad to be capable of still greater flexibility, the core of the pad is provided with a hollow portion as herein shown, thus assisting in permitting the pad to yield sufficiently to conform itself to irregular and curved surfaces and

to distribute the adhesive to the article uniformly.

Referring now to the drawing, the invention is herein shown as embodied in a labeling machine of any well-known type now upon the market in which the article to be labeled is first coated with adhesive at one station of operation and thereafter at a succeeding station of operation a label is attached to the article over the adhesive. Reference may be had to the labeling machine disclosed in U. S. Patent No. 1,746,988, to Otto G. Brautigam, issued February 11, 1930 for a full and complete description of such labelers.

As herein illustrated, labeling machines of the type disclosed in the Brautigam patent above referred to are provided with a reciprocable slide 10 mounted in guides 14 supported upon the machine frame. A yieldingly mounted rod 16 upon which the adhesive applying pad is mounted is supported upon the slide 10 and, in operation, the unit is advanced to an intermediate position, as illustrated in dotted lines in Fig. 3, where a glue roll 20 mounted for vertical operation is raised and lowered to transfer adhesive to the face of the applying pad. Thereafter the unit is advanced to the article 21 to be coated with adhesive whereupon the unit is returned to its retracted position.

In its preferred form and as herein shown, the novel and improved adhesive applying pad comprising the present invention is cemented to a member 22 preferably made of metal, which is removably secured to the head portion 24 of the yieldingly mounted rod 16. The pad is constructed with a soft sponge rubber core 26, faced on four sides with pure gum rubber sheets 28, 30, 32, 34. The four sides are securely welded together by semi-cured rubber corner strips 36, one at each corner to form a tough and compact covering for the sponge rubber core. The remaining two sides 38, 40, comprising the top and bottom ends of the pad are open to provide greater flexibility for the sponge rubber. As herein shown, the sponge rubber core 26 is provided with a rectangular opening 42, extending from the top to the bottom of the pad, which permits the pad to more readily conform to the contour of the article to be coated, as illustrated in Fig. 2 by permitting the thick front wall of the pad to more readily flex.

From the description thus far, it will be observed that the novel and improved adhesive applying pad is constructed in a novel and superior manner so that in operation, it will present a substantially flat and compact surface to the

adhesive transferring roll 20. Thereafter, upon engaging the article, the pad will readily yield and adapt itself to the shape of the article whereby a film of adhesive may be applied to an irregular surface and particularly a curved surface in such a manner that the adhesive will be uniformly distributed. It will also be observed that the pad is formed in the shape of a trapezoid which contributes to the effectiveness of the pad, so that when compressed, the angular sides 32, 34 take a curvilinear form and provide a substantial backing to assure a firm contact of the edges 50, 52 of the pad with the article.

In the operation of the machine, after the above described operations have been performed, the article 21 is advanced on the belt 54 to the next station of operation where a label is attached and pressed firmly into contact with the article.

While the preferred embodiment of the invention has been herein illustrated and described as a pad for applying adhesive to an article in a labeling machine, it will be understood that the invention may also be used as a presser or wiper pad for pressing the label against the article, previously supplied with an adhesive coating, and also in other forms of labeling machines within the scope of the following claims.

Having thus described the invention, what is claimed is:

1. In a labeling machine, an adhesive applying device comprising a supporting member, a resilient pad mounted thereon having its body portion formed of a relatively thick compressible resilient material provided with an adhesive applying face of a flexing material, possessing high wear resistance, said face being normally disposed in a flat plane and secured to the body to form a unitary structure therewith.
2. In a labeling machine, an adhesive applying device comprising a supporting member, a resilient pad mounted thereon having its body portion formed of relatively thick sponge rubber provided with an adhesive applying face of a flexing material possessing high wear resistance, said face being normally disposed in a flat plane and secured to the body to form a unitary structure therewith.
3. In a labeling machine, an adhesive applying device comprising a supporting member, a resilient pad mounted thereon having its body portion formed of relatively thick sponge rubber and provided with an adhesive applying face of dense

wear resisting flexible rubber said face being normally disposed in a flat plane.

4. In a labeling machine, an adhesive applying device comprising a supporting member, a resilient pad mounted thereon having its body portion formed of a compressible resilient material provided with an adhesive applying face and sides of flexible material possessing high wear resistance, said face and sides being secured to the body portion to form a unitary structure therewith.

5. In a labeling machine, an adhesive applying device comprising a supporting member, a resilient pad mounted thereon having its body portion formed of a compressible resilient material provided with an adhesive applying face and sides of a dense wear resisting but flexible rubber secured thereto to form a unitary structure therewith.

6. In a labeling machine, an adhesive applying device comprising a supporting member, a resilient pad mounted thereon having its body portion formed of a relatively thick compressible resilient material provided with an adhesive applying face of a flexing material, possessing high wear resistance, said face being normally disposed in a flat plane and secured to the body to form a unitary structure therewith, said body portion being provided with an opening formed therein for assisting in permitting the body portion to flex and conform to the shape of the article being labeled.

7. In a labeling machine, an adhesive applying device comprising a supporting member, a resilient pad mounted thereon having its body portion formed of relatively thick sponge rubber and provided with an adhesive applying face of dense wear resisting flexible rubber, said face being normally disposed so as to present a flat surface, said body portion being provided with an opening formed therein for assisting in permitting the body portion to flex and conform to the shape of the article being labeled.

8. In a labeling machine, an adhesive applying device comprising a supporting member, a resilient pad mounted thereon having its body portion of trapezoidal shape in section, formed of a compressible resilient material provided with an adhesive applying face of a flexing material, possessing high wear resistance, said face being secured to the body to form a unitary structure therewith.

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