Oct. 20, 1931. L. RADO 1,828,680

METHOD OF ATTACHING SEALING OR LABELING STRIPS OR THE LIKE TO BOXES, CASES, AND WRAPPINGS MADE OF METAL FOIL COVERED PAPER, CARDBOARD, AND THE LIKE

Filed Sept. 17, 1928

Fig. 1

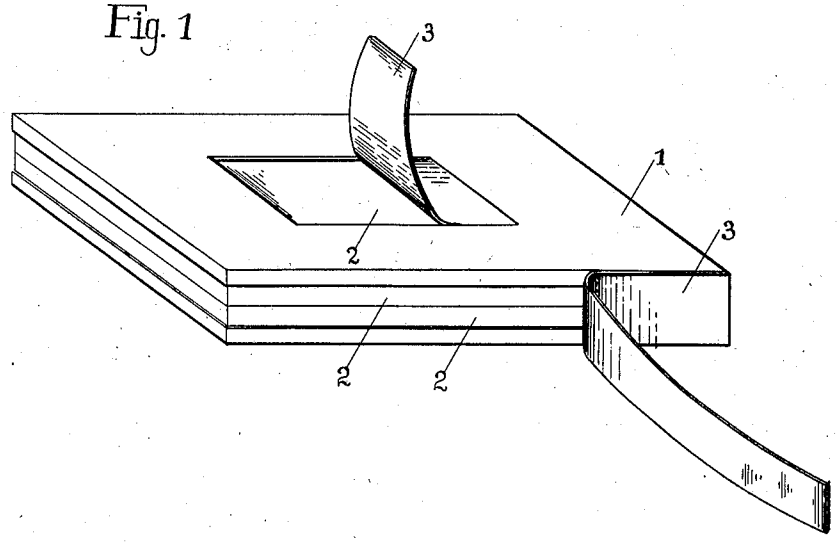
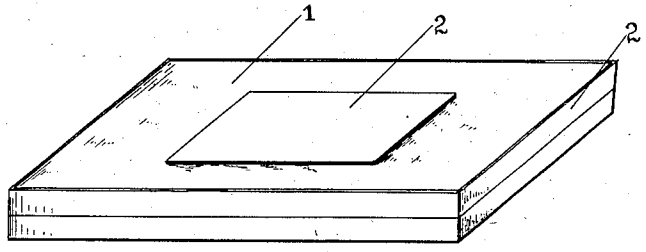


Fig. 2



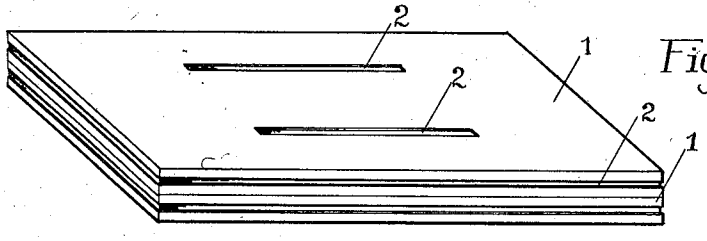
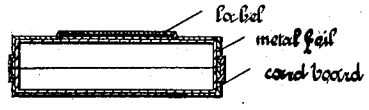


Fig. 3.

Fig. 4



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UNITED STATES PATENT OFFICE

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METHOD OF ATTACHING SEALING OR LABELING STRIPS OR THE LIKE TO BOXES, CASES, AND WRAPPINGS MADE OF METAL-FOIL-COVERED PAPER, CARDBOARD, AND THE LIKE

Application filed September 17, 1928, Serial No. 306,615, and in Germany September 24, 1927.

It is well known that a variety of articles are manufactured to-day of paper, cardboard and the like covered with metal foil. Boxes, cases and the like of all kinds are made by pressing, drawing and similarly working such material. Difficulties have, however, been experienced in the sealing or labeling of these bodies covered with metal-foil, inasmuch as the metal layers do not take the adhesive material well. Thus, for example, in the sealing of capped boxes, which are made mechanically by stamping and pressing, the lower and upper parts must be overlaid with a sealing strip. If the attempt is made to apply this strip by an adhesive straight on to the metal foil, it is found that it is impossible to do this reliably by means of adhesives, because the strip after a given time, when the adhesive has dried, gradually becomes loose. This difficulty is the principal reason why the manufacture of boxes, containers and the like of paper, cardboard and the like covered with metal foil, is made extremely difficult.

It has been found that the disadvantages referred to are entirely obviated if those portions of the metal foil where a strip or the like is to be attached by an adhesive are cut away before such foil is applied to the box or the like or if the already applied metal foil is mechanically removed at least in part by means of brushes or milling devices from those portions of the surface where the strip or the like is to be attached by an adhesive or if the metal foil is cut through one or more times by means of suitable devices so that thin grooves are formed by the cut and ensure a fast adherence of the applied strip. It is only in this way that it is made possible to attach sealing or labelling strips and the like to the boxes and the like by means of the ordinary adhesives used.

In order to distinctly illustrate my invention I have constructed Figures 1, 2, 3 and 4 showing that the process can be carried through in a variety of ways correspondingly applied.

These figures are perspective views and a cross section of boxes of card board covered with metal foils to which sealing and labelling strips are attached. The dimensions shown and their proportions are not to be considered as relevant to the invention.

In the drawings Fig. 1 shows a box with a thin metal foil 1 cut away before it is applied to the card board or other material at these points 2 where the completed box is to have a strip 3 or the like adhesively secured thereto.

Fig. 2 shows a box of card board or other material which is already covered entirely with metal foil 1. The parts 2 where a strip or the like is to be secured adhesively to the box are treated with rotating steel, brushes, milling devices and the like and in this manner the metal foil is in part or wholly removed.

Fig. 3 shows that the parts in question of the metal foil 1 may also be cut through one or more times by means of suitable devices. Fig. 4 is a cross section along the line $a-b$ of Fig. 3 and illustrates that the thin grooves 2 formed by the cut are sufficient to ensure good adherence of the strips 3 which are fastened in the grooves by means of an adhesive.

By applying the new method in the manner above set out there is ensured in an extremely simple manner a reliable and permanent connection, by means of the ordinary known adhesives, and the strips or the like which are to be attached adhere to the pierced or otherwise treated parts very strongly. In the case of finished boxes or the like, the mechanical treatment is preferably carried out by rotating a suitable brush or milling tool mounted in a suitable mounting, in the opposite direction to the travel of the body covered with the foil. The brush or milling device may of course also be introduced into the series of operations employed in the manufacture of the boxes.

The new process is particularly suitable for the manufacture of folding boxes, cartons, bags, and pressed and drawn packings.

What I claim is:

1. The method of attaching labels to metal foil covered fibrous material which comprises mechanically removing a portion of the metal foil corresponding in area to the

area of the label, and attaching a label to the exposed fibrous material surface by means of an adhesive.

2. The method of attaching labels to metal foil covered fibrous material which comprises cutting out a portion of the metal foil corresponding in area to the area of the label and attaching a label to the exposed fibrous material surface by means of an adhesive.

3. The method of attaching labels to metal foil covered fibrous material which comprises removing a portion of the metal foil by abrasion and attaching a label to the exposed fibrous material surface by means of an adhesive.

4. The method of attaching labels to metal foil covered fibrous material which comprises cutting narrow strips of foil from the main portion thereof and attaching a label by means of an adhesive to the said fibrous material in such a manner that it covers the said strips.

5. A new article of manufacture comprising a metal foil covered fibrous material from which a portion thereof has been removed and a label attached to the fibrous material at the portion from which the metal foil has been removed.

In testimony whereof I have signed my name to this specification.

LEOPOLD RADO.