Sept. 27, 1949. N. D. MUSSETT 2,482,989

DEVICE FOR MOISTENING TAPE AND OTHER ARTICLES

Filed Aug. 16, 1946 3 Sheets-Sheet 1

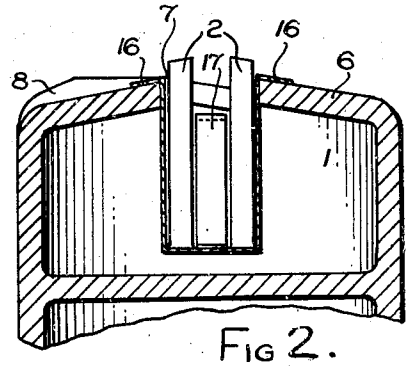


FIG 2.

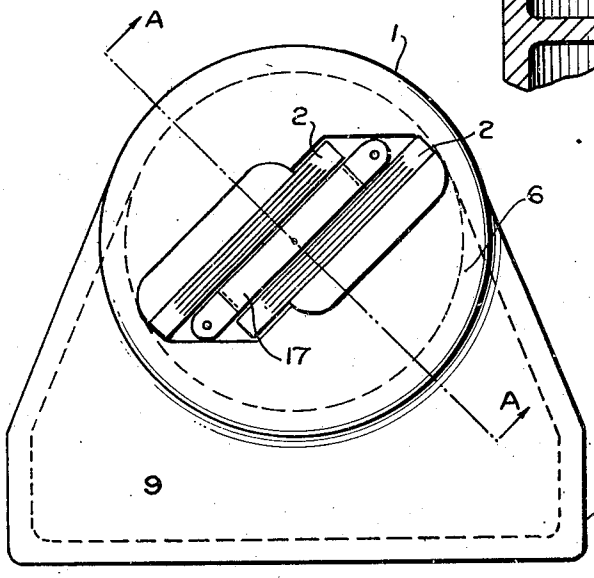


FIG. 1

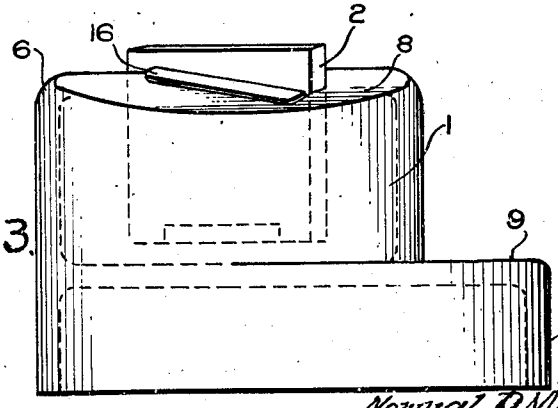


FIG 3.

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DEVICE FOR MOISTENING TAPE AND OTHER ARTICLES

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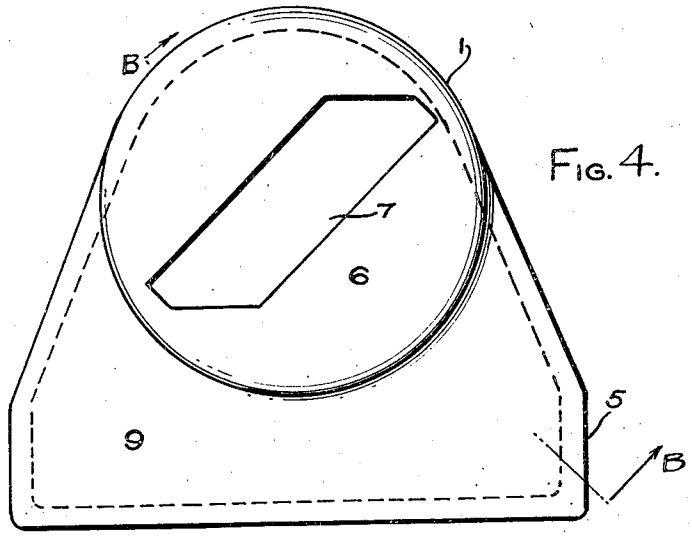


FIG. 4.

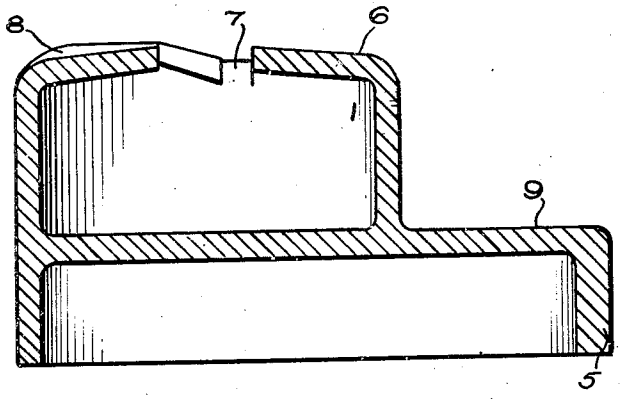


FIG. 5.

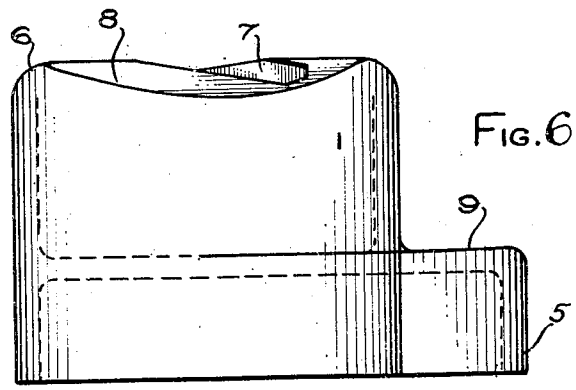


FIG. 6.

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DEVICE FOR MOISTENING TAPE AND OTHER ARTICLES

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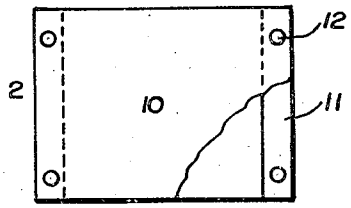


FIG. 7

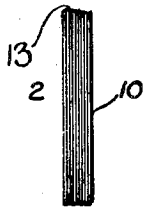


FIG. 8.

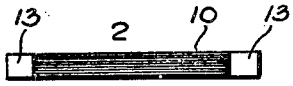


FIG. 9.

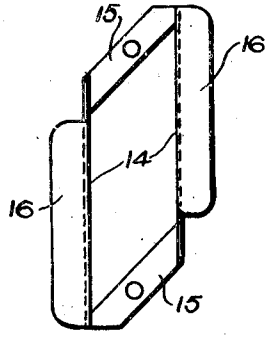


FIG. 13.

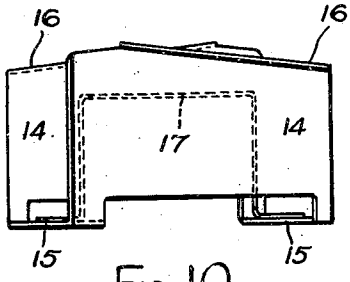


FIG. 10.

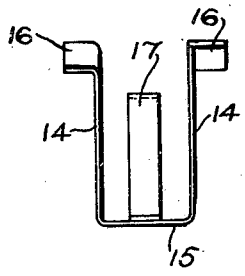


FIG. 11.

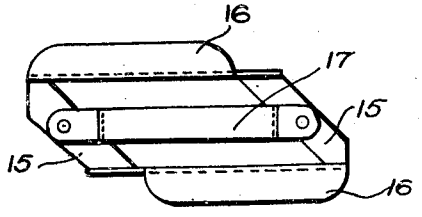


FIG. 12.

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UNITED STATES PATENT OFFICE

2,482,989

DEVICE FOR MOISTENING TAPE AND OTHER ARTICLES

Norman Duncan Mussett, Croydon, England

Application August 16, 1946, Serial No. 691,000
In Great Britain August 17, 1945

4 Claims. (Cl. 91—54.4)

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This invention relates to moistening devices, more especially intended for moistening tape or other strip material which may be gummed or ungummed.

The invention is not, however, limited, in so far as use of the device is concerned, to moistening strip material, as the device is suitable also for moistening other articles or objects, such as, for example, the closing flaps of envelopes, postage and other adhesive stamps, and for moistening the fingers when counting monetary notes, leaves of paper and the like.

In the moistening device according to the present invention, moistening liquid in a container is fed by capillary attraction through ducts in an applicator, so that liquid for moistening is always available at the delivery end of the ducts and is constantly replenished as it is taken up by an article or object moved over the applicator for moistening.

In the drawings:

Figures 1, 2 and 3 are, respectively, a top plan, a sectional elevation (broken away) on the line A—A (Figure 2) and a side elevation, of a preferred form.

Figures 4, 5 and 6 are, respectively, a top plan, a sectional elevation on the line B—B (Figure 4) and a side elevation of the reservoir in the form shown in Figures 1 to 3.

Figures 7, 8 and 9 are, respectively, an elevation, edge view and top plan of one of the applicators used in the form shown in Figures 1 to 3, the end plate of the applicator being broken away in Figure 7 to show one of the dividing strips.

Figures 10, 11 and 12 are, respectively, a side elevation, and elevation and top plan of the holder for the applicator in the form shown in Figures 1 to 3.

Figure 13 being a plan of the holder with the separating bracket removed.

In the form shown in Figures 1 to 13, the reservoir 1, which may be a metal casting, has a base 5 and a top 6 in which a comparatively wide slot 7 is formed to receive a pair of applicators 2 illustrated by Figures 7 to 9.

The reservoir 1 is circular and its top 6 is cupped as at 8 and inclined downwards on each side of the slot 7. Its base 5 extends forwardly to serve as a platform 9 on which small articles can be placed.

The slot 7 extends at an acute angle to the front of the platform 9 to reduce the likelihood of uneven moistening of a tape or strip, for example, should it be drawn carelessly across the applicators in the slot, out of the normal path,

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which is parallel to the edge of the platform 9.

The applicators 2, as shown in Figures 7 to 9, each comprise a set of thin, substantially rectangular plates 10, with thin separating strips 11 at the side edges to space the plates slightly apart and so form capillary channels between them, the plates and strips being held together as a unit by rivets 12. The spaces between the top edges of the separating strips 11 are filled in as at 13 to form smooth tops. The plates 10 and strips 11 are preferably made of metal, such as stainless steel, the strips being of a thickness of the order of .005 inch.

The applicators 2 are arranged side by side in a holder, illustrated by Figures 10 to 13.

The holder comprises a substantially U-shaped frame having upright sides 14, joined at the bottom by inclined strips 15, so that the sides are relatively off-set, the top edges of the upright sides being turned over outwards to form flanges 16 which are inclined oppositely.

A substantially U-shaped bracket 17 connected at its ends to the joining strips 15, bridges the strips and forms a separator for the applicators 2.

The applicators 2 are introduced between the sides 14 of the holder frame and the separating bracket 17, and the holder is introduced into the reservoir 1, through the slot 7, the top flanges 16 resting on the inclined faces of the top 6 of the reservoir.

The applicators 2 are thus immersed in the moistening liquid contained in the reservoir, and liquid from the reservoir rises by capillary attraction in the capillary ducts between the plates 10 of the applicators, so that it is available for moistening at the upper open ends of said ducts.

The article or object to be moistened is drawn across the top of the applicators 2 and as it takes up liquid, the liquid in the reservoir 1 rises in the capillary ducts in the applicators to replace that taken up by the moistened article or object.

The form of the device last described is particularly suitable for use in telegraph offices for moistening the telegraphic paper strip for application to telegraph forms, waste lengths of strip being placed on the platform 9 for subsequent disposal.

With the device according to the invention, the surface of a tape or strip, for example, brought into contact with the open upper end of the capillary ducts is immediately moistened and any length of tape or strip is evenly moistened at whatever speed it is moved across the upper edge of the ducts when in contact therewith.

The degree of moisture imparted to the arti-

cle or object to be moistened can be varied by varying the cross-sectional area of the ducts.

I claim:

1. A device for moistening tape, strip and other articles and objects, comprising a reservoir containing moistening liquid, said reservoir having a top cover with a slot therein, and an applicator arranged in said reservoir, said applicator comprising a plurality of units each composed of a set of plates secured together face to face in closely spaced relation to form capillary channels between them, and a frame for supporting said units side by side in an upright position, said frame being received in said slot in said top cover of said reservoir with the lower ends of said units immersed in the moistening liquid, so that liquid rises by capillary attraction in said channels to provide a continuous supply for moistening objects drawn across the top of said units.

2. A device for moistening tape, strip and other articles and objects as claimed in claim 1, wherein said top cover of said reservoir is inclined and cupped on each side of said slot therein, and said frame is provided with top flanges to engage over the edges of said slot.

3. A device for moistening tape, strip and other articles and objects according to claim 1, wherein said slot in said top cover of said reservoir is inclined to the front of said reservoir.

4. A device for moistening tape, strip and other articles and objects, comprising a reservoir of circular formation containing moistening liquid, a slotted top cover and a forwardly directed platform provided on said reservoir, and an applicator removably inserted in said slotted top cover of said reservoir, said applicator comprising two units of the same size and configuration, each of said units being composed of a set of plates secured together in closely spaced relation to form capillary passages between them, and a frame for supporting said units in said reservoir in an upright position spaced apart with their major axes parallel and positioned in the same horizontal plane, and displaced relatively to each other along their major axes with their lower ends immersed in the moistening liquid, so that liquid rises in said passages by capillary attraction to provide constantly at the top, a liquid supply for moistening objects drawn over said applicator and to replenish the liquid taken up by the moistened objects.

NORMAN DUNCAN MUSSETT.

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