(No Model.)

M. HOLST.

MOISTENING DEVICE.

No. 422,078. Patented Feb. 25, 1890.

Fig. 1.

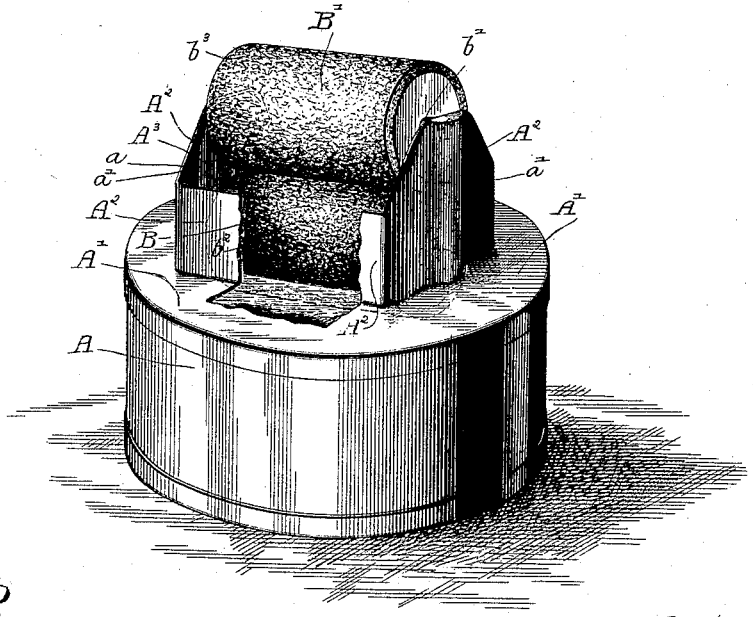


Fig. 2.

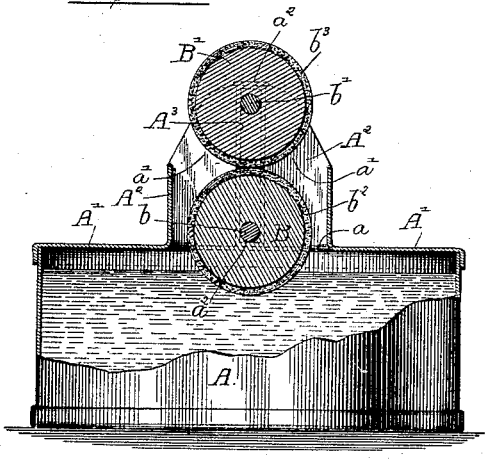
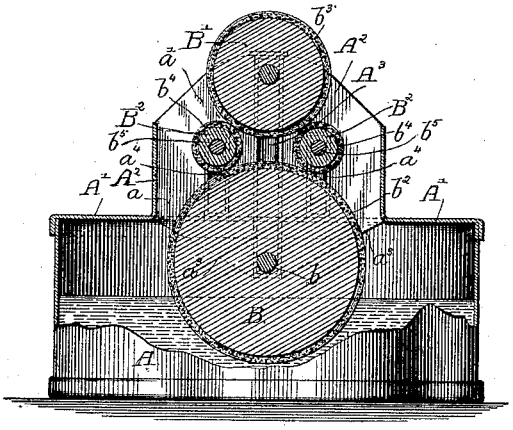


Fig. 3.



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UNITED STATES PATENT OFFICE.

MARTIN HOLST, OF CHICAGO, ILLINOIS.

MOISTENING DEVICE.

SPECIFICATION forming part of Letters Patent No. 422,078, dated February 25, 1890.

Application filed October 21, 1889. Serial No. 327,656. (No model.)

To all whom it may concern:

Be it known that I, MARTIN HOLST, a citizen of the Kingdom of Sweden and Norway, residing in Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Moistening Devices; and I do hereby declare that the following is a full, clear, and exact description of the invention, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to a novel construction in moistening devices for moistening stamps, adhesive envelopes, and analogous articles. It is also adapted for use in banking-houses and the like for moistening the fingers to facilitate the counting of paper money or slips.

The invention consists in the features of construction and combination of parts hereinafter fully described, and more particularly pointed out in the appended claim.

In the accompanying drawings, Figure 1 illustrates a perspective view of a moistening device constructed in accordance with my invention, with parts cut away to show the interior construction. Fig. 2 is a vertical cross-sectional view of the same. Fig. 3 is a vertical cross-sectional view of a modified form of construction embodying my invention.

In said drawings, Figs. 1 and 2, A indicates a suitable box or receptacle of any desired form, but preferably made cylindric, provided with a top A′, having a rectangular opening *a*, conveniently located about the center thereof. The said opening *a* is provided with an uprising wall or flange A^2, which surrounds the same on all sides thereof, said wall A^2 being provided at the short sides with upwardly-extending lugs or projections *a′*.

B B′ indicate two rollers, provided at their ends with bearing pieces or trunnions *b b′*, respectively, by means of which they are supported in suitable bearings provided in the short sides of the wall A^2, surrounding the opening *a*. Any desired form of bearing can be employed; but a convenient way of supporting said rollers consists in forming two vertical grooves or recesses A^3 A^3 in the short sides of the wall A^2. The said grooves A^3 extend outwardly from said wall and are closed at their upper and lower ends by pieces a^2 a^2. The rollers B B′ are of a length slightly less than the length of the rectangular opening *a*, so that when they are located within said opening and within the uprising wall A^2 their ends will come nearly in contact with the short sides of said wall, and the trunnions *b b′* will enter the vertical grooves, and thus provide a bearing, as before described, for the rollers. It will thus be obvious that the rollers will be loosely supported in their bearings and that the bottom roller B will extend somewhat into the receptacle A. The top roller B′ at the same time will rest lightly upon the bottom roller B. The length of the vertical grooves A^3 A^3 is such that when the trunnions of the bottom roller B rest in the lower end of said grooves, and the top roller B′ is in place thereon, the trunnion *b′* of said top roller will be located near the upper end of said vertical groove. The said rollers B B′ are each provided with a continuous covering throughout their length of some porous material, preferably cloth or felt, as indicated by b^2 b^3.

The operation of my invention is as follows: In the use of this device a sufficient quantity of water is placed within the receptacle A to bring the level of the water near the top A′ of the receptacle, so that the roller B will be immersed in the water a considerable distance. It will be evident that, owing to the capillary attraction of the felt or other porous covering of said roller B, the water will be drawn up into said covering. By turning the top roller B′ the said bottom roller B will be rotated within the water, so that every part of the covering b^2 surrounding the same will be thoroughly soaked and impregnated by the water. It follows that the covering b^3 of the top roller will be moistened, owing to its capillary attraction and its contact with the wet covering b^2 of the bottom roller. It is obvious that when the receptacle is filled with enough water to reach the bottom roller the coatings on both of said rollers will always be moist, the bottom roller being very moist, while the upper roller will contain less

moisture. It has been found that enough water will be taken up by said rollers to keep the device always in condition for use, and that the said top roller will contain enough moisture sufficient for the purposes for which it is intended.

In Fig. 3 is shown a modified form of construction embodying my invention. In this form of construction the rectangular opening a in the top A′ of the receptacle is of the same length but wider than the opening shown in Figs. 1 and 2. The end walls surrounding said receptacle are extended below the top of the casing, as shown at a^3, and the vertical bearing-grooves A^3 extend to the lower end of the extension a^3.

a^4 a^4 indicate two supplemental bearing-grooves of the same construction as the said grooves A^3. The said grooves a^4 are located one on either side of the groove A^3 and have their upper ends located somewhat below the top of said groove. The bottom roller B is constructed as before described, but has a greater diameter than the roller B. (Shown in Figs. 1 and 2.) The trunnions b of said bottom roller rest in the lower end of the said groove A^3, in the manner hereinbefore set forth.

B^2 B^2 indicate small supplemental rollers having the same length as the other rollers, but of a smaller diameter. These supplemental rollers B^2 are each provided with a porous covering b^4, and are also provided with trunnions b^5, which enter the vertical bearing-grooves a^4 in the wall A′. The said bearing-grooves a^4 are so located with reference to the roller B that the supplemental rollers B^2 will rest upon the said bottom roller on either side thereof. The trunnions of the top roller B′ rest in the upper end of the groove A^3, so that the said roller itself will rest upon the two supplemental rollers B^2 B^2.

The object of this construction is to provide a gradual and slow supply of water to the top roller B′. The operation will be obvious, as the passage of the water will be retarded in passing through the supplemental rollers B^2, and more so than if it were conveyed directly from the bottom roller to the top or moistening roller. In either case, however, the top or moistening roller B′ will not in any sense be overladen with water or wet, but will merely be moist, whether in use or not. It follows, however, that by rotating the upper roller the bottom roller will be turned around in the water, so that when the device is in use and when moisture is being taken from the top roller there will be a constant and gradual supply of water furnished to said top roller.

The manner of using this device will be entirely obvious, and is the same as the devices of this character now in use. For instance, in moistening stamps it is preferable to divide the stamps in strips and draw said stamps across the top of the moistening-roller. The adhesive parts of envelopes will be drawn across in the same manner, while for moistening the fingers it will only be necessary to turn said top roller with the fingers. It will be understood, of course, that this device can be put to various uses not named herein.

I am aware that moistening devices have been used before for these purposes, and also that a moistening device has been made comprising a revoluble roller supported in a case containing water within which a part of said roller is immersed, so that by rotating the said roller the water will be taken from the supply within the case and distributed over the face of the roller. These devices are objectionable, however, owing to the fact that a too copious supply of water is obtained, because the moistening-roller is immersed directly in the body of water, and when it is turned the part that was immersed in the water will be brought on top and brings a large supply of water with it, so that the article which is to be moistened comes in contact with a surface of the roller which is too thoroughly wet for the purposes intended, instead of being simply moistened. In the practical use of said device it is necessary to allow time for sufficient evaporation before applying the article to the wet roller; or in the case of moistening the fingers it will be necessary to dry them somewhat before using them. I overcome this very serious and practical objection by the use of two or more rollers, as described, which are provided with porous coverings, so that the roller immersed in the water does not come in contact with the article to be moistened, but conveys its moisture directly or indirectly to a moistening-roller, so that said moistening-roller will be moistened sufficient only to slightly and properly moisten the article with which it comes in contact.

I claim as my invention—

A portable moistening device described, comprising the vessel A, having an opening in its top A′, surrounded by the flange or curb A^2, and a plurality of rollers placed one above another, the lower one of which is partially immersed in the fluid contained in the vessel A, and the superposed one or ones of which are supported in the end portions of the flange or curb A^2.

In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

MARTIN HOLST.

Witnesses:
TAYLOR E. BROWN,
HARRY COBB KENNEDY.