Dec. 2, 1924. 1,517,649

C. E. MOREHOUSE

STENCIL MOISTENING DEVICE

Filed Nov. 4, 1921 3 Sheets-Sheet 1

Fig. 6.

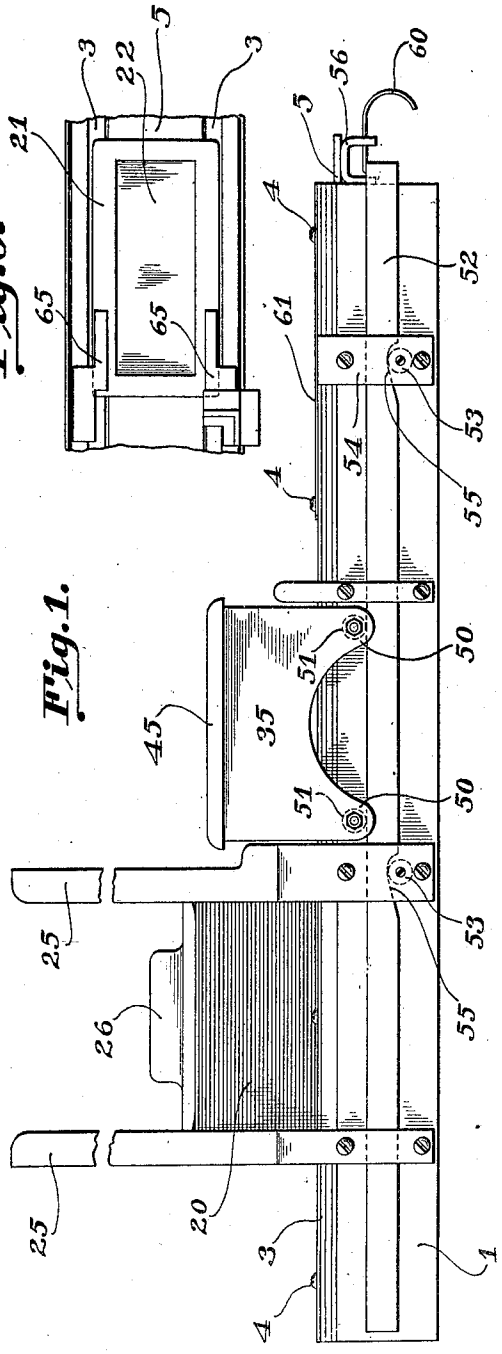
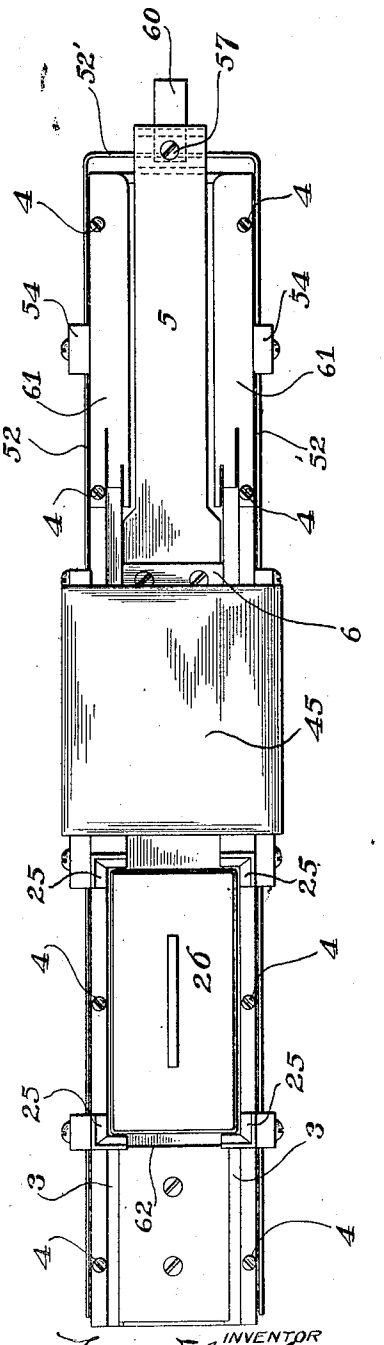



Fig. 1.

Fig. 2.




INVENTOR
Cyrus E. Morehouse
BY Cyrus N. Arledge
ATTORNEY

Dec. 2, 1924. 1,517,649

C. E. MOREHOUSE

STENCIL MOISTENING DEVICE

Filed Nov. 4, 1921 3 Sheets-Sheet 2

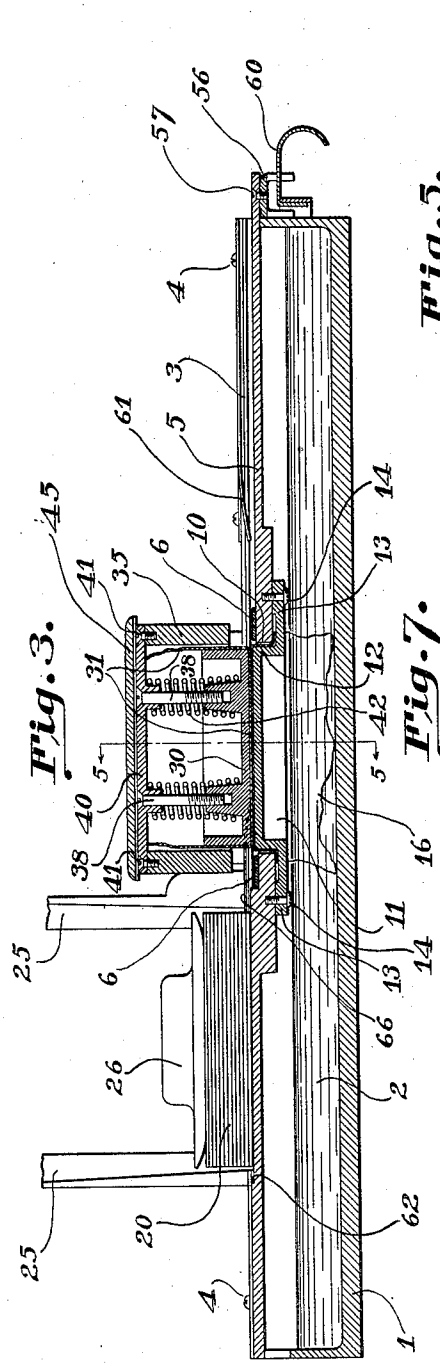


Fig. 3.

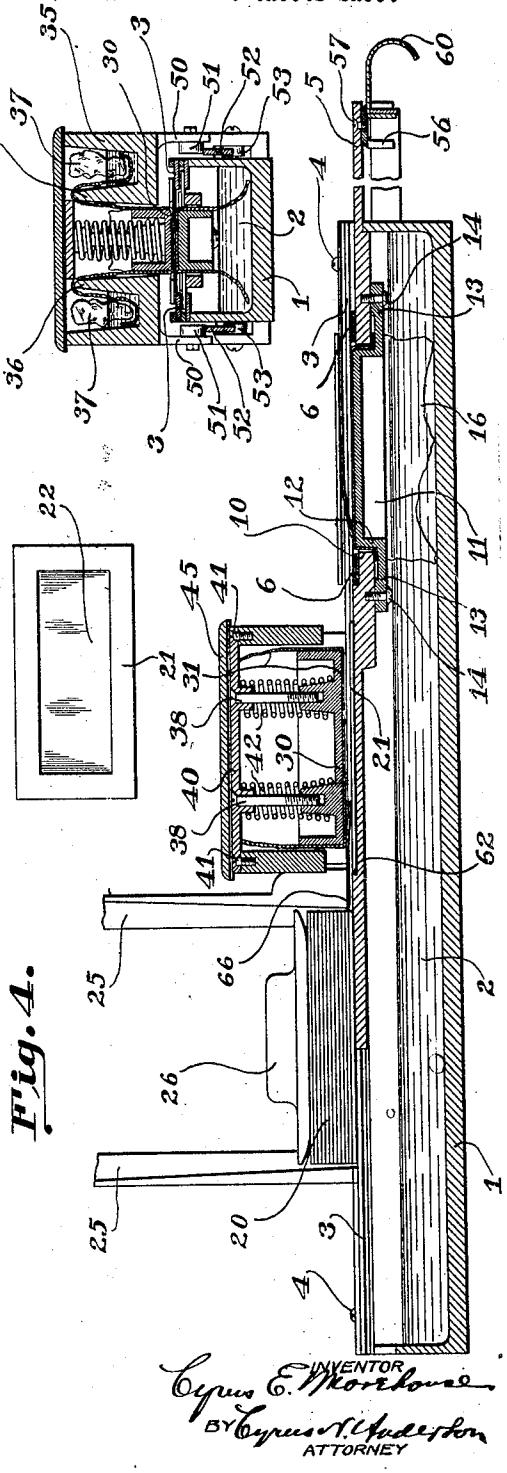


Fig. 4.



Fig. 5.



Fig. 7.

Cyrus E. Morehouse
INVENTOR
BY Cyrus N. Anderson
ATTORNEY

Dec. 2, 1924. 1,517,649

C. E. MOREHOUSE

STENCIL MOISTENING DEVICE

Filed Nov. 4, 1921 3 Sheets-Sheet 3

Fig. 8.

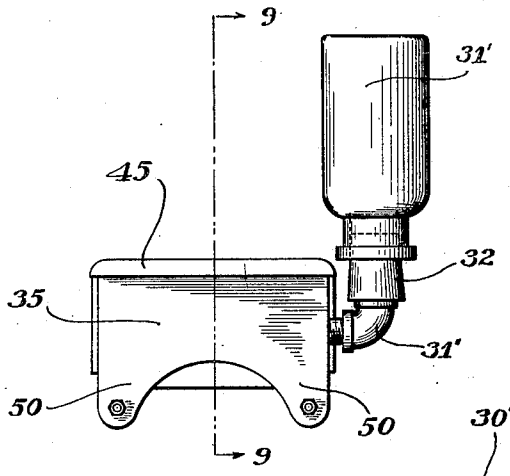



Fig. 10.

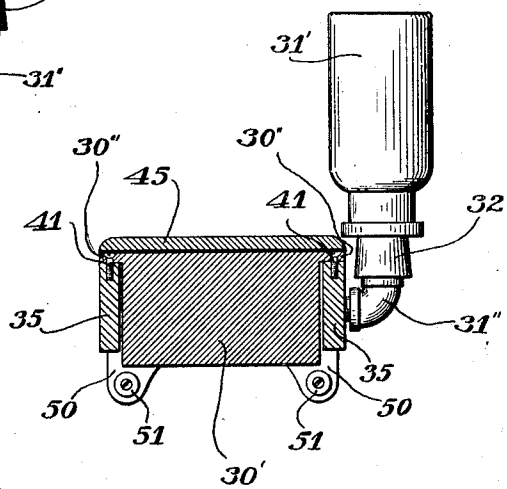
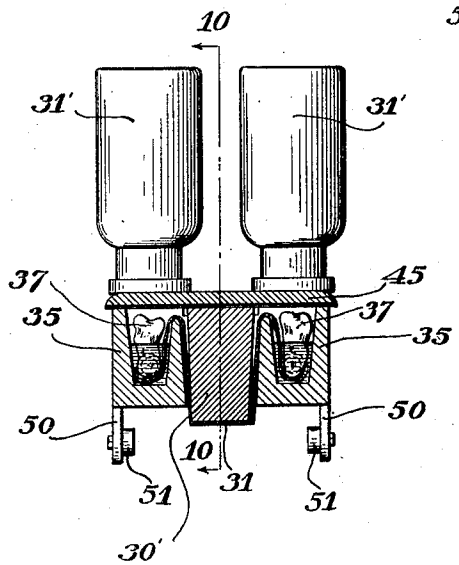



Fig. 9.




INVENTOR

Cyrus E. Morehouse

BY Cyrus W. Anderson

ATTORNEY

Patented Dec. 2, 1924. 1,517,649

# UNITED STATES PATENT OFFICE.

CYRUS E. MOREHOUSE, OF PHILADELPHIA, PENNSYLVANIA.

## STENCIL-MOISTENING DEVICE.

Application filed November 4, 1921. Serial No. 512,707.

*To all whom it may concern:*

Be it known that I, CYRUS E. MOREHOUSE, a citizen of the United States, and a resident of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented an Improvement in Stencil-Moistening Devices, of which the following is a specification.

My invention relates to devices for moistening stencils preparatory to the forming thereon of markings such as letters, figures, etc., and it has for its general object to provide a device having means for simultaneously moistening both sides of the central fibrous sheet of the stencil on which the markings are to be placed.

A further object is to provide a device having a moistening means and means for successively supplying stencil cards thereto to be moistened.

Another object is to provide a device comprising a couple of oppositely disposed cooperating moistening pads with means for successively removing stencils from a pile and conveying them into position between said pads where they become moistened.

A still further object is to provide means whereby one of the said pads may be reciprocated and also means to effect relative movements of the said pads away from each other prior to such reciprocating movement so as to prevent sliding movement of either pad against the stencil card.

Other objects and advantages of the invention will be pointed out in the detailed description thereof which follows or will be apparent from such description.

In order that the invention may be readily understood and its many practical advantages fully appreciated, reference should be had to the accompanying drawings in which I have illustrated one form of a convenient embodiment thereof. However, it will be understood that the invention is susceptible of embodiment in other forms of construction than that shown and that changes in the details of construction may be made within the scope of the claims without departing from the invention.

In the drawings:

Fig. 1 is a view in side elevation of a device embodying my invention;

Fig. 2 is a top plan view thereof;

Fig. 3 is a longitudinal central sectional view showing the parts in normal position ready to be operated;

Fig. 4 is a similar view but showing one of the parts after it has been operated and in extended position;

Fig. 5 is a transverse sectional view taken on the line 5—5 of Fig. 3;

Fig. 6 is a top plan view of a portion of the structure with certain other parts removed;

Fig. 7 is a top plan view of one of the stencil cards;

Fig. 8 is a view in side elevation of a modified construction of one member of the moistening means;

Fig. 9 is a transverse sectional view taken on the line 9—9 of Fig. 8; and

Fig. 10 is a longitudinal sectional view taken on the line 10—10 of Fig. 9, the porous pad sheet or cover being omitted.

Referring to the drawings: 1 designates a rectangular shaped receptacle which is adapted to hold water, as indicated at 2. The said receptacle is provided at its opposite sides with guides, as indicated at 3, the said guides comprising spaced strips secured to the upper edges of the sides of said receptacle by means of screws 4. A slide plate 5 is provided having transversely arranged narrow plates 6 secured in spaced relation to each other upon the upper side thereof, the opposite ends of which project beyond the opposite edges of the said slide plate and extend into the guides 3 whereby the said slide plate is supported in slidable relation with respect to the receptacle 1. When the slide plate is in the position shown in Figs. 1 to 3 inclusive it practically closes the said receptacle.

The slide plate or member is provided at its central portion with an opening 10. Secured to the underneath side of the slide plate or member 5 is a clamping member 11 having a central projecting portion 12 which extends upwardly through the central opening 10. The opposite projecting ends 13 of the clamping member 11 are fastened by means of screws 14 to the slide plate or member 5. The upper side of the projecting portion 12 of the clamping member 11 is covered with a sheet of suitable moisture or water holding means, such as chamois skin, the portions of which upon opposite sides of the said clamping member depend, as indicated at 16, and extend into the water 2 within the receptacle 1. Portions of the said absorbent sheet of material are clamped between the end portions 13 of the clamping

member and the adjacent opposing portions of the slide plate or member 5 so that the said absorbent sheet of material is firmly secured in position with a portion thereof overlying the top surface of the part 12 which projects through the opening 10 of the slide plate or member. The clamping member 11 with the absorbent sheet of material thereover constitutes a moistening pad.

The rear portion of the slide plate or member 5 is adapted to extend underneath and to support a pile of stencil cards 20 comprising a marginal frame-like portion 21 having secured upon one side thereof by a suitable adhesive or otherwise a thin fibrous sheet of material 22, usually Japanese fiber paper. The opposite sides of the said fibrous sheets are coated with a suitable gelatine compound. These cards are well known commercial articles of manufacture and need not be further described.

These cards are retained in position one above the other by means of vertical standards or posts 25 secured at their lower ends as shown to the opposite sides of the receptacle 1 and in order to insure satisfactory operation said cards should be held down by means of a weight 26.

For co-operating with the moistening pad carried by the slide plate or member 5, and as shown in Figs. 3, 4 and 5, a top moistening pad is provided comprising a spring pressed base member 30 over which is stretched a sheet 31 of suitable absorbent material, such as chamois skin, the opposite sides of which extend upwardly through a central opening in a receptacle 35 and over the upper edges of intermediate walls 36 in said receptacle, and then downwardly into receptacles formed between the said intermediate walls and the outer walls of the said receptacle. The said oppositely disposed receptacles or compartments contain water which by capillary attraction is conveyed to the portion of the said absorbent sheet underneath the lower side of the base portion 30 of the pad. For the purpose of retaining the water and the moisture within the compartments or receptacles upon the outer sides of the intermediate walls 36, I place quantities of absorbent material 37 such as cotton therein. The base portion 30 of the upper pad structure is adjustably secured by means of screw bolts 38 to a plate or bar 40, the opposite ends of which are secured to the opposite ends of the receptacle 35 by means of screws 41. The said pad is pressed downwardly by means of coiled springs 42 the lower ends of which contact with the upper side of the base member 30, while the upper ends thereof contact with the lower side of the plate or bar 40. By adjusting the screw bolts 38 the position of the pad comprising the base member 30 and the absorbent covering therefor may be adjusted with relation to the lower side of the receptacle 35 and also so as to cause it to properly cooperate with the lower pad upon the slide plate or member 5. The top of the receptacle 35 is closed by means of a cover 45.

In the modified construction of the top member of the moistening means shown in Figs. 8 to 10 inclusive of the drawings, the parts 31, 35, 37, 41, 45, 50 and 51 are identical with the parts correspondingly designated in the previous figures of the drawings. In the said Figs. 8 to 10 $30^1$ designates the base or body member of the upper or top pad around the under or lower side of which the porous pad sheet or cover 31 extends. The said base $30^1$ is solid or integral and is provided with projections $30^{11}$ at its opposite ends which are secured to the central portions of the upper edges of the opposite ends of the receptacle 35 by the screws 41. In order to keep the two water holding compartments, which are situated at the opposite sides of the receptacle, supplied with water, I have provided the bottles $31^1$ each of which communicates with one end of one of the said compartments near its bottom through a pipe connection $31^{11}$. The opening through each pipe connection extends through a stopper 32 secured to the outer upper end thereof. The mouth of each bottle is closed by one of the stoppers 32 as shown. When the water in a compartment is lowered to a point below the opening of the pipe connection connected therewith or below the upper portion of said opening, air enters the bottom which is secured to said connection and additional water is allowed to flow from said bottle into said compartment. However when the level of the water in said compartment reaches a certain distance above said opening the flow of water from the bottle ceases because of atmospheric pressure upon the top surface of the water in the compartment, there being a partial vacuum in the upper closed end of said bottle above the water which may be present therein.

When the slide member is in the position shown in Figs. 1 to 3 of the drawings with the pad carried thereby underneath the upper pad upon the receptacle 35, the said upper pad rests against or upon the first named or lower pad, so that if a stencil is in place between the said pads both pads will contact with the central portion thereof, the bottom pad with the lower side, and the top pad with the upper side thereof. It should be noted that these pads are of such dimensions that they contact only with that portion of the fibrous diaphragm of the stencils within the outside supporting frame structure 21 thereof, so that no moisture is applied to the marginal or frame portion of the stencil structure. The screw bolts 38 should be so adjusted that the top pad will

properly contact with the central portion of the stencil to be moistened when in place between the two pads.

When the slide plate or member is in position as shown in Figs. 1 to 3 inclusive of the drawings, the receptacle 35 and pad carried thereby are supported upon the pad carried by the slide, as already indicated, but in order to prevent relative sliding movement of the said pads while in contact with each other or while in contact with a stencil card between the pads, means is provided for elevating the receptacle 35 together with the pad carried thereby and moving the said pad out of contact with the pad or with a stencil upon the slide before any movement of the latter is allowed to take place.

The means provided for this purpose comprises downwardly extending projections 50 at the four corners of the receptacle 35, each of which projections is provided with a wheel or roller 51 which wheels or rollers are adapted to contact with and rest upon the upper edges of a slidable track or support 52 which is of U or yoke-shape, as indicated in Fig. 2 of the drawings. The bottom edges of the opposite sides or legs of the member 52 rest upon rollers 53, the front rollers being supported within recesses upon the inner sides of blocks 54 secured to the opposite sides of the receptacle 1. The rear rollers 53 are supported within recesses formed upon the inner sides of the lower end portions of the front posts or standards 25 previously referred to. When in normal or rear position as shown in Fig. 1, the rollers 53 are situated in notches 55 in the lower edges of the opposite sides of the member 52, which notches have cam-acting edges. The forward end portion 52′ of the yoke member 52 is situated between the opposite sides of an inverted U-shaped member 56 which is secured by means of a screw 57 to the under side of the forward end of the slide 5. The depending portions of the said U-shaped device 56 which are spaced from each other as shown in the drawings may be regarded as depending lugs. A hooked finger piece 60 is secured to the forward portion 52′ of the member 52 whereby the said member may be readily moved back and forth upon the supporting wheels or rollers 53. When in normal position; that is, the rear position prior to operation, the members 52 and 5 are in the positions shown in Figs. 1 to 3 of the drawings, in which positions the rollers 53 occupy positions within the cam notches 55; also when the parts are in said positions the portion 52′ of the member 52 occupies a position adjacent the rear side of the inverted U-shaped device 56. As a result of this arrangement and relationship there is a certain amount of lost motion between the member 52 and the slide member 5. When the member 52 is pulled forward the rearwardly and downwardly inclined portions of the notches 55 ride up upon the rollers 53 so as to elevate or lift the receptacle 35 and the pad carried thereby prior to the forward sliding movement of the slide member 5. Forward movement of the member 52 does not effect forward movement of the slide member 5 until the portion 52′ contacts with the forward depending portion of the device 56. It is during such forward movement of the member 52 prior to any movement of the slide 5 that the upper pad carried by the receptacle 35 is moved out of contact with the lower pad or with any stencil card which may be in position between the two pads. The subsequent forward movement of the part 52 causes corresponding forward movement of the slide member 5 together with the pad carried thereby and also any stencil card which may have been situated thereon and underneath the upper pad. As the card is carried forward it contacts with the switch members 61 and is deflected upwardly and is supported thereon, as indicated in Fig. 4 of the drawings.

The stencil cards are successively removed from the bottom of the pile 20 and are carried forward underneath the upper pad by means of a shoulder 62 upon the upper side of the slide member 5 near the rear end thereof. If a card has been previously carried forward underneath the said upper pad and moistened by the said pads it is moved forward from such position underneath the said pad by the forward end of a rear stencil contacting therewith and pushing it forward, as indicated in Fig. 4. The momentum given to the forward stencil causes it to slide forward upon the switch plates 61 so that when it stops it is in spaced relation to the rear stencil by means of which it has been pushed forward. In order to prevent the momentum of the stencil which is carried forward by the shoulder 62 from causing it to continue to move forwardly after the slide plate or member is stopped, friction springs 65 are provided, the forward ends of which bear upon the side portions of the frame 21 of the stencils, as is clearly shown in the drawings. These springs are held in place underneath shoulders 66 upon the inner sides of the forward standards or posts 25. The stencils as they are carried forward pass underneath these springs, as is clearly shown and indicated in Fig. 4 of the drawings.

A stencil having been drawn forward by the shoulder 62 to position underneath the upper pad as shown in Fig. 4, the slide plate or member 5 is returned to what has been termed its "normal" position as shown in Fig. 3 so that the pad carried by the said slide member is returned to position under-

neath the said stencil and in contact with the central fibrous portion thereof which it is desired to moisten. As already indicated, when the slide is in such position the upper or top pad rests upon the top side of the said portion of the stencil so that both sides thereof are moistened simultaneously and in view of the fact that the pads are of a size to contact only with the portions of said stencils within the marginal frame thereof, moisture is applied to the desired portions only thereof.

In the use of the device a pile of stencils is placed in position inside of the posts or standards 25 as indicated in Fig. 1. It is then placed in such position that the operator who is operating the machine to form the markings, such as letters, figures, etc., upon the stencils may conveniently and readily catch hold of the hook-shaped finger portion 60 to operate the part 52 and the slide member 5. As indicated, the operation of the said member consists in pulling the same forward to remove a stencil from underneath the pile of stencils 20 and place it in position underneath the upper moistening pad, and thereafter returning the slide to normal position. While the operator is marking the card which has been pushed forward from underneath the upper pad the stencil which has taken its place is being moistened.

It will be seen, therefore, that by my device the handling and the moistening of the stencil cards preparatory to marking the same are greatly facilitated so that the operator may mark a substantially greater number of stencils within a given time than heretofore has been possible.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. In a stencil moistening device, the combination of moistening pads one of which is slidably supported and is adapted to be moved into and out of opposed relation with respect to the other, and means for effecting movement of the said other pad transversely of the plane of the first named pad toward and from the same.

2. In a stencil moistening device, the combination of a receptacle adapted to contain a liquid, a slidable device supported upon the top of said receptacle, a pad carried by the said slidable device, said pad having portions extending into the said liquid, a liquid holding receptacle supported above the first named receptacle and a pad carried by the said second named receptacle, the said pad being adapted to co-operate with the first named pad for succesively moistening stencils.

3. In a stencil moistening device, the combination of a slidably supported pad, means whereby moisture may be continuously supplied to the said pad, a pad adapted to co-operate with the first named pad, means for continuously supplying moisture to said second named pad, and means for effecting relative movements of the said pads toward and from each other.

4. In a stencil moistening device, the combination of a lower moistening pad which is adapted to be moved back and forth, an upper moistening pad, a slidable device, means intermediate said slidable device and the said upper pad whereby upon the sliding of the said slidable device back and forth the said upper pad is moved toward and from the first named pad, and means whereby upon the sliding of the said slidable device sliding movement of the lower pad is effected.

5. In a stencil moistening device, the combination of a water holding receptacle, a slidable member supported upon the upper edges of the opposite sides of said receptacle, a moistening pad carried by the said slidable member, a water holding receptacle situated above the first named receptacle, a stencil moistening pad carried by said upper receptacle, a member slidably supported upon the said first named receptacle, means intermediate the said last mentioned slidable member and the said upper receptacle whereby the sliding movements of the said member cause elevation and lowering of the said upper receptacle, and means whereby movement of the second named slidable member causes movement of the first named slidable member.

6. In a stencil moistening device, the combination of a couple of stencil moistening pads, separate means for supporting the respective pads and one of said pads having adjustable connection with its support.

7. In a stencil moistening device, the combination of a water holding receptacle, a plate-like member slidably supported upon the top of said receptacle, a pad carried by said member, the said pad having means whereby it is moistened by the water within the said receptacle, a water holding receptacle supported upon the first named receptacle, an upper pad adjustably supported upon the said second named receptacle, and means whereby the said upper pad is maintained in moistened condition by water from the said second named receptacle.

8. In a stencil moistening device, the combination of a water holding receptacle, a member slidably supported upon the top of said receptacle, said member having a central opening therethrough, a clamping member secured to the under side of said member and having a projecting portion which extends through the said opening, a porous sheet of material extending over the said projection, the said sheet having portions clamped between the said members and also having portions depending into the said re-

ceptacle, a receptacle supported upon the first named receptacle, the said second named receptacle having an opening through the center thereof and also having water holding compartments upon the opposite sides thereof, a member situated within the said opening and projecting beyond the lower side thereof, means for adjustably connecting the said member to the said second named receptacle, and a sheet of porous material extending around the under side of said member and upwardly, the opposite ends thereof terminating within the said compartments, substantially as described.

9. In a stencil moistening device, the combination of a water holding receptacle, a member slidably supported upon said receptacle, said member being provided with a pad which is adapted to contact with and moisten the lower side of a portion of a stencil card, a second water holding receptacle situated above the first named receptacle, said second mentioned receptacle being provided with a pad for co-operating with the first named pad, a member having side portions which are situated upon the opposite sides of the said first named receptacle, means for slidably supporting the said last mentioned member, the said opposite sides of said member being provided with cam acting notches in the lower edges thereof whereby when the said member is in its rearmost position it occupies its lowermost position, and the said member moving upwardly upon its initial forward movement, means whereby such upward movement elevates the said second named receptacle and the pad carried thereby, and means whereby the first and second named members are operatively connected, the said means permitting lost motion between the said members, substantially as described.

10. In a stencil moistening device, the combination of a receptacle adapted to hold water, a pad supported upon said receptacle, means whereby water is supplied by capillary attraction from the water in said receptacle to the said pad, a second water holding receptacle located above the first-named receptacle, a pad supported thereon in co-operative relation to the first-named pad, means whereby moisture is adapted to be supplied from said second receptacle by capillary attraction to the said pad, and means for automatically supplying water to the said second receptacle.

11. In a stencil moistening device, the combination of upper and lower moistening pads, a receptacle upon which the upper of said pads is supported, said receptacle comprising a couple of water holding compartments, and water holding means supported upon said receptacle and being in communication with the said compartments for automatically supplying water thereto as required.

In testimony that I claim the foregoing as my invention I have hereunto signed my name this 25th day of October, A. D., 1921.

CYRUS E. MOREHOUSE.