Oct. 2, 1934. W. TRULL ET AL 1,975,488

DUPLICATING DEVICE

Filed April 1, 1932

Fig. 1

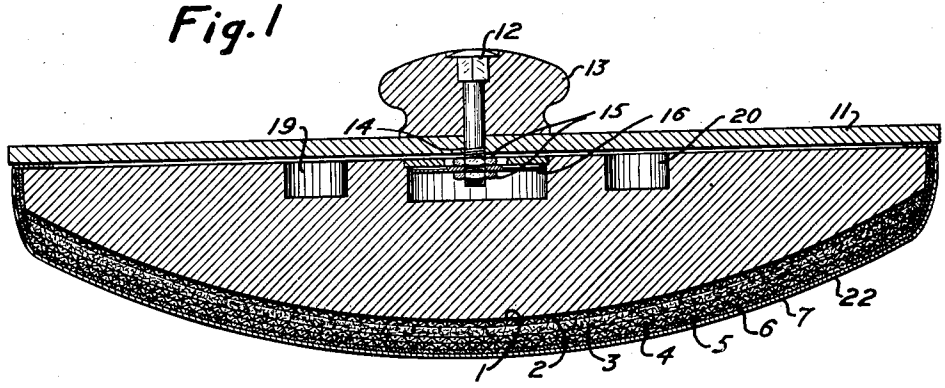


Fig. 2

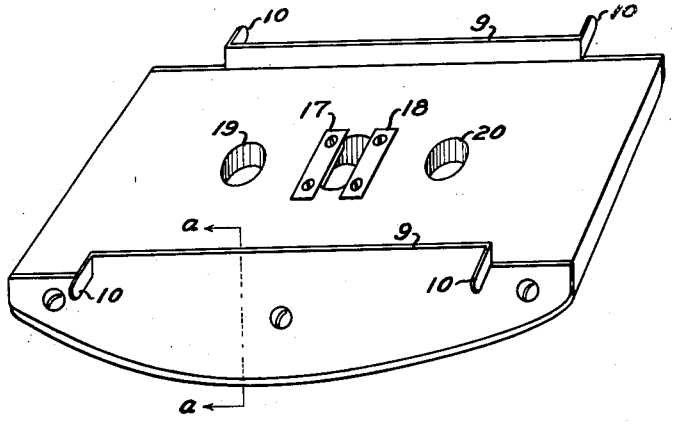


Fig. 3

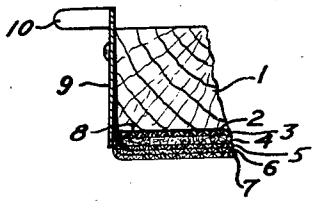
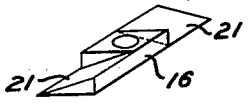


Fig. 4



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DUPLICATING DEVICE

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Application April 1, 1932, Serial No. 602,449

7 Claims. (Cl. 101—125)

This invention relates to a device for duplicating printed matter and the like.

The object of the invention is to provide efficient, durable, and relatively simple means of making duplicate copies of printed matter and the like through the use of stencils.

A further object of the invention is to provide an easily portable hand operated duplicating device which will not clog and which will make a large number of uniform copies.

Another object of the invention is to provide a device for duplicating printed matter and the like which can be quickly, easily and cleanly reinked from the outside.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination, arrangement of parts, and in the details of construction as hereinafter described and claimed, it being understood that changes in the embodiment of the invention herein disclosed may be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawing forming part of this specification:

Fig. 1 is a sectional view showing method of construction of pad, method of mounting stencil, and method of affixing stencil retaining plate to body of device.

Fig. 2 is a perspective view of device, with stencil and stencil retaining plate removed, showing catch plates and side members which have projections which serve as means for supporting said device in a suitable frame when not in use.

Fig. 3 is a cross sectional view on (*a*—*a*) showing rubber cement coating on side of pad to prevent loss of ink through sides.

Fig. 4 is a perspective view of the catch member 16.

Various parts may be made of wood, fiber, metal, etc., without departing from the spirit of the invention.

Like numerals indicate corresponding parts in the different figures of the drawing.

The preferred form of the device consists of a member 1, shown in Fig. 1, to the curved side of which is applied a smooth layer of fish glue 2. This member 1 is made of wood. To the dry glue layer 2 is applied a fine mesh wire screen 3 which acts as an ink reservoir. Over the screen 3, a piece of felt 4 is placed. Next a piece of flannel 5 is placed upon the felt 4. This flannel piece 5 acts as a breaker and diffuser of the ink preventing an excess flow of ink and providing an even distribution of ink through every part of the stencil through which ink is dispersed. A piece of silk mull 6, of fairly open mesh, is next applied. The last member 7 is a piece of cotton and silk fabric of very fine mesh.

The use of these last two pieces of silk is an important feature of the device in the fact that they are silk, and the last layer being of very fine mesh, a clean, close grained surface through which lint and smudgy particles cannot pass, is created.

The various parts of the pad are assembled as shown in Figs. 1 and 3, the last two members 6 and 7 being brought over the edges of the others and fixed to the wooden member 1 with rubber cement.

A heavy coat of rubber cement 8 is applied to the sides of the members 3, 4, and 5 before affixing the members 6 and 7 as shown in Fig. 3.

The side plates 9 serve several purposes, namely: (1) They tend to prevent warping of the wooden member 1; (2) They cover the rough end grain of the wood; (3) By making them of metal and by polishing or plating them, they enhance the looks of the device; (4) The ears 10, shown in Figs. 2 and 3, serve the extremely useful purpose of supports for the device when not in use. Any suitable frame or box may be used for a bracket.

The member 11, shown in Fig. 1, is a rectangular plate, having a hole through its center, which fits between the side plates 9 and holds the ends of the stencil 22 tightly against the member 1, thus holding the stencil in proper alignment on the pad.

The method of affixing the member 11 to the member 1 is very simple and is clearly shown in Figs. 1, 2 and 4. A carriage bolt 12 is fitted, through a handle 13, and the hole 14 in the plate 11, with two nuts 15 and a holding member 16. The member 16 fits between the plates 17 and 18 affixed to the member 1 and by giving the handle 13 a half twist the beveled ends 21 of the member 16 will ride under the plates 17 and 18, thus drawing down the member 11 tightly on the stencil 22.

The holes 19 and 20 are merely to facilitate the handling of the device while applying ink.

The operation of the device is as follows:

The member 1 is grasped by the holes 19 and 20 and ink is applied to the surface of the pad. By the action of osmosis and capillary attraction the ink will be drawn into the pad until checked by the glue layer 2. After allowing a few minutes for penetration the stencil is placed in the desired position on the pad. The ends of the stencil are then brought over the ends of the member 1, as

shown in Fig. 1, and the plate 11 is placed in position. With a half twist of the handle 13, said plate is locked in position holding the stencil rigidly. The device is now ready for use and with one good inking should print about 1000 clear copies without reinking. Clear legible prints can be made with one motion. The density of the prints can be increased by merely exerting more pressure on the device.

What we claim is:

1. A device for duplicating printed matter and the like comprising a main body with a curved surface on one side, and superimposed several layers of various materials fastened thereto in the following order: a smooth layer of fish glue, a layer of fine mesh wire screen, a layer of felt, a layer of flannel, a layer of fairly open mesh silk mull, and a layer of very fine mesh cotton and silk fabric, the latter being adapted to lie next to the stencil.

2. A device for duplicating printed matter and the like, having a main block, an ink pad affixed thereto, a plate adapted to hold a stencil in place on said block, there being a pair of holes in the top of said block adapted to be grasped by the fingers of the operator while inking said pad.

3. A device for duplicating printed matter and the like, having a main block, a pad affixed thereto, a plate adapted to hold a stencil in place on said pad, said plate having a hole therein, a bolt having a handle affixed to one end and a bevel ended plate affixed to the other end, a pair of plates affixed to the upper side of said block to be engaged by said bevel ended plate, thereby drawing down said stencil holding plate tightly on a stencil.

4. A device for duplicating printed matter and the like, having a main block, a pad affixed to said block, a plate adapted to hold a stencil in position on said pad, means for holding said plate in position, and side plates adapted to support said device when not in use.

5. A device for duplicating and printing having metallic side plates with ears bent therefrom, said ears being adapted to support said device when said device is not being used.

6. A device for duplicating printed matter and the like having a pad built up of several layers having a coating of rubber cement along the sides of said layers to prevent the loss of ink through said sides of said pad.

7. A device for duplicating printed matter and the like comprising a main body with a curved surface on one side, and superimposed layers of glue, wire mesh, felt, flannel, open mesh silk mull, fine mesh cotton and silk fabric applied thereto for the purpose specified.

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