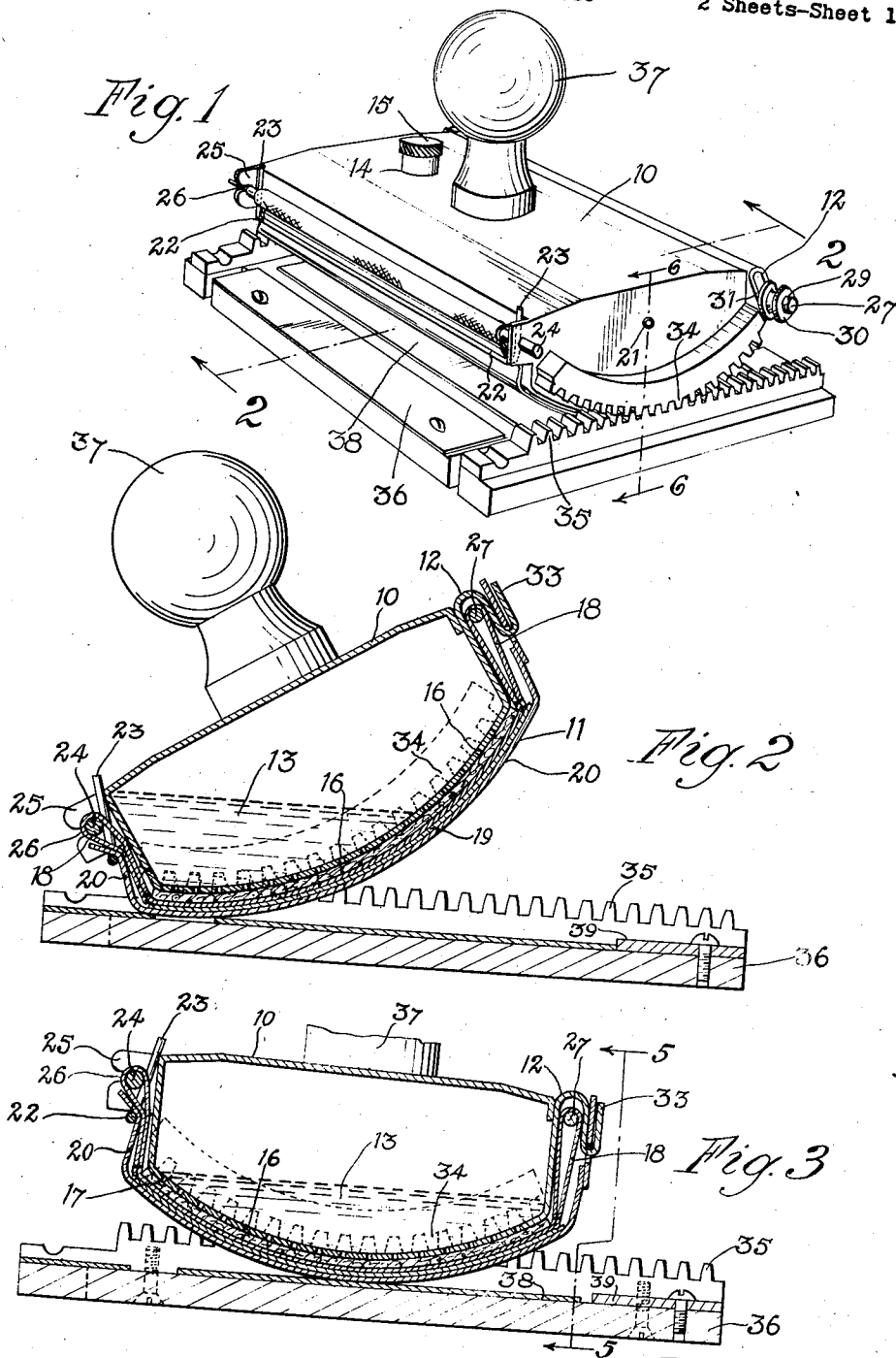


June 4, 1940.

M. J. DOPPELT
DUPLICATING DEVICE

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2 Sheets-Sheet 1



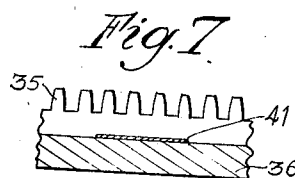
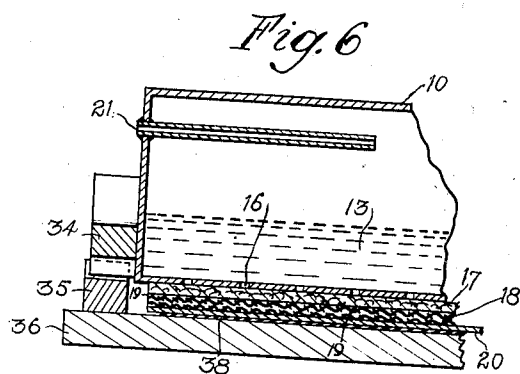
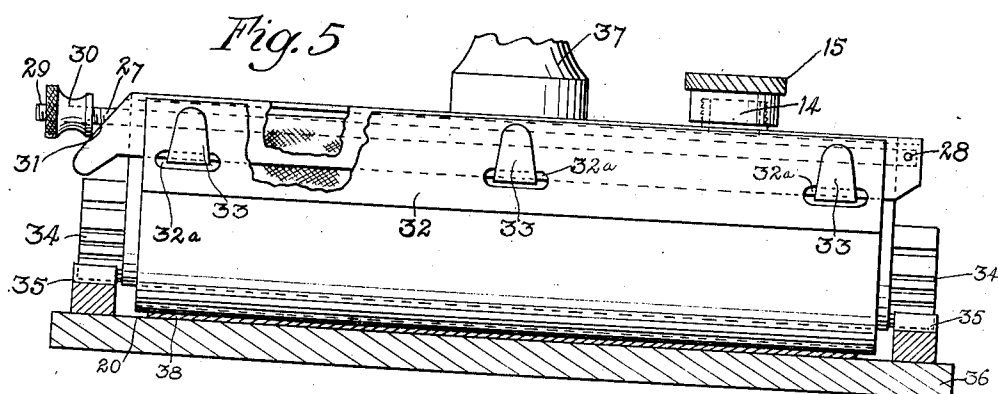
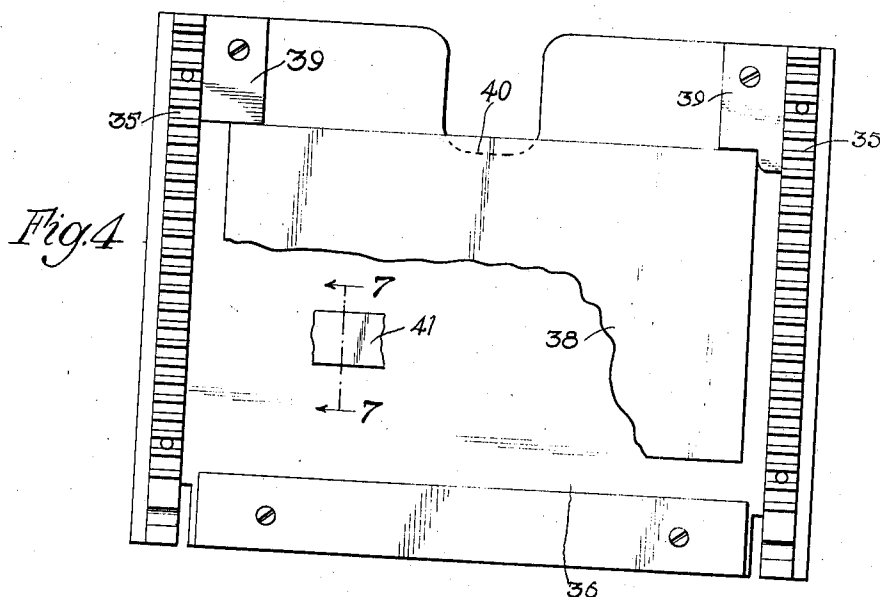
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June 4, 1940.

M. J. DOPPELT
DUPLICATING DEVICE
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UNITED STATES PATENT OFFICE

2,203,192

DUPLICATING DEVICE

Max J. Doppelt, Chicago, Ill.

Application April 2, 1938, Serial No. 199,610

2 Claims. (Cl. 101—126)

The invention relates to duplicating devices, especially those provided with a stencil, whereby a large number of copies may be made.

Duplicating devices are extensively used at the present time with fairly good results, but are prohibitive in price and complicated in construction, so that they easily become inoperative.

It is, therefore, an object of the invention to provide a portable, inexpensive and yet efficient device which meets all the requirements for making a large number of copies from a stencil.

It is a further object to provide a base and a platen completely disassociated therefrom, but which are placed in exact co-operative relation with each other, by merely superposing the platen onto the base.

Another object of the invention is to provide a simple but efficient duplicating machine in which the platen may be readily removed by lifting and used for printing on surfaces not adapted to be placed within the device.

It is still another object of the invention to provide a durable duplicating device in which the stencil may be readily removed and replaced.

Another object of the invention is to provide a durable and portable duplicating machine in which a large quantity of ink may be stored in the platen, and permitted to ink the stencil as used, so that a self contained device is provided.

With these and other equally important objects in view, which will become apparent from a perusal of the invention, the latter comprises the means and novel steps described in the following specification, particularly pointed out in the claims forming a part thereof, and illustrated in the accompanying drawings, in which:

Fig. 1 is a perspective view of my improved duplicating device.

Fig. 2 is a section on the line 2—2 of Fig. 1.

Fig. 3 is a view similar to Fig. 2, with the platen in different position.

Fig. 4 is a top plan view of the base.

Fig. 5 is a section on the line 5—5 of Fig. 3.

Fig. 6 is a fragmentary section on the line 6—6 of Fig. 1, and

Fig. 7 is a detail section on the line 7—7 of Fig. 4.

Referring to the several views in the drawings, 10 designates a hollow body or casing, which has a curved bottom 11, constituting the platen; at one side of the casing and at the top thereof a lip extends therefrom terminating in an inverted U-shaped member 12. The ink 13 is applied to the platen through the opening of a neck 14 in the top of the casing, which neck is closed by a

cap 15. The ink penetrates through perforations 16 in the bottom 11 of the casing 10, into an absorbent pad of felt 17, and passes successively to a layer of muslin 18, a sheeting of silk 19, and finally reaches the stencil 20. An air vent 21 in the casing ensures proper seepage of the ink through the perforations 16 and permits air displacement when filling the device with ink.

The felt pad 17 and the silk sheeting 19 are held in place by a muslin wrapper 18, which is secured to and kept taut on the platen by a bar 22, co-extensive with the platen, and provided with bent ends 23 which are engaged by a lock bar 24 around which the muslin wrapper is looped, also co-extensive with the platen and extending at one end into an aperture of one of a pair of lugs 25, integral with the casing 10, and entering into a slot 26 of the other lug 25. The opposite end of the muslin wrapper, is looped over a bar 27 on the opposite side of the platen, which bar is secured at one end by a pin 28. The other end of the bar 27 is threaded at 29 and is engaged by a thumb nut 30 which, when tightened, tends to slide the bar along a cam edge 31, provided at the adjacent edge of the inverted U-shaped member 12.

Thus, the muslin wrapper 18 and the enclosed felt pad and silk sheeting may be tightened or loosened across the plates, as desired, by turning of the nut. The stencil 20, which is firmly attached to a strip 32, held in position by hooks 33 integral with the U-shaped member 12, and entering openings 32a in said strip, is drawn across the platen over the muslin wrapper and is retained in position by being clamped under the bar 22.

Tightening or loosening of the stencil is obtained by releasing the lock bar 24 and using the fingers to manipulate the stencil into proper position.

Secured to the platen on either side are segmental gears 34, which are adapted to mesh with racks 35 on either side of the base of the device 36 and provide for a motion of the platen upon the base by manipulation of a knob or handle 37 mounted on top of the casing 10.

In the operation of the device, the paper or card to be printed, designated as 38, is placed on the base against abutments or aligning members 39, whereby it is in proper position to receive the imprint from the platen. The platen is placed on the base so that the gears mesh with the rack, whereupon, by rocking, the imprint is received on the surface of the paper, and the platen is then rocked back to its starting position.

tion, so that the printed card may be removed and replaced by a new card.

A slot 40 in the base, at the center thereof, facilitates grasping and removal of the printed card. To compensate for worn portions of the stencil, a patch 41 may be applied to the base, to raise the card or paper, wherever desired, so that a greater pressure is applied at that point.

Attention is called to the fact that, by virtue of the provision of the racks and segmental gears, the card, when engaged by the platen or stencil, participates in the movement of the platen by being shifted on the base, so that the card will always remain in the same relative position to the platen throughout the movement of the latter.

Thus the platen may be rocked many times and the imprint will never become blurred but only more distinct.

It is evident that the absence of any moving parts, except the platen itself, not only provides for the most simple operation, but also reduces to a minimum the possibilities of the device getting out of order. Furthermore, the fact that the platen and the base are entirely disconnected, makes the platen, or casing alone, readily accessible as a duplicating machine in itself.

In order to use the device for printing on surfaces too large or bulky to be placed on the base, it is only necessary to lift the casing from the rack and rock it wherever desired. The segmental gears 34 are inset from the lower periphery of the platen and terminate inwardly of the printing surface. Hence they will not engage a work surface when the platen is used apart from

the base and prevent engagement of the printing surface with said work surface. At the same time, the large work surface cannot be marred by the gears.

While the drawings disclose a preferred embodiment of the invention, numerous changes, alterations and revisions, may be made without departing from the spirit of the invention.

I, therefore, do not limit myself to the details of construction, as shown, but claim my invention as broadly as the state of the art permits.

I claim:

1. A duplicating device, including a base having racks, and a printing platen having a reservoir and a stencil attached thereto and being detached from said base and having an arcuate printing surface, said platen having segmental gears adapted to mesh with said racks upon superposing said platen on said base, said gears being inset from the periphery of said printing surface and having their teeth terminating inwardly thereof.

2. A duplicating device, including a base, and a self-contained printing platen detached from said base and having an arcuate printing surface and adapted to move over said base with a rocking motion, complementary toothed means carried by said base and platen, said means being adapted to mesh and gear said platen to said base upon superposition thereon, said means on said platen terminating inwardly of the periphery of said printing surface.

MAX J. DOPPELT.