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E. BORREGARD

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SCREEN HOLDER

Original Filed July 13, 1927

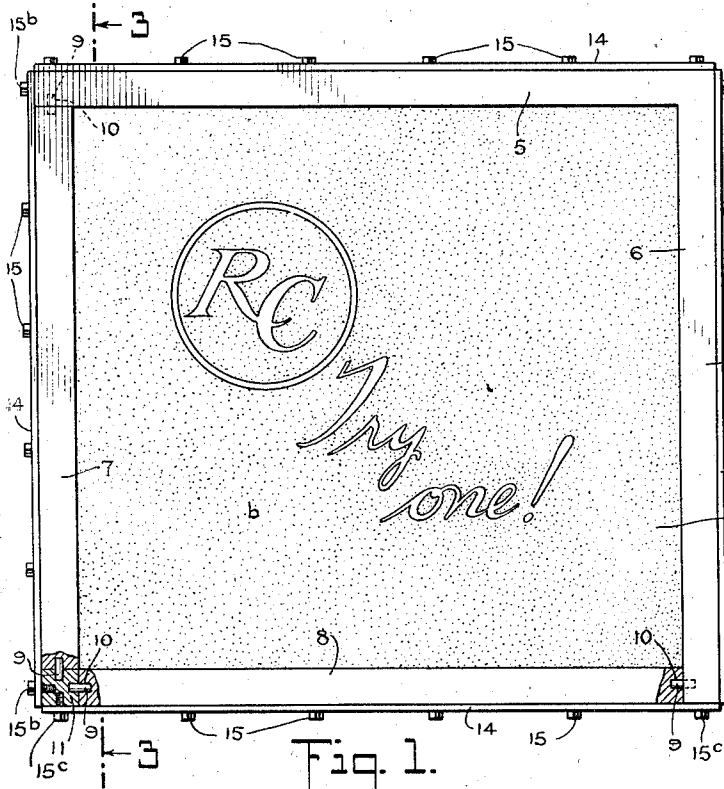


Fig. 1.

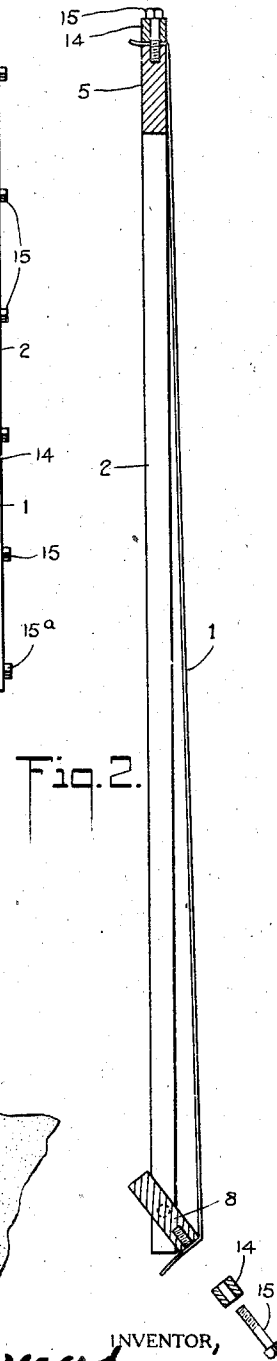


Fig. 2.

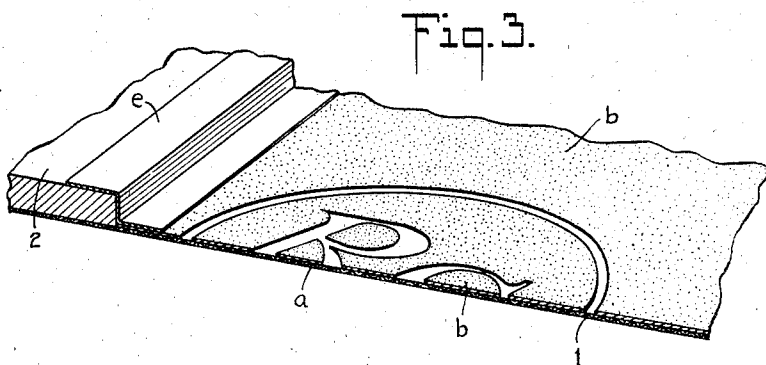


Fig. 3.

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SCREEN HOLDER

Original application filed July 13, 1927, Serial No. 205,429. Divided and this application filed April 26, 1928. Serial No. 272,917.

This application is a division of my prior application, Serial No. 205,429, filed July 13, 1927, and relates to the stencil or printing screen and frame therefor, disclosed therein.

The general object of the invention is to provide a screen frame of simple, strong and durable construction in which the screen or stencil fabric may be easily and quickly mounted and properly stretched in both directions and which also provides a suitable reservoir for the liquid color.

The characteristics and advantages of the invention are further sufficiently explained in connection with the following detail description of the accompanying drawings, which illustrate one representative embodiment. After considering this example, skilled persons will understand that many variations may be made without departing from the principles disclosed, and I contemplate the employment of any structures that are properly within the scope of the appended claims.

Fig. 1 is a top plan of a screen frame and screen embodying the invention in one form.

Fig. 2 is a fragmentary, sectional and perspective view, on enlarged scale.

Fig. 3 is a section at 3—3, Fig. 1.

The present frame and screen are designed for use in a screen printing machine of the character described in the above identified parent application, but are not necessarily limited to such uses, and may be employed for screen or stencil printing in machines of other types, or for stencilling by hand operations.

The screen proper consists of a sheet 1 of silk of suitable dimensions, the margins of which are secured to the edges of a frame 2, so that the screen fabric overlies one main face of the frame and the inner contour of the frame forms a reservoir for the liquid color. The frame consists of rectangular metal bars 5, 6, 7 and 8, of which bars 5 and 6 are rigidly connected at one corner of the frame, bar 7 is pivotally connected to bars 5 and 8 and bar 8 is pivotally connected to bars 6 and 7. For this purpose a dowel or pin 9 is fixed in a hole drilled on an inner face of bar 6 near one end thereof, and the projecting end of this dowel has a bearing fit in a socket 10 formed

in the adjacent end of bar 8. Bar 7 is pivotally secured to bar 5 in a similar way. A pivot block 11 is provided for the pivotal connection of the adjacent ends of bars 7 and 8, by means of similar pins or dowels 9 fitting in sockets in the ends of the stated bars. Fastening strips 14 are provided, detachably secured to the outer faces of all the bars by screws 15.

The screen 1 is applied to the frame by first removing all of the fastening strips, and securing two opposite margins of the fabric screen to the outer faces of the two opposite bars such as 5 and 8, by application of the corresponding fastening strips 14 and insertion of all of the screws except screws 15^a. When the fabric margin is secured to bar 8, the bar is tilted to angular position as shown in Fig. 3, and after securing the fabric the bar is tilted to plane alignment, thus powerfully stretching the screen in one direction, and is secured in that position by insertion of an end screw 15^a into the end of bar 6. The other opposite margins of the fabric are then secured to outer faces of bars 6 and 7 in a similar manner while bar 7 is tilted, and that bar is then turned to plane alignment with the other bars, completing the stretching of the screen in both directions, and is secured in position by insertion of the remaining end screws 15^b, whereupon the entire frame is firm and rigid and the fabric tightly stretched over one face thereof, ready for application of a stencil design thereto as fully explained in the above identified application.

Before color is poured upon the screen, paper strips *c* are attached adhesively around the inner margins of the frame overlapping the upper frame faces, their inner faces, and the outer margins of the screen, as best shown in Fig. 2, to prevent any leakage of the liquid color between the screen and the frame members.

I claim:

1. A frame for screens of the class described, comprising two bars rigidly secured at a right angle to each other, and two other bars each hingedly connected at one end to one of the rigidly connected bars, the other

ends of said other bars being hingedly connected together, and means for securing a screen fabric to outer faces of the bars and for securing the bars in plane alignment.

5 2. A screen structure for purposes described, comprising a frame consisting of four bars in rectangular arrangement, two of the bars being rigidly connected, and the other two bars being each hingedly connected at one end to an end of one of the
10 rigidly connected bars, a hinge block to which the other ends of said other two bars are hingedly connected, fastening strips overlying outer edge faces of the bars, and a
15 screen fabric overlying one face of the frame and having its margins secured between the fastening strips and the outer bar faces.

3. A screen structure for purposes described, comprising a frame consisting of
20 four bars in rectangular arrangement, two of the bars being rigidly connected, and the other two bars being each hingedly connected at one end to an end of one of the rigidly connected bars, a hinge block to which the other
25 ends of said other two bars are hingedly connected, fastening strips overlying outer edge faces of the bars, a screen fabric overlying one face of the frame and having its margins secured between the fastening strips and the
30 outer bar faces, and strips of sheet material adhesively secured about inner walls of the frame and overlapping the outward margins of the screen adjacent the frame, to prevent leakage of liquid color.

35 In testimony whereof I have signed this specification this 20th day of February, 1928.
ERNST BORREGARD.

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