June 7, 1932. H. KAPLAN 1,862,091

MEANS FOR EMBOSSING PANELS ON CARDBOARD

Filed Jan. 2, 1931

Fig. 1.

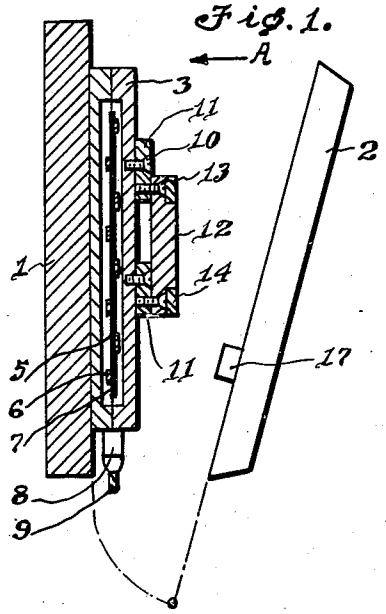


Fig. 2.

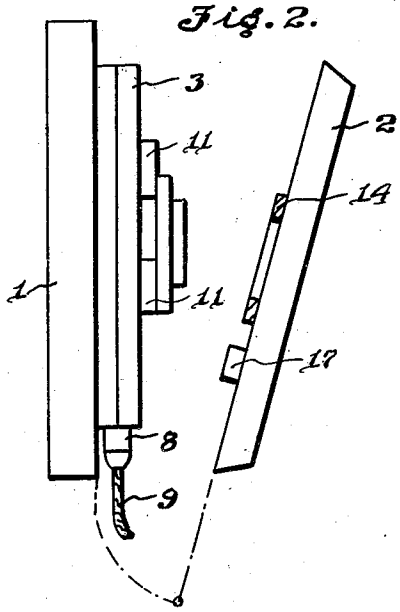


Fig. 7.

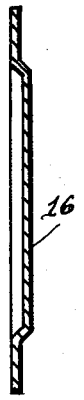


Fig. 3.

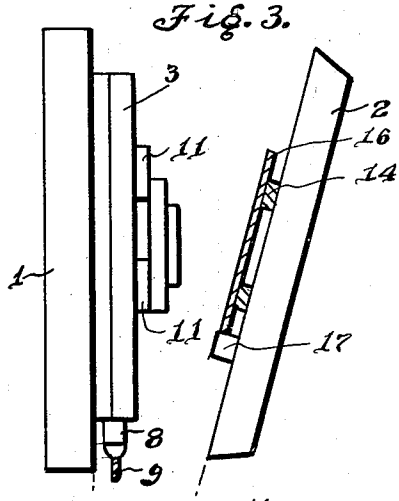


Fig. 4.

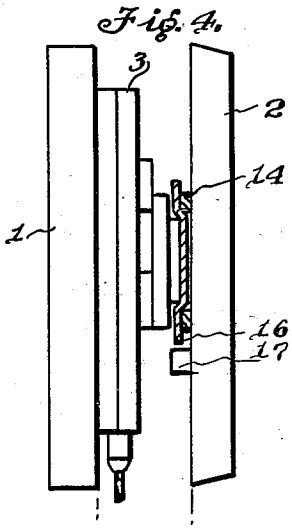
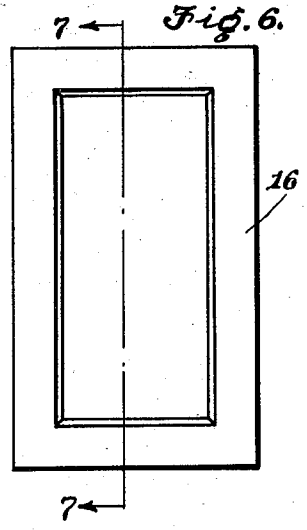


Fig. 6.



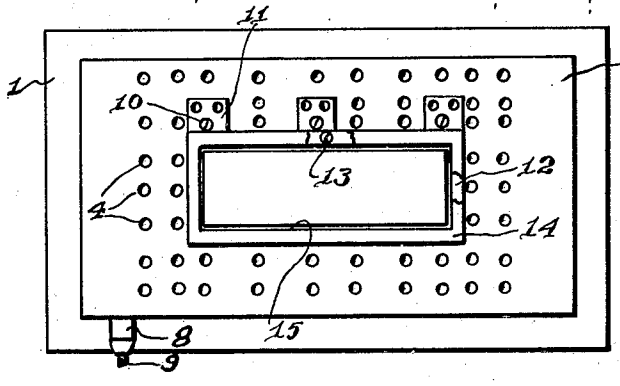


Fig. 5.

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UNITED STATES PATENT OFFICE

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MEANS FOR EMBOSSING PANELS ON CARDBOARD

Application filed January 2, 1931. Serial No. 506,259.

This invention relates to a means for embossing panels on cardboard paper or the like.

This invention is an improvement of my copending application Serial #412,222, filed December 6, 1930.

In the device described in the above application it has been found that the stock embossed by the cold dies becomes wrinkled and warped and in order to overcome this fault means are provided to heat the dies so as to give to the stock a smooth and even surface. It is therefore the object of the invention to provide means to heat the die so as to produce a smooth and even product.

Another object of the invention is to provide a simple and inexpensive method of producing embossed panels on sheets of cardboard paper or the like with the aid of the ordinary job printing press.

Still another object of the invention is to provide novel means for accurately positioning the male and female embossing dies in respect to each other.

Other objects will appear as the disclosure progresses. It is obvious that the actual practice of the invention may perhaps necessitate certain mechanical changes. It is therefore not intended to limit the invention to the embodiment illustrated but rather to define such limits in the appended claims. For a more general understanding of the invention attention is called to the drawing in which a preferred embodiment of the invention is illustrated. In this drawing like parts denote like reference characters throughout the specification.

Figure 1 is a diagrammatic sectional view of a printing press showing the male and female dies attached to the bed plate.

Figure 2 is a similar view as Figure 1 but showing the female die attached to the platen of the press.

Figure 3 is a similar view as Figure 2 but showing a sheet of stock on the platen ready to be embossed.

Figure 4 is a similar view as Figure 3 but showing the bed plate and platen closed up or in working position.

Figure 5 is a view of the bed plate of the press in the direction indicated by arrow A of Figure 1.

Figure 6 is an enlarged view of the finished product.

Figure 7 is a section on line 7—7 of Figure 6.

Referring now to the drawing in detail, numeral 1 designates the bed plate of an ordinary job printing press and 2 the platen. Attached to the bed plate is a plate 3 provided with a series of tapped holes 4. The plate 3 is formed of two sections having a hollow portion and placed within this hollow portion is an electric heating element 5 composed of the usual resistance wire 6 mounted on a frame of mica 7. The resistance wire is connected to the plug 8 into which is plugged the cable 9 leading to the source of electric current. Fastened to the plate 3 by screws 10 is a set of blocks 11. These blocks support the male die 12 by the aid of the screws 13.

The female die 14 is preferably made from a sheet of cardboard having a cut out portion 15 slightly larger in size than the outside dimensions of the male die so it can fit loosely around the said die. For accurately positioning the female die 14 it is first placed around the die 12 as best seen in Figure 1 and by the aid of a very small amount of glue applied to one side of the die 14 it is glued temporarily in place. The entire surface of the said die 14 facing the platen is then covered with glue and the platen 2 is moved towards the bed plate and then back again. The result is the die 14 having more glue on the surface will relieve itself from the plate 3 and adhere to the platen as shown in Figure 2. It will thus be seen that the female die will automatically adjust itself in the correct position without any trial or guesswork.

For the operation of embossing, the cards are placed on the platen as shown in Figure 3 and the press operated in the usual manner.

Every time the bed plate and platen close up as shown in Figure 4 an embossed panel will be made on the card 16. Numeral 17 designates the usual stop printers use for

positioning the stock on the platen. As previously pointed out the female die is made from cardboard or the like so that the edges will not cut the stock where it is embossed as would be the case if a steel die were used.

It will thus be seen that I have provided a simple and efficient means of embossing panels on ordinary stock without wrinkling or warping. After positioning the dies the operation of embossing is performed in the same manner like printing. The plate 3 is provided with a plurality of holes in its surface so that any size male die can be attached thereto. The heat from the plate 3 will readily pass and be transmitted to the male die 12. The drawing shows the heating element within the plate 3. However, similar results can be had by attaching the heating element in the die itself. The female die can be automatically and accurately adjusted with only one movement of the platen without any adjusting to do.

Having described my invention, I claim:

In a die of the class described, the combination of a plate split in half and provided with a hollowed out interior, a heating element in said interior, one face of said plate provided with a series of holes, a set of blocks provided with screws which fit in said holes, a male die attached to said blocks, and a female die adapted to co-operate with said male die.

In testimony whereof I affix my signature.

HARRY KAPLAN.