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METHOD AND ARTICLE FOR WIPING INKY SURFACES

Filed March 8, 1928

Fig. 1.

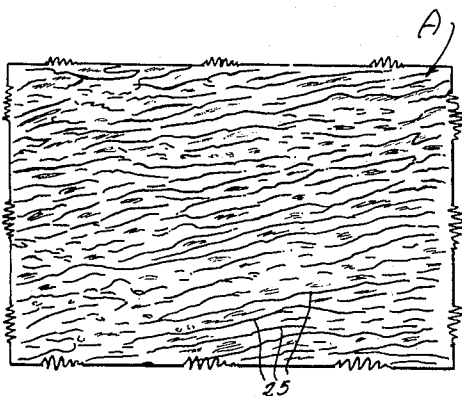


Fig. 2.

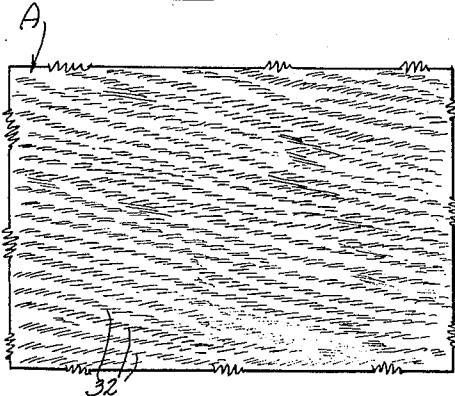


Fig. 3.

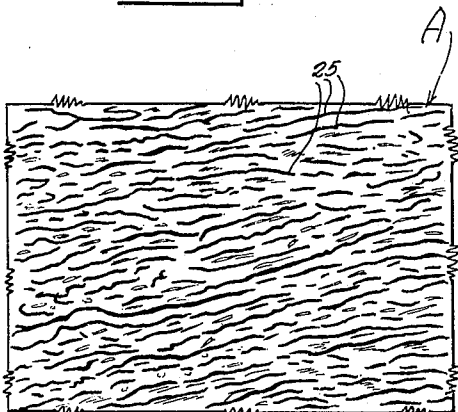


Fig. 4.

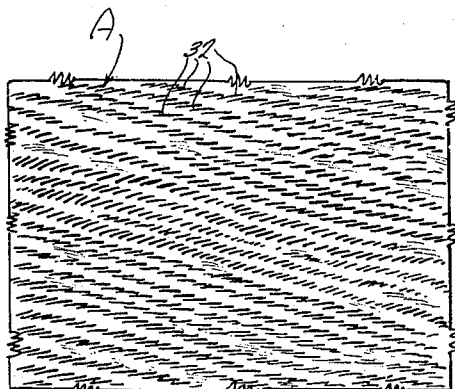


Fig. 5.

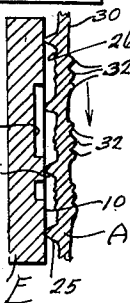


Fig. 6.

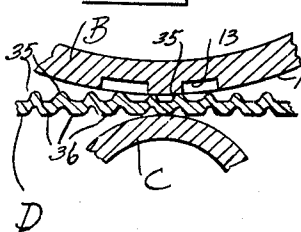
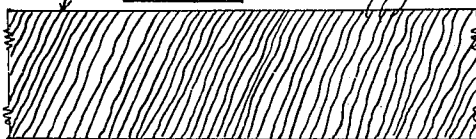


Fig. 7.



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METHOD AND ARTICLE FOR WIPING INKY SURFACES

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This invention relates to an improved method and article to facilitate the wiping of inky surfaces, such as on die plates and the like.

5 The primary object of this invention is the provision of an improved method for the wiping of ink from die plates and the like, by relative movement between the inky surface and corrugated or ridged surface of ab-
10 sorbent paper so as to catch the ink from the external surface of the die only, without materially reaching into the die cuts or recesses; the improved method of the invention thus differing over the old method of wiping ink
15 from die plates and the like by means of cloth and smooth paper to effect considerable saving in the cost of the wiping stock, and in the consumption of ink, since with the improved method the ink need not be placed so heavy
20 on the die as when conventional wiping expedients and articles are used.

A further object of this invention is the provision of an improved wiping paper for removing ink from engraving plates and the
25 like to properly condition the same.

Other objects and advantages of this invention will be apparent during the course of the following detailed description.

In the accompanying drawing, forming a
30 part of this specification, and wherein similar reference characters designate corresponding parts throughout the several views,

Figure 1 is a fragmentary view of one wiping
35 face of the preferred and improved wiping paper.

Figure 2 is the opposite face of the paper illustrated in Figure 1, which may also be used as a wiping surface for removal of ink from plates and the like.

40 Figure 3 and 4 are views showing the surfaces illustrated in Figures 1 and 2 respectively, with ink as absorbed on the roughened or ridged parts thereof incident to the wiping operations.

45 Figure 5 is a fragmentary sectional view, of an enlarged nature, showing the relation in which the paper of Figures 1 and 3 cooperate upon a die plate.

Figure 6 is a view illustrating how an em-
50 bossed wiping paper is used in the improved

method for removal of ink from engraved cylinders, such as used in engraving printing of postage stamps and the like.

Figure 7 is a reduced fragmentary view of a strip of the improved wiping paper showing certain important structural features thereof.

In the wiping of flat die plates, such as the die plate E illustrated in Figure 5 of the drawing, it is conventional to wipe the surface 10 in which the engraving cuts 11 are faced, with smooth calendered paper, with a cloth, or the operator wipes the surface 10 clean with the palm of his or her hand. In engraving operations using a die cylinder B, having a surface 12 provided with engraving cuts 13, it is conventional to wipe the surface 12 clean of ink prior to the engraving operation, by passing a cloth between the convex surface of the die cylinder B and a guide roller C. This is customary at the United States Bureau of Engraving, at the present time, where the cylinders B are used for the engraving of stamps. In the United States Bureau of Engraving the wiping
75 cloths are used on both sides from six to ten times, the cloths being laundered. I understand that the United States Government has a \$500,000 laundry necessary for the laundering of such cloths, and because the cloth material is of such nature as to sometimes
80 pass into the engraving recesses 13 of the die, the die rollers or cylinders are inked far heavier than necessary.

Referring to the improved wiping paper 85 A illustrated in Figures 1 to 5 of the drawing, the same is of absorbent stock, ranging in weight from 25 to 45 pounds per 480 sheets of standard 24" x 36" size. The paper A is furnished in long strips, on rolls, and the same is used for wiping on both sides thereof.

The paper used is preferably embossed or creped stock, or otherwise manufactured with furrows, ridges, corrugations, projections, protuberances, bosses, nebs, on one or both sides thereof, stuck up or projecting from the normal major surface. Thus, for the paper A illustrated in Figures 1 to 5, which is a creped paper, the ribs, or projections 25 are provided in spaced relation on
100

one surface or side or face thereof, the same being the face illustrated in Figures 1 and 3, and in engagement with the die plate surface 10 in Figure 5; these ridges, corrugations, or projections 25 being elevated in peaked form, preferably from the major surface 26 of the said face of the wiping paper A. The ridges, ribs, or projections 25 may be continuous from side edge to side edge of the wiping paper, if desired, or the ribs or ridges or projections may be broken, in an overlapping relation transversely of the length of the wiping paper, as illustrated in Figures 1 and 3. It is preferred that the ridges, corrugations, or projections 25 have a slope transversely on the paper with a diagonal inclination thereacross, in an acute angled relation with respect to the longitudinal axis of the stock A, as illustrated by the ridge corrugation, or projecting raised portions 25^a illustrated in Figure 7 on the paper A'; this diagonal slope of the ribs, ridges, or raised portions of the stock, A, is illustrated in Figures 1 and 3 as being slightly diagonal crosswise of the stock or paper, in order to more readily wipe the ink from the die plate or cylinder as the paper relatively moves with respect to the cylinder or die plate.

On the opposite side of the stock A from the surface 26, is a major surface 30, having bossed, roughened, nebbed, or raised projections 32, extending transversely across the stock A in series or rows which are diagonal to the longitudinal axis of the stock, in the diagonal relation illustrated in Figures 2 and 4; it being understood that the ribbed or bossed portions 32 are arranged in spaced rows to provide a ridged or corrugated-like effect which is efficient in removing ink from the engraved side of the die plates.

In Figures 1 and 2 I have shown the opposed sides of the stock A, and in Figures 3 and 4 respectively shown the opposed sides of the stock A after having been passed over inked surfaces, showing the ink in heavy lines, caught or absorbed on the protuberances, projections, ridges, corrugations, or bossed portions 25 and 32.

As illustrated in Figure 6, the stock D may be used, of an embossed nature, having the opposite sides thereof recessed or bossed, or otherwise formed to provide roughened surfaces which may catch the ink on the cut surface of the die plate or cylinder, as the case may be. In the particular embossed paper D, the same at one side has the projections 35, and at the other side has projections 36, with valleys or recesses between said projections. The projections 35 and 36 may be ridges, ribs, corrugations, protuberances, nebs, or other projections.

The passage of the wiping paper over the surface of the die may be effected by a relative movement of either the die or paper, as in conventional wiping operations. How-

ever, the paper must be sufficiently strong to stand the lateral twist or reciprocatory motion to which the same is subjected during the plate wiping operation, and it is to be noted that the ribs, or projections on the paper do not enter the cut recesses of the die plate, and while the paper wipes the plate surface entirely free of ink, the ink does not have to be spread as heavy as is ordinarily required in using conventional wipers, such as cloth. In the Bureau of Engraving, for the engraving of stamps, the saving in ink alone it is estimated will amount to \$50,000 per year.

From the foregoing description it is apparent that a novel method and wiper for the cleansing of ink from die plate surfaces have been provided, which may more efficiently and with greater economy wipe ink from plate or cylinder surfaces of engraving dies, than can be accomplished with ordinary wiping expedients and methods now used.

Various changes in the steps of the method, and formation of the improved wiping material may be made to the invention without departing from the spirit of the same or the scope of the claims.

I claim:

1. The method of cleansing the ink surfaces of engraving plates and the like which consists in passing over the ink surface a flexible material having spaced projections on the surface thereof in such manner that the projections only contact the ink surface.

2. The method of removing undesirable ink from inky surfaces of engraving plates, cylinders, and the like which consists in relatively passing over the ink surface flexible material having a ridged surface of an absorbent nature, the ridges being spaced and the material operating on the inky surface with ridges only in engagement with the inky surface during relative movement of the flexible material over the inky surface.

3. The method of removing ink from inky surfaces of printing plates and the like which consists in the relative shifting contacting movement over the inky surface of absorbent paper material having spaced ribs thereon in surface contact at their peaks with the ink surface, the relative movement of the paper over the ink surface taking place in a direction of movement acute to the lengths of the ribs on the paper.

4. An ink wiper for engraving plates and the like comprising paper having a surface thereof provided with spaced projections thereon suitable for catching ink as the paper is passed over an inked surface of an engraving plate, said projections being in the form of ridges, and the ridges running crosswise of the length of the paper in a diagonal relation to the length of the paper.

5. Wiping paper for removing wet ink from engraving plates and the like compris-

ing an elongated paper strip having a face thereof roughened with projections raised transverse to the normal body surface of the paper, said projections being in the form of ribs extending diagonally crosswise of the strip of paper.

6. The method of cleansing the inked surfaces of engraving plates and the like which consists in passing over the inked surface a flexible crepe like absorbent ink wiping paper having closely spaced raised projections thereon, in such manner that the raised projections only will contact with the inked surface.

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