

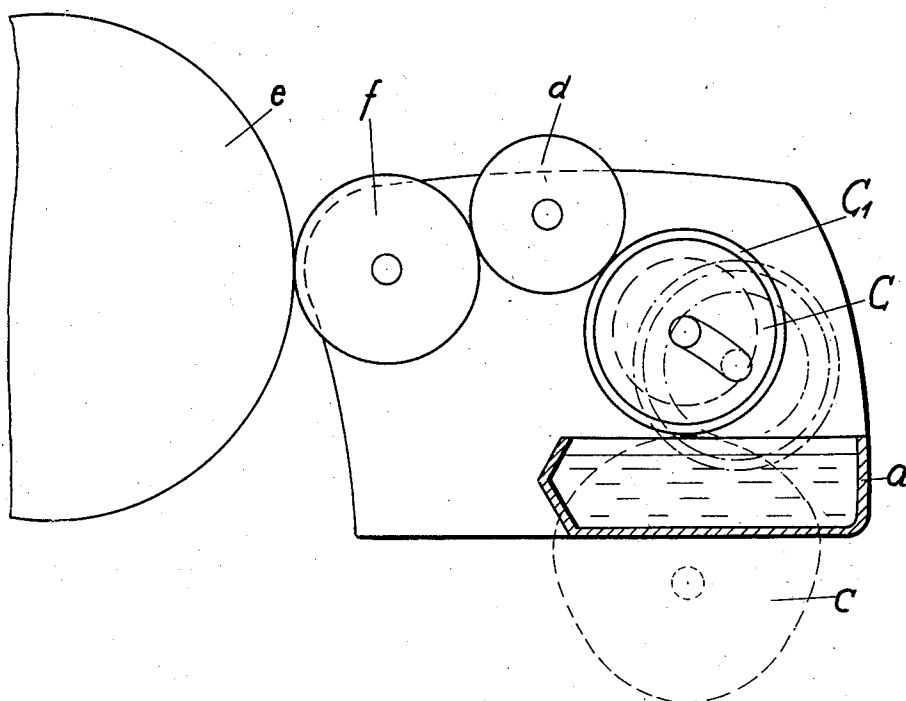
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PROCEDURE FOR FRESHENING UP AMALGAMATED PRINTING SPOTS

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PROCEDURE FOR FRESHENING UP AMALGAMATED PRINTING SPOTS

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The invention is directed to a process for refreshing the color-repelling amalgam spots of amalgam printing plates, and consists in depositing a mercurial salt solution on a rotating metallic element through the medium of a rotating absorbing surface and thereby forming an amalgam, then transferring the available portion of such amalgam from said rotating metallic surface to a second rotating metallic surface moving in contact and synchronism with the printing plate, and thus transferring the available portion of such amalgam from said second rotating metallic surface to the printing plate through such contact.

The means for carrying out the process is illustrated in the accompanying drawing, wherein:—

The figure represents more or less diagrammatically a construction illustrative of the process defined as the invention.

In the drawing, a receptacle *a* is adapted to receive water containing slight quantities of mercurial salts for example, mercuric nitrate. A roller *C* having a felt covering *C*₁ is movable into and out of the receptacle through the medium of a cam roller *c*, the latter being merely illustrative of a mechanical means for moving the roller *C* into and out of the receptacle. When the roller *C* is within the receptacle *a*, the absorbent surface *C*₁ picks up the requisite quantity of the solution, and when elevated by the cam, as indicated in full lines in the drawing, the absorbent surface *C*₁ of the roller *C* is brought into contact with a brass roller *d*, and while in contact transfers to such metal roller *d* the mercurial salts on such absorbent surface *C*₁. There is thus formed a thin amalgam coating on the metal roller *d* and the transferable portion of the thin amalgam coating is by the roller *d* delivered to a metal transfer roller *f* driven in contact and synchronism with the movement of the printing plate drum, here indicated at *e*.

The layer thus transferred is delivered to the printing plates and particularly to the color-repellent amalgamated spots of the plates and renewing the amalgam thereon in a simple, expeditious manner.

It will be understood that the driving means of the initial pick-up roller *C*, which, for example, may be the cam *c*, is operated at such speed that when the roller *C* is within the solution in the receptacle *a*, there is little liability of splashing the liquid from the receptacle, and furthermore the time period at which the roller *C* is permitted to remain within the solution is calculated with a view to transferring to the printing drum or the printing plates thereon a sufficient film of the material to take care of the requisite number of printing operations.

The transfer roller *f* is a metallic roller and is at all times in direct contact with the printing drum or printing plates, and this is made possible by the fact that the material layer which in effect forms a thin film between the roller *f* and the drum *e* acts as a lubricant which, combined with the fact that there is no relative movement between the roller *f* and the drum *e*, readily provides for the transfer of the material without difficulty.

The invention overcomes the well known difficulties incident to applying metallic mercury directly to the plates or to the inking rollers for the renewing of the amalgam spots.

Having thus described the invention, what is claimed as new is:—

1. The herein described process of refreshing the color-repelling amalgam spots of amalgam printing plates, consisting in depositing mercurial salts on a rotating element to form an amalgam thereon, transferring the available portion of such amalgam onto a second rotating element moving in contact and synchronism with the printing plate, and transferring such available portion of the amalgam to the printing plate through such contact whereby to refresh the color-repellant amalgam spots of the printing plate.

2. The herein described process of refreshing the color-repelling amalgam spots of amalgam printing plates, consisting in depositing mercurial salts on a rotating metallic element through the medium of a rotating absorbing surface to thereby form on such rotating element an amalgam, transferring from such rotating metallic element

the available portion of the amalgam onto a second rotating metallic surface moving in contact and synchronism with the printing plate, and transferring from said second rotating metallic surface to the printing plate
5 through such contact the material on said second rotating metallic surface to thereby refreshen the color-repellent amalgam spots of the printing plate.

10 3. An apparatus for refreshing the color-repelling amalgam spots of amalgam printing surfaces including two metallic rollers operating in contact, one of said rollers moving in contact and synchronism with the
15 printing plate, and a roller having an absorbent surface operating in a solution of mercurial salts and periodically movable into contact with the second of said metallic rollers to transfer to said second metallic roller
20 the mercurial salts for the purpose of forming an amalgam on said second metallic roller.

4. An apparatus according to claim 3, wherein the absorbent surface of the roller is
25 a felt-covered surface.

5. An apparatus according to claim 3, wherein means are provided to move the roller operating in the solution from a position within the solution to a position free of
30 the solution and in contact with the second roller.

In testimony whereof I affix my signature.
HEINRICH RENCK.

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