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METHOD OF PREPARING WIPING ROLLERS FOR PRINTING

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2 Claims. (Cl. 91—67.8)

This application is a division of application Serial Number 365,449 filed May 23, 1929.

The present invention relates to the process of preparing wiping rollers for printing in order to obtain, on the original plate of an engraver, prints, either in black or in colours, having the same finish and the same appearance as those which, up to now, have been printed by hand. This process also applies to etched cylinders, or to cylinders engraved with a chisel or burin, or by photo-mechanical processes and adapted to be used for continuous printing on paper or fabric.

Such processes are particularly described in my copending application Number 365,449 filed May 23, 1929.

In these processes and in others to obtain the same results, a multicolor printing receives, from a series of inking rollers, or the like, the desired total polychromic impression.

When passing under the various inking rollers, the form, which may be constituted as a plate, a cylinder, or the like, has been covered over its entire surface with several layers of ink which must be removed, on the one hand without emptying the fine lines of the engraving and, on the other hand, without arbitrarily mixing the shades and soiling them. For that purpose and according to the present invention, use is made of a wiping metal roller, perfectly centered and balanced, and covered with a layer of a slightly resilient material made of a composition of pure wax, whiting, gelatin, glycerin, and water. This coating is applied on said roller by molding, or in any other way, and it is then treated in the following manner:

When it is taken out of the mold, the roller is immediately rinsed with alcohol at 90°, then it is left in this condition for about twelve hours. A saturated solution of alum is prepared at a temperature of 15° C., the roller is caused to slowly rotate in this solution and to be slightly rubbed with a very fine cloth. This operation must last about 15 minutes. The vat is removed and the roller is left to rotate until a light white dust remains on the surface of the roller after the evaporation and without leaving a trace of moisture. The roller is then placed in a refrigerator which is maintained at a temperature of about 3° C. where it must remain until again used for at least 24 hours. When it is taken out of the refrigerator, the roller will first be wiped with a fine cloth and then rubbed with a chamois leather. At this time, it must present to the touch a smooth and soft surface comparable to that of the human skin.

The roller covered with this coating must have a surface area at least equal to that of the length of the press-stone, or it must have the same diameter as the engraved cylinder.

It is made to rotate exactly at the same relative speed as the press-stone, but in reverse direction.

Its pressure on the engraving must be adjustable with accuracy and subordinated to the affinity of the colours used for the engraved steel plate.

On coming in contact with the engraved plate or cylinder, the roller is completely loaded with the excess ink with the minimum of friction, each theoretical point of the engraving meeting the tangential line of the roller only at the exact point of contact.

It is obvious that the said roller may be used in all kinds of printing processes, when it is necessary to remove the excess of the ink which covers a printing form without emptying the finest lines of the engraving and without mixing the shades and soiling them.

What I claim as my invention and desire to secure by Letters Patent is:

1. A method of manufacturing wiping rollers for removing the excess of ink or color on printing forms, this method consisting in preparing a supporting core perfectly centered and covering this core with a layer of resilient material made of whiting, wax, glycerine, gelatin and water.

2. A method of preparing a wiping steel roller for printing forms, which comprises coating the roller with a composition of gelatin, wax, whiting, glycerine, and water, then rinsing the coated roller in alcohol and leaving it to dry for about 12 hours, thereupon slowly rotating the roller in a saturated solution of alum at a temperature of about 15° C. for about 15 minutes, cooling it at a temperature of 3° C. for about 24 hours, and finally polishing the roller.

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