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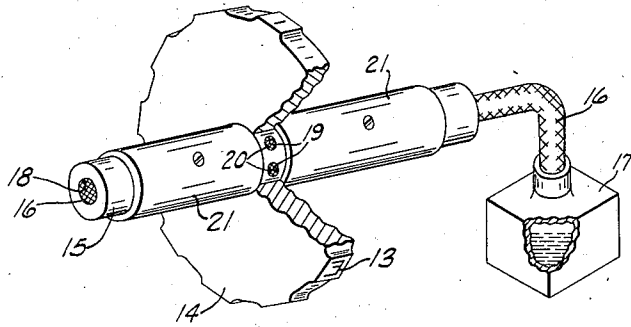
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2,262,884

MEANS FOR INKING POROUS METALLIC TYPE

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FIG. 1



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MEANS FOR INKING POROUS METALLIC TYPE

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218,561. Divided and this application October
2, 1940, Serial No. 359,416

6 Claims. (Cl. 101—327)

This invention relates to novel means for supplying ink to type members made of porous metal.

The instant application is a division of an application for Letters Patent of the United States, Serial No. 218,561, filed by Justin S. Compton on July 11, 1938.

An object of this invention is to provide means whereby porous metallic printing members may be supplied with printing fluids by means of wicks which conduct the fluid from a source, through the supporting structure of the printing member, to the type face surface of the printing member, which surface by that means is kept constantly wet thereby.

Another object of this invention is to provide a supporting means for a porous metallic printing member, which supporting means is capable of supporting the member for movement thereon and at the same time is capable of supplying ink to the type portion of the member through the surface of the member which engages the supporting means.

Another object of this invention is to provide a shaft for supporting porous metal type members for rotation thereon, said shaft having means to conduct ink to the type members through the bearing surface of the type members.

The porous metallic material used in making the type members described herein is fully described in United States Letters Patent No. 2,199,265, issued to Carl N. Lohrey on April 30, 1940, to which reference is made. The porous metal structure herein described has therein minute interconnecting pores, which extend from the surface of the metal through the body thereof, said pores being of such size that they absorb and hold fluids by a capillary diffusing action. The surface film of fluid at the pore openings may be transferred to material to be printed, by contact therewith, which transferred fluids are replaced from within by diffusion through said pores. Obviously the metal used must be wettable by the particular fluid used. The use of 70% copper and 30% nickel has been found suitable for use with non-volatile dye inks commonly used for type printing, being wettable thereby and hard enough to resist wear. The particular kind of metal used in the structure is optional as long as it is porous and will absorb the fluid employed. The structure composed of the materials referred to is particularly adapted for absorption of dye ink, although other sensitizing fluids and other metals may be used in cooperation therewith.

The instant invention proposes to supply ink to such a type member by conducting ink from a font or other source by means associated with the supporting means.

5 With these and incidental objects in view, the invention includes certain novel features of construction and combinations of parts, the essential elements of which are set forth in appended claims and a preferred form or embodiment of 10 which is hereinafter described with reference to the drawing which accompanies and forms a part of this specification.

The figure shows a porous metallic wheel which is saturated by a wick contacting it through the 15 supporting member.

The conduction of printing fluid from a font to a type member by means carried by the supporting member is shown in the figure as applied to a rotatable type wheel 14 supported on a shaft 15. 20 The wick 16, made of felt or other suitable wick material, has one end dipped in a font 17 of liquid, whence it enters an axial boring 18 in the supporting shaft of the type wheel. Radial holes 19 in the shaft at the place where the wheel is 25 mounted accommodate branches 20 of the wick 16, so that they may come into contact with the bearing surface of the type wheel. In this manner the type wheel may be kept saturated with fluid even though the wheel rotates. Sleeves 21 30 mounted on the shaft keep the wheel aligned with the radial holes.

While the form of mechanism herein shown and described is admirably adapted to fulfill the objects primarily stated, it is to be understood 35 that it is not intended to confine the invention to the one form or embodiment herein disclosed, for it is susceptible of embodiment in various forms all coming within the scope of the claims which follow.

40 What is claimed is:

1. The combination of a porous metallic type wheel; a shaft having axial and radial holes, upon which shaft the type wheel is rotatably 45 mounted; a wick occupying the holes in the shaft so that the wick contacts the surface of the type wheel bearing on the shaft; and a font of fluid in which a portion of the wick projecting from the axial hole is submerged so that said fluid is conducted to the porous type wheel, keeping 50 it saturated.

2. The combination of a porous metallic wheel having peripheral characters; a shaft on which said wheel is rotatably mounted, said shaft being supplied with an axial boring and a plu- 55 rality of radial borings at the place whereon

the wheel is mounted; a wick occupying the borings in the shaft so that the bearing surface of the rotating wheel is in constant contact therewith while rotating; and a font of fluid supported separately from the shaft into which an end of the wick protruding from the axial boring is dipped whereby the wick becomes fluid-saturated and in turn saturates the type wheel.

3. The combination of a porous metallic type wheel having a printing surface and a bearing surface; an axle rotatably supporting said type wheel; an ink supply source; and means carried by said axle and coacting with said ink source and the bearing surface of said type wheel, to provide a continuous saturation of ink in the type wheel.

4. The combination of a porous metallic type member having a printing surface and a bearing surface; means engaging said bearing surface to support the type member for movement thereon; a font of ink; and ink-conducting means associated with the first-mentioned means

and extending into said ink and to said bearing surface to conduct ink from said font to the printing surface of the type member through the bearing surface of said member.

5. The combination of a porous metallic type wheel having a printing surface and a bearing surface; an axle rotatably supporting said type wheel; and ink-saturated means carried by said axle and coacting with the bearing surface of said type wheel, to provide a continuous saturation of ink in the type wheel.

6. The combination of a porous type member having a printing surface and a bearing surface; means engaging said bearing surface to support the type member for movement thereon; and ink-supplying means associated with the first-mentioned means and engaging said bearing surface, to replenish ink used from the printing surface by supplying ink from the ink-supplying means through said bearing surface of the type member.

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