June 3, 1952 H. V. LAUER 2,598,806

HAND STAMP

Filed Oct. 11, 1949

FIG. 1

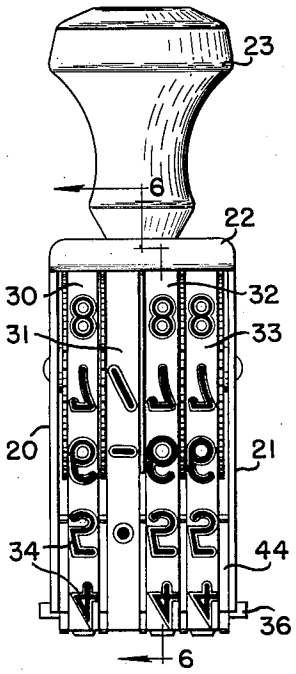


FIG. 2

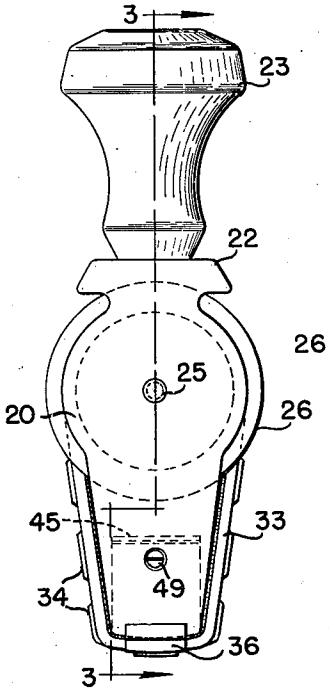


FIG. 3

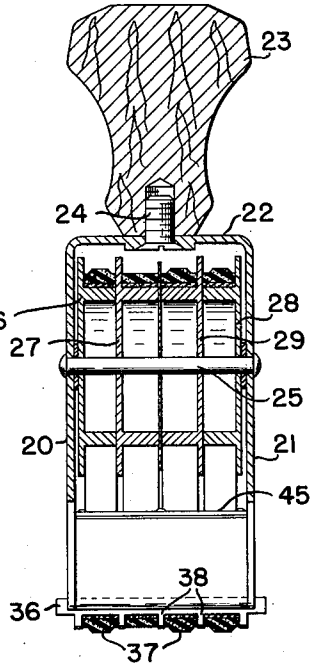


FIG. 4

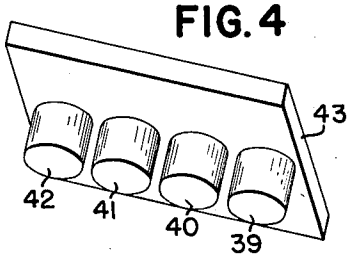


FIG. 5

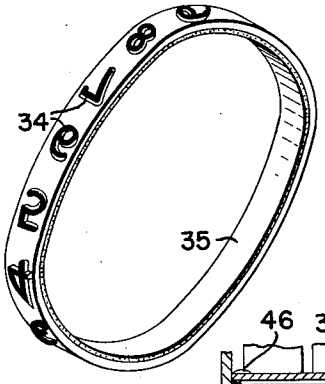


FIG. 6

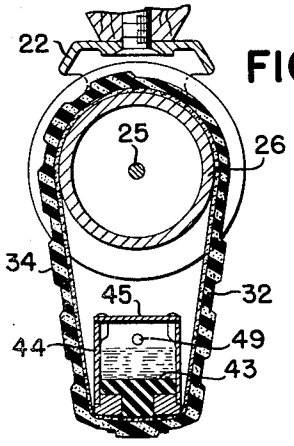
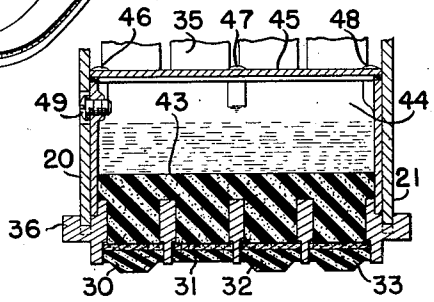


FIG. 7



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HAND STAMP

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Application October 11, 1949, Serial No. 120,689

10 Claims. (Cl. 101—103)

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This invention relates to a hand stamp, and more particularly pertains to such having one or more endless bands having printing characters thereon which may be selectively brought to printing position by turning the bands.

The novel feature of this invention is to provide such a hand stamp in which the bands are capillarily porous to ink, preferably made of cloth-backed microporous rubbery material, and impregnated with ink which is supplied as used, from an ink font within the loops of the bands. The ink is fed as needed to the bands, automatically, by means of a porous wick, preferably made of the same capillarily porous rubbery material as the bands themselves.

As microporous rubbery material is somewhat fragile it is given the porous cloth backing to prevent stretching or tearing of the bands.

It is an object of this invention to provide a printing stamp with adjustable band printing elements, made of capillarily porous material which are continuously kept impregnated with ink by permanent sliding contact with a wick conducting printing fluid from a font.

It is another object of the invention to provide such a stamp wherein the printing bands are kept in inked condition regardless of their position of adjustment, by reason of a sliding contact between the wick and the back of the bands.

With these and other objects in view the invention will be described in connection with the drawing in which

Fig. 1 is a front elevation of the hand stamp,

Fig. 2 is a side elevation of the hand stamp,

Fig. 3 is a section through Fig. 2 approximately on the line 3—3,

Fig. 4 is an enlarged perspective view of the wick,

Fig. 5 is an enlarged perspective view of a printing band,

Fig. 6 is a section through Fig. 1 approximately on the line 6—6 thereof, and

Fig. 7 is an enlarged section, from side to side, through the lower part of the hand stamp.

Referring to the drawing, a frame is provided having side plates 20 and 21, joined by a top portion 22 to which is secured a handle 23 by means of a screw 24. A top cross member 25 has rotatively mounted thereon flanged wheels 26, 27, 28 and 29, which in assembled position on cross member 25 provide four runways, one for each of the endless printing bands 30, 31, 32 and 33 made of microporous rubbery material. The outside of each of the bands has raised type characters 34 spaced therearound, and the inside

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of each band has secured thereto a reinforcing layer of cloth 35. The preferred rubbery material is a copolymer of butadiene and acrylonitrile vulcanized to a resilient state. United States Patent 2,349,613, issued on the application of Robert G. Chollar, explains how such material is made capillarily porous to ink, the process in brief, including the working together of the rubbery material in the unvulcanized state and fine particles of a leachable material, such as sodium nitrate, which material is resistant to vulcanizing temperatures but which is easily washed out of the vulcanized product, leaving it porous. The lower ends of the bands are supported by and run in grooves in a bottom cross piece 36, which also serves as the bottom of the font to be described, so that turning of the wheels 26, 27, 28 and 29 permits any type character to be brought to printing position as shown at 37 in Fig. 3. The separating fins 38 act as stops so that the type may be compressed only a slight distance, which controls the amount of printing fluid transferred on a printing operation.

The cross piece 36 has four holes, one in each groove, to receive the branches 39, 40, 41 and 42 of porous wick 43, made of the same capillarily microporous rubbery material as the bands. Wick 43 is located in a font 44 secured between side plates 20 and 21. Font 44 has a top closure 45 attached by screws 46, 47, and 48 and has a screw plug 49 which may be removed to fill the font with printing fluid. The wick 43 transfers the printing fluid, by means of the branches, to the cloth backing of the bands against which they are in permanent sliding contact. The bands are thus kept saturated with printing fluid and will make thousands of impressions without the necessity of applying the type to an ink pad each printing operation, as has been necessary in the past.

The font, preferably, is located within the band loops and may be refilled through the plug 49 without removal of the bands. The wick branches rest lightly on the rear band surfaces and in no way interfere with their adjustment. The capillary action of the micropores of the wicks and bands prevents leakage of the ink from the font except to replenish that exhausted from the bands by printing operations or possible evaporation.

It will be apparent that the invention is not limited to a stamp of four bands as more or less may be used.

Moreover it will be apparent that by using a divider within the font and using two wicks,

separated from contact, a first colored ink may be placed in one half of the font and a second colored ink may be placed in the other half of the font. Thus, multiple colored prints could be made with a single impression. As many inks could be used as there are bands, if desired.

What is claimed is:

1. A hand stamp including, in combination, a frame having spaced apart cross members around which type-bearing endless capillary porous printing bands are looped, one of said cross members having a hole located at each band; a printing fluid font supported by the frame so as to be within the loops; and a capillarily porous wick extending into the font and having branches extending through said holes in the cross member so that the ends of said branches of the wick continuously press against the backs of the associated bands and in sliding contact therewith for capillarily conducting printing fluid from the font to the pores of the bands.

2. The hand stamp of claim 1 in which one of the cross members is provided with rotatable elements around which the bands are looped, so that by turning the rotatable elements the bands may be adjusted to a selected printing position.

3. The hand stamp of claim 2, in which each band is provided with its own rotatable element.

4. The hand stamp of claim 1, in which the bands and the wick are impregnated with printing fluid.

5. The hand stamp of claim 4, in which the font contains printing fluid.

6. The hand stamp of claim 1, in which the font contains printing fluid.

7. The hand stamp of claim 1, in which the bands are of capillarily micro-porous rubber material.

8. The hand stamp of claim 7, in which the rubbery material is backed by cloth bonded thereto.

9. The hand stamp of claim 1, in which the wick is of capillarily micro-porous rubbery material.

10. The hand stamp of claim 1, in which the cross member in which the holes are located, is grooved, each groove receiving a band, with the bands extending slightly outwardly from the grooves.

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