Sept. 11, 1951 W. WOCKENFUSS 2,567,308

PRINTING MEANS FOR SELECTIVE PRINTING WIRES

Filed Jan. 18, 1949

Fig. 1

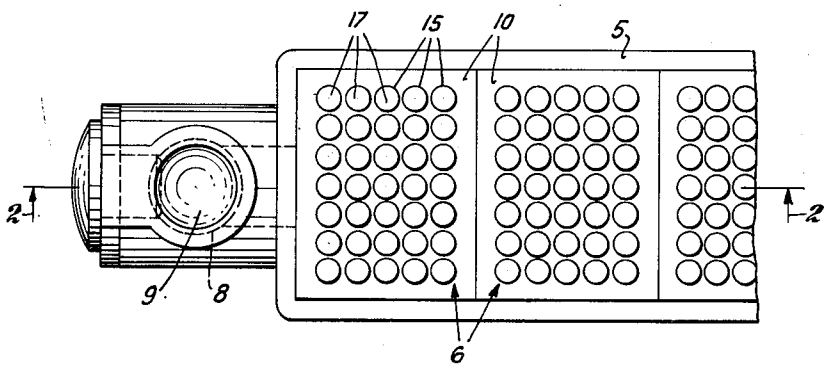


Fig. 3

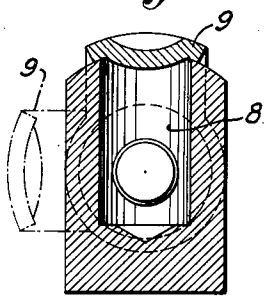
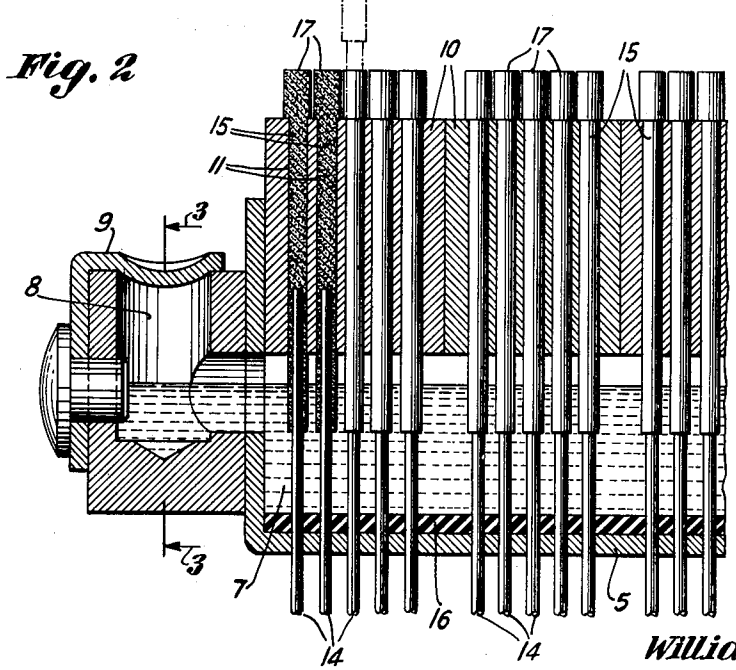


Fig. 2



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Patented Sept. 11, 1951 2,567,308

UNITED STATES PATENT OFFICE

2,567,308

PRINTING MEANS FOR SELECTIVE PRINTING WIRES

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Application January 18, 1949, Serial No. 71,534

2 Claims. (Cl. 101—103)

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This invention relates to improvements in printing devices and has particular reference to inking means therefor.

It has been suggested, heretofore, to provide a device in which the print section thereof comprises a plurality of individually controlled printing elements in the form of wires or rods which are selectively operable to form different characters upon impression-receiving surfaces when said elements are caused to strike said surfaces through carbon transfer sheets.

In accordance with the present invention, it is proposed to print directly upon a single impression-receiving surface by means of printing elements having character forming surfaces to which a printing fluid is supplied by capillary attraction.

More specifically, the invention resides in the provision of a plurality of individual and selectively operable rod-like printing elements each of which has a section thereof formed of absorbent material terminating at one end in an impression-forming surface and which is at least partially immersed in an inking fluid capable of being absorbed by said section so that its impression-forming surfaces will be continuously coated with said fluid.

The inventive idea involved is capable of receiving a variety of mechanical expressions one of which, for purposes of illustration, is shown in the accompanying drawing; but it is to be expressly understood that said drawings is employed merely for the purpose of facilitating the description of the invention as a whole and not to define the elements thereof.

In the drawing, wherein the parts are shown considerably enlarged over their actual size:

Fig. 1 is a fragmentary top plan view of a printing device constructed in accordance with the invention;

Fig. 2 is a longitudinal section on the line 2—2 of Fig. 1, showing the device in association with a platen and an impression-receiving sheet; and

Fig. 3 is a section on the line 3—3 of Fig. 2.

In my co-pending application Serial No. 35,307, filed June 26, 1948, there is illustrated a machine wherein each of a plurality of print heads comprises a number of printing elements which are individually and selectively controlled to form various characters, and the printing elements of the present invention are capable of being controlled in the same manner as disclosed in the said application.

In the form of the invention herein shown, the device comprises an elongated casing 5 open on one side, which may be the top thereof, to

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receive a plurality of print heads generally indicated by the numeral 6 and supported in the casing in abutting relation with each other and in contact with the walls of the casing. The bottom of the casing 5 constitutes a reservoir for receiving a printing fluid 7 which is supplied thereto through an inlet 8 communicating with the reservoir and provided with a pivoted closure 9.

Each of the heads 6 comprises a guide member 10 in the form of a block having a series of closely arranged openings 11 extending therethrough from top to bottom and each adapted to receive a rod-like printing element movable therein to projected or printing position, as shown in dotted lines in Fig. 2, so as to engage and make an impression upon a sheet 12 mounted on a plate 13. The means of the above identified application may be employed to individually and selectively operate the printing elements of each head so that any group therein may be controlled to form a desired numeral or alphabetical character, or the like.

In the present construction, each printing element comprises two sections 14 and 15, the former of which is a small metallic rod or wire which is mounted so as to extend through the bottom of the casing 5 and also through a seal 16 of any desired material secured to said bottom to prevent leakage of the fluid 7. Each rod 14 extends upwardly through the fluid 7 and into the lower end of the upper section 15 wherein it is secured so that reciprocatory movement imparted to the rod 14 will be transmitted to the section 15 thereof. The latter section is made of a suitable absorbent material of a metallic nature having sufficient porosity to permit the section, whose lower end is immersed in the fluid 7, to absorb said fluid by capillary attraction and said section 15 has sufficient rigidity to maintain its form as it is reciprocated and caused to contact the impression sheet 12. A material suitable for these purposes is known as "Oilite." The upper ends of the sections 15 of the printing elements which protrude from each guide 10 are enlarged so that the impression-forming surfaces 17 thereof and the impressions made by said surfaces on the sheet 12 will be in close proximity to each other.

What is claimed is:

1. A printing device comprising a casing including a wall and an open end opposed thereto and adapted to receive a printing fluid, a guide member mounted in the open end of said casing, and a plurality of printing members extending completely through and movably supported in

said guide member, each printing element including a section formed of absorbent material and having its outer end extending beyond said guide member to provide an impression-forming surface and its inner end immersed in said fluid, said printing member further including a rod having its inner end extending through said wall and into the immersed end of the first named section.

2. A printing device comprising a casing including a wall and an open end opposed thereto and adapted to receive a printing fluid, a guide member mounted in the open end of said casing, and a plurality of printing members extending completely through and movably supported in said guide member, each printing element including a section formed of absorbent material and having its outer end extending beyond said guide member to provide an impression-forming surface and its inner end immersed in said fluid, said printing member further including a rod

having its inner end extending through said wall and into the immersed end of the first named section with said inner end of the rod terminating at a point within the confines of said guide member.

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