

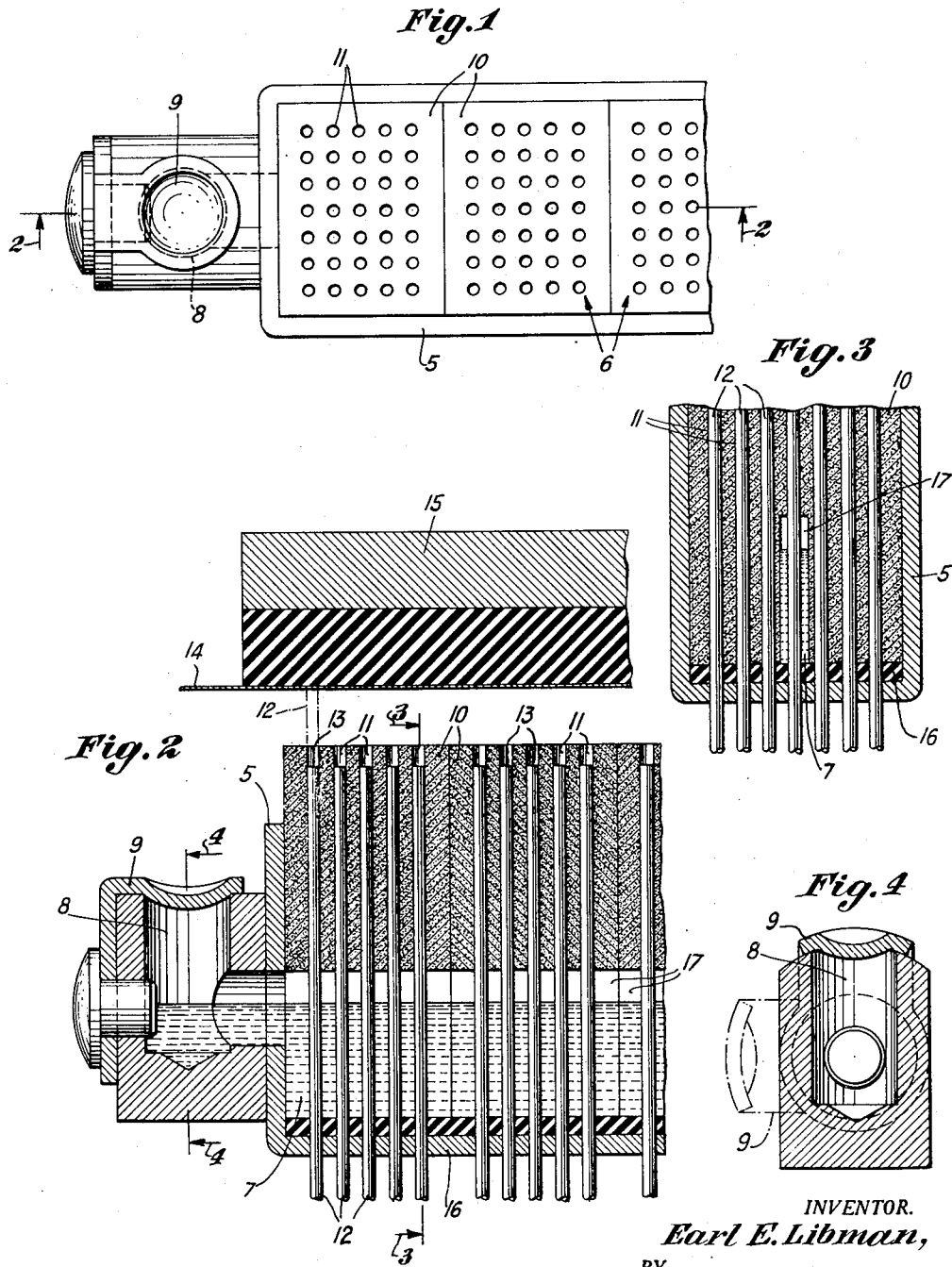
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E. E. LIBMAN

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INKING MEANS FOR ROD-LIKE PRINTING MEMBERS

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INVENTOR.
Earl E. Libman,
BY
Edward A. Huella
ATTORNEY.

UNITED STATES PATENT OFFICE

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INKING MEANS FOR ROD-LIKE PRINTING MEMBERS

Earl E. Libman, Brooklyn, N. Y., assignor to Control Instrument Company, Inc., New York, N. Y., a corporation of New York

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3 Claims. (Cl. 101-327)

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This invention relates to improvements in a printing device 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 provides a plurality of individually and selectively operable rod-like printing elements which are mounted for movement in a guide member or members formed of an absorbent material and at least partially immersed in a printing fluid so that the latter will, by capillary attraction, be supplied to and coat the impression-forming surfaces of said elements.

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; it being expressly understood that said drawing is employed merely for the purpose of facilitating the description of the invention as a whole and not to define the limits 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;

Fig. 3 is a fragmentary section on the line 3-3 of Fig. 2; and

Fig. 4 is a section on the line 4-4 of Fig. 2.

In the co-pending application of William Wockenfuss, 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.

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The printing device, as shown herein, comprises an elongated casing 5 open on one side, which may be the top thereof, to 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 is adapted to receive a printing fluid 7 which is supplied through an inlet 8 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 openings 11 extending therethrough from the top to bottom for receiving and guiding the printing elements 12 in the nature of rods or wires which are individually and selectively controlled, as above mentioned, so as to be projected from the normally recessed position of Fig. 2 to the dotted line position thereof to cause their impression-forming surfaces 13 to strike the sheet 14 on the platen 15 and thus make impressions upon said sheet in conformity with the selective operation of said elements 12. The lower portions of said elements project through the bottom of the casing 5 and through a seal 16 of suitable material which combines with said bottom to prevent leakage of the fluid 7 through the wall formed by said parts.

In order to feed the printing fluid 7 to the end surfaces 13 of the elements 12, each guide block 10 in which a group of said elements is movably mounted is made of an absorbent material of a metallic nature having a sufficient degree of porosity, such as found in the product known as "Oilite," to permit said fluid to flow by capillary attraction and thus coat the walls of the openings 11 in which the printing elements are movable so as that the latter are moved outwardly toward their printing positions the surfaces 13 will gather sufficient fluid from the walls of the openings 11 by a wiping action thereagainst to make proper impressions upon the sheet 14. To accomplish this end, the lower portions of the guide blocks 10 are provided with aligned channels 17 extending lengthwise of the casing 5 to form, in combination with the bottom of said casing, a reservoir for receiving the fluid 7 in which said lower portions will at all times be immersed in said fluid so that the blocks 10 will absorb the fluid to the extent necessary to coat the impression-forming surfaces 13 of the printing elements as they are moved toward their operative positions.

What is claimed is:

1. A printing device comprising a casing, a

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guide member therein of absorbent material having a channel therethrough combining with said casing to form a reservoir for receiving a printing fluid, said guide member having openings therethrough, and a rod-like printing element extending into each of said openings in direct contact with the wall thereof with one end of the element normally recessed in its opening and having an impression forming surface at said end adapted, by relative movement between said element and guide member, to be projected beyond the adjacent surface of the latter, said printing element having constant contact with the wall of its opening in both the normal and projected positions of said element.

2. A printing device comprising a casing for receiving printing fluid and having side walls, a bottom wall and an open end opposed to the latter wall, a guide member of absorbent material within said casing and extending from said bottom wall to at least the depth of said side walls at the open end of said casing, said guide member having openings therethrough, and a plurality of printing elements extending from exteriorly of said casing through said bottom wall and into the openings in said guide member, each printing element being movable in its opening from a normally recessed position therein adjacent the open end of said casing to a projected position relative to said guide member and said open end, said printing element having contact with the wall of its opening both in the normal and projected positions of the element.

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3. A printing device comprising a casing having a reservoir for receiving a printing fluid, a guide member of absorbent material mounted in said casing and at least partially immersed in said fluid, said member having openings extending therethrough, and a plurality of selectively operable printing elements movable in said openings in close contact with the walls thereof and having impression forming surfaces at adjacent ends wholly within said openings in one position of movement of said elements, the latter being adapted for movement from said position to a projected position relative to said guide member whereby said surfaces will gather fluid thereon by a wiping contact of the edges of said surfaces with said walls.

EARL E. LIBMAN.

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