

Sept. 24, 1929.

T. E. MURRAY

1,729,356

DUCT FORMING DEVICE AND METHOD

Filed May 21, 1924

Fig. 1.

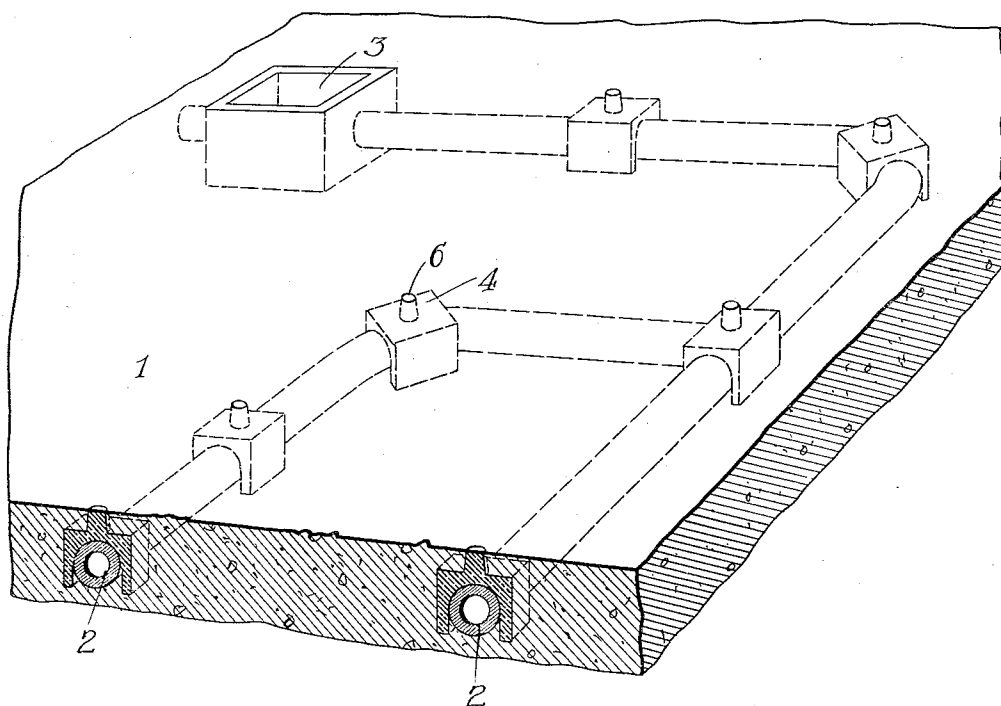
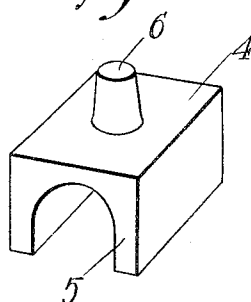


Fig. 2.



INVENTOR
Thomas E. Murray
BY
Anthony J. Vito, ATTORNEY

UNITED STATES PATENT OFFICE

THOMAS E. MURRAY, OF BROOKLYN, NEW YORK

DUCT-FORMING DEVICE AND METHOD

Application filed May 21, 1924. Serial No. 714,956.

In certain previous applications for patent I have described methods and apparatus for forming ducts in concrete floors, walls and other structures in which ducts electric cables or wires are to be carried, and which ducts may be used for a variety of other purposes. The principal part of such apparatus is one or more rubber tubes which by their flexibility and their contractibility in cross-section can be used as forms or molds about which the concrete is poured and can be subsequently pulled out, leaving ducts extending in any desired directions through the floor or other structure. The form being covered by the concrete, it is important to know, after the floor is completed, where the duct is located. For this purpose I have invented certain markers which not only locate the line of the duct but also facilitate the provision of openings from the surface of the floor to the duct at desired points.

The accompanying drawings illustrate an embodiment of the invention.

Fig. 1 is a perspective view, partly in section, of a portion of a floor;

Fig. 2 is a perspective view of one of the markers used.

Referring to the accompanying drawings, the floor is made of a body of concrete 1 molded about lines of tubing 2 intended to be subsequently withdrawn to leave the conduits through which the wires are to be passed. Removable forms 3 are provided to mold junction boxes which are to communicate with the ducts.

It is desirable also to have openings at various points along the length of the ducts through which connections may be made for lamps, heaters or other apparatus.

At points where such connections can be most conveniently made, markers are located when the tubing is laid in position and are built into the concrete in such a way as to be visible when the concrete floor is completed. Preferably also such markers constitute a sort of removable molds for openings leading to the ducts.

In the case illustrated the marker consists of a block 4 of gypsum or similar frangible material of color contrasting with the sur-

rounding concrete and provided with flanges 5 adapted to straddle the duct molds 2. Gypsum is proposed because it is white and because it can be easily broken out and removed so as to leave the desired space for making connections with the cables. Various other substances might be used, however, and the exposed portions thereof painted, if necessary, to make a contrast with the concrete. Preferably the block 4 has an integral button 6 extending upward to the level of the top of the concrete, and this button alone is exposed. It makes a large enough opening in the concrete, however, for access to and withdrawal of the parts of the removable block 4.

In use the blocks will be placed in the manner indicated in the drawing at desired points in the lengths of the tubes. The concrete of the wall will thereafter be poured to the level of the contrasting buttons 6. When the floor has hardened the tubular forms 2 will be withdrawn and the electric wires inserted and connected up with the mains in the usual way. When a connection is desired to an apparatus in the building, the nearest button 6 is gouged out with a sharp tool. Preferably also the entire block 4 with its flanges 5 is broken up and removed so as to give easy access to the wires in the ducts. These wires may be drawn up through the holes left by the button 6 and the desired connections made thereto and the wires pushed back into the duct.

Though I have described with great particularity of detail a certain embodiment of my invention, yet it is not to be understood therefrom that the invention is restricted to the particular embodiment disclosed. Various modifications may be made by those skilled in the art without departure from the invention as defined in the following claims.

What I claim is—

1. A device of the character described for use in connection with duct molds comprising a body adapted to straddle such mold and having a frangible portion extending to the surface of the structure in which the duct is to be formed.

2. The method of forming concrete floors and similar structures with ducts which includes the steps of positioning a duct mold and a marker extending to the level of the floor surface and casting the concrete about the mold and marker and up to said level, and withdrawing the mold without the marker.

3. The method of forming molded structures with a duct therein having an outlet which comprises locating a duct mold and a frangible marker extending therefrom to the outer surface of the structure and casting concrete about the mold and marker and to said outer surface, and withdrawing the mold and breaking said marker out of the surrounding concrete.

4. A combined outlet mold and marker for use with molded ducts in concrete building slabs, comprising a core of frangible material extending from the interior of the molded duct to the surface of the slab.

5. A concrete building slab having a duct therein and a frangible marker extending from an intermediate point in the length of the duct to the surface of the slab to mark the location of the duct and to provide easy access thereto by gouging out the marker.

In witness whereof, I have hereunto signed my name.

THOMAS E. MURRAY.