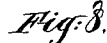
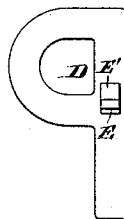
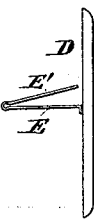


Patented June 23, 1891.



Fig: 3.



Inventor:

W. E. Roberts
by his attorney
Thomas Drew Jackson

UNITED STATES PATENT OFFICE.

WILLIAM E. ROBERTS, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO
JULIEN GERARD BUCKLEY, OF SAME PLACE.

ADVERTISING DEVICE.

SPECIFICATION forming part of Letters Patent No. 454,769, dated June 23, 1891.

Application filed May 29, 1889. Renewed March 28, 1891. Serial No. 386,756. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. ROBERTS, of the city and county of New York, in the State of New York, have invented a certain new and useful Improvement in Advertising Devices, of which the following is a full and exact description.

My invention is intended more particularly for advertising theaters and analogous subjects in which there are required to make changes of certain portions or the whole at short intervals.

It has been long the practice to prepare boards on which the next piece to be performed and many others are painted, one complete name on each board, and by substituting these boards one for another to indicate to an audience the succession of pieces in a musical performance or the like. This invention makes it easy to construct any word and to show it by separate types, or rather by separate letters exchangeable in a manner analogous to types in a printer's composing-stick. I prefer to show white letters on a ground of dead black, and will describe the invention as thus worked; but it will be evident that these conditions may be reversed or various colors may be used. I provide in each place where the advertisement is to be shown a peculiarly-constructed ground, presenting joints in which the tongues of the letters may be received, and I provide letters having tongues of an elastic character and wedge form, fixed at a uniform height, so that when the proper letter is selected, brought into position, and pressed against the proper ground its elastic tongue will enter the joint and will be retained by the friction due to the expansive force of its elasticity. When a line of them have been thus set, showing the proper word or words, and the other lines have been also changed, if any change therein is needed, a glass cover is applied, which may for convenience be hinged after the manner of a door, and the advertisement is complete. When it is desired to change any part or the whole of the words or letters or any figures to indicate a different hour for the period of high tide or for the starting or arrival of a

boat or train, the glass is removed by the opening of the door by a proper key, the former letters or figures are drawn out, and new ones desired are inserted and the door again closed and locked. I provide tongues of the proper character, which are elastic in the direction of the height and rigid in the direction of their length and width, and I provide joints in the ground which are also elastic, the elasticity of the joints being obtained by the use of pile fabric, which will yield to allow the insertion of the several tongues, but will stand up so as to nearly or quite conceal the existence of the joint at all other points therein.

The accompanying drawings form a part of this specification and represent what I consider the best means of carrying out the invention.

Figure 1 is a general front elevation. Fig. 2 is a transverse section on a larger scale. Fig. 3 is a vertical section of a portion on a scale corresponding to Fig. 2. The remaining figures show details on a still larger scale. Fig. 4 is a vertical section through one of the bars and a portion of each adjacent bar. Fig. 5 is a front view of one of the letters. Fig. 6 is an edge view of one of the letters. Fig. 7 is a rear elevation, and Fig. 8 is a vertical section.

Similar letters of reference indicate corresponding parts in all figures where they occur.

A is a back, and A' A' are uprights at each side on the front thereof, grooved on the inner side, as indicated by a'. These grooves receive the ends, respectively, of a series of bars B, which latter are of rectangular section and covered with velvet or other pile fabric b. This covering b must present a dead and uniform surface, especially on the face of each bar B which is presented to the front. The uppermost bar B is held firmly by screws or other sufficient fastening. There is no objection to allowing the other bars to yield a little up and down. They lie ordinarily as close as their weight and a gentle pressure added will urge them together, the pile fabric holding the bodies of the bars B apart.

D D, &c., are letters of such size as to be clearly legible at the distance for which the device is intended to be viewed. In a narrow hallway smaller letters may serve than in a large depot or concert-room. Each letter is formed separately in a skeleton form, preferably of the style known as "Gothic," and each is provided with a tongue E, which extends from the back and is doubled and left with its fold E' free and exerting a considerable elastic force to stand at an angle of ten degrees from the other leaf of the tongue. The fold is formed by a curve so quick that the tongue can be thrust by a sufficient force into the joint between any one of the bars B and the next, the fold of the tongue closing together and the pile of the velvet lying down to allow its reception. It will be held by the elasticity of the tongue and of the pile.

The letters may be carried to the board in any convenient way. It may in some cases be preferable to carry the board to the depository of the letters and effect the changes there and return it. I esteem it important to allow the board to be manipulated only by a properly-authorized person. In some cases where the changes are slight it may not be necessary to carry to the board or device a large number of each "sort" of letter, but only to carry the specific letters necessary to make the required changes.

In advertising theaters, ten or some other number may be combined in one advertising device according to my invention, and one man can in the course of a night visit two hundred of my advertising-boards distributed in different parts of a large city, successively unlocking each, rapidly effecting the few changes required for the next night's programme, locking them, preferably by a spring-lock, and moving to the next.

No part of the velvet or other pile fabric is exposed to wear except the faces, which are presented together and receive the tongues wedgewise between them. The tongues being smooth will depress the pile in the short portion of the joint occupied by the tongue, leaving the pile erect in the spaces between, so that the joint is not conspicuous where it extends across the middle of the skeleton letters or across the spaces between them and between the words. If a face of the velvet is worn or is likely to become so, the bars may be turned at intervals, so that all the faces will be nearly equally worn, faded, or otherwise defective, when the whole may be finally changed.

In forming the letters each letter-body is cut by dies from a sheet of metal, and a rivet is inserted through it and allowed to project at the back. This projection serves as a means for attaching the spring-tongue E E' by soldering it thereto.

To coat the bars B, I first saturate the wood with boiled oil or other suitable filling to reduce the liability to hygrometric changes,

and then surface it with a thin solution of hot glue, applied by dipping or otherwise, and finally wrap each letter with velvet and press it thereon and hold it till it cools and dries.

G is the door, mainly of glass, turning on hinges g and secured by a lock H.

Modifications may be made by any good mechanic without departing from the principle or sacrificing the advantages of the invention. The bars B need not be exactly square; there may be wide variations; and the letters need not be all of equal size, proper care being taken to have those which are used together in any line correspond. I propose to make some of the bars with curved sides, matching the full face of one against the hollow face of an adjacent bar, so as to hold the letters in corresponding arched lines.

I have in my experiments used what are sometimes known as "enameled" letters, formed by a face of porcelain upon a body of copper or other metal, the rivets being set, as above described, before the enamel is applied and burned on, and the spring-tongue being soldered to the rivet at a later period; but other modes of producing the letters and other modes of surfacing the bars may be used with some success.

Instead of making the bars B entirely independent, I can, if preferred, in any case have them joined at one end or at both ends. To attain this condition, it is only necessary to provide, by gluing together or otherwise, a board of proper dimensions in a single piece and saw it partially across, using a single saw many times or a gang of saws set at the proper distance apart to partially but not completely separate the board into the required parallel bars. The saws should be sufficiently thick to produce a sufficient "kerf" to allow the pile fabric to be inserted and smoothly glued or otherwise held on the sides. The saw or saws may be introduced by first boring small holes, as is frequently practiced in other jig-saw work. I propose to stiffen and brace the bars B by one or more strips of wood or other material extended up and down the back of the board and screwed, glued, or otherwise fastened rigidly to each bar B in the obvious manner.

I claim as my invention—

1. A set of portable letters, each provided with a strongly-attached tongue E E', of wedge form and elastic character, adapted to engage and hold in a narrow joint in a suitable ground and to be drawn out and inserted independently, as herein specified.

2. A letter D, having spring-tongue E E' thereon, combined with the ground composed of parallel bars B, of wood surfaced with elastic pile fabric rigidly held a little distance apart, so that the pile closes and conceals the joint, as herein specified.

3. The grooved bars A' A', sustaining the parallel bars B, in combination therewith

and with removable letters D, having spring-
tongues E E', adapted to be inserted in the
spaces between said bars B and to be re-
placed independently, and with a removable
5 transparent covering or door G, all arranged
to serve as herein specified.

In testimony whereof I have hereunto set

my hand, at New York city, New York, this
7th day of May, 1889, in the presence of two
subscribing witnesses.

WM. E. ROBERTS.

Witnesses:

WM. WURSTER,
F. J. CREVELING.