

D. B. SAMUELS.
DISPLAY DEVICE.

APPLICATION FILED DEC. 24, 1919. RENEWED FEB. 21, 1922.

1,429,458.

Patented Sept. 19, 1922.

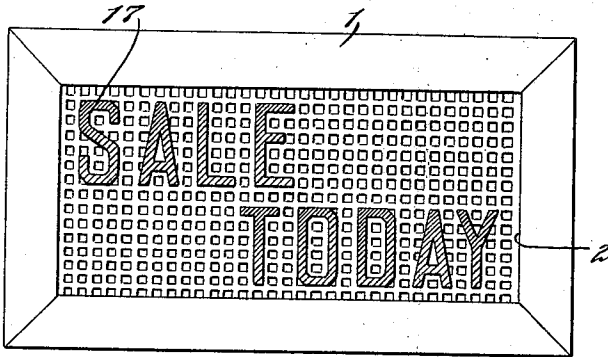


Fig. 1.

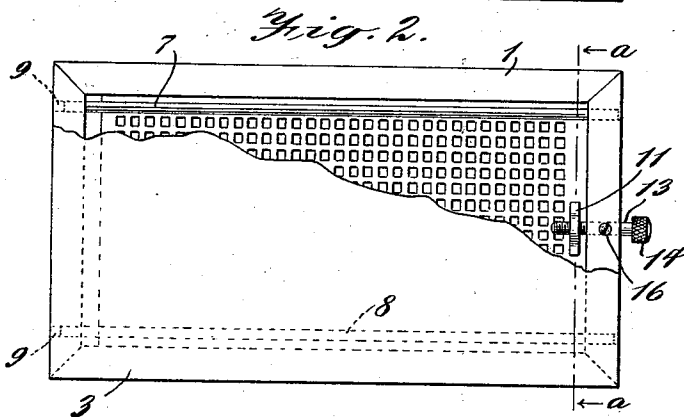


Fig. 2.

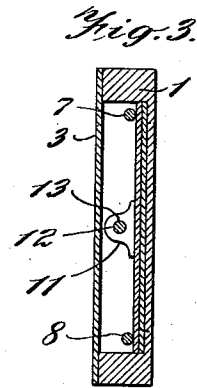


Fig. 3.

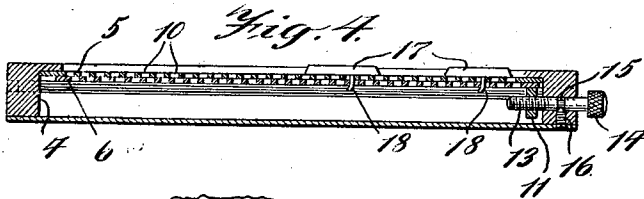


Fig. 4.

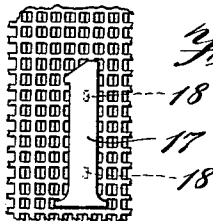


Fig. 5.

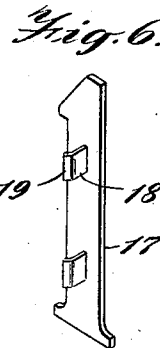


Fig. 6.

Daniel B. Samuels INVENTOR

BY

Racinebaum, Stockbridge & Root.
ATTORNEYS.

UNITED STATES PATENT OFFICE.

DANIEL B. SAMUELS, OF NEW YORK, N. Y., ASSIGNOR OF ONE-FOURTH TO FRANCIS B. BRADLEY, OF SHORT HILLS, NEW JERSEY, AND THREE-FOURTHS TO INTER-CHANGEABLE LOCK SIGN CO., INC., A CORPORATION OF NEW YORK.

DISPLAY DEVICE.

Application filed December 24, 1919, Serial No. 347,127. Renewed February 21, 1922. Serial No. 538,369.

To all whom it may concern:

Be it known that I, DANIEL B. SAMUELS, a citizen of the United States, residing at the city of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Display Devices, of which the following is a full, clear, and exact description.

This invention relates to signs and display devices and particularly to those having detachable character and a support therefor, whereby the information carried by the display device can be changed at will.

An object is to provide a device of this kind in which the characters can be arranged in any desired relation as to spacing or position in the field or area upon which they are supported; also to provide a sign in which the rearrangement of the adjustable characters can be quickly accomplished and also to provide a device which is attractive in appearance, simple in construction, inexpensive to manufacture, and which will securely hold the characters in position.

In the accompanying drawings:

Fig. 1 is a front elevation of one form which my invention may assume;

Fig. 2 is a rear elevation of the same;

Fig. 3 is a section of the same taken substantially on the line *a-a* of Fig. 2;

Fig. 4 is a longitudinal section of the same;

Fig. 5 is an elevation of a portion of the support showing one of display characters applied thereto, and

Fig. 6 is a perspective of one of the display characters.

The frame 1 has a display opening 2 in its front face, is provided with a cover 3 for the rear face, and may be conveniently constructed of four strips having mitered ends at their junction. The frame has a recess 4 in its rear face in the bottom of which and adjacent the opening 2 is a pair of superposed perforated plates 5 and 6, one of which (5) is fixedly secured to the frame, while the other (6) is mounted to make sliding excursions in its own plane for short distances by means of rods 7 and 8 secured to the rear face of this plate (6)

and sliding in recesses 9 in the end strips of the frame. These plates are provided with numerous apertures or perforations 10 which are preferably uniformly and correspondingly distributed over the surfaces thereof at short distances apart, so that the corresponding perforations or apertures in the respective plates can, by a slight relative movement of the latter, be brought into or out of alignment to any required extent to correspondingly restrict the passages through the plates.

Mounted on one end of the rear face of the plate 6 in any suitable manner such as by soldering, is a follower or boss 11 having a threaded aperture 12 therein through which passes the threaded end of a screw or bolt 13, rotatably carried in the adjacent end strip of the frame. The screw 13 is provided with a milled head 14 to facilitate operation by one's fingers and with an annular groove 15 which is engaged by a set screw or pin 16 in the end strip through which it passes for preventing longitudinal movement of the bolt or screw. Rotation of the screw by means of the milled head will therefore cause the threaded boss to act as a follower or nut and be moved lengthwise of the screw in a direction dependent upon the direction of rotation of the screw. The boss will, since it is rigidly connected to the plate 6, transmit its longitudinal movement to said plate. Thus, the corresponding apertures in the plates can be shifted into and out of alignment by a mere rotation of the milled head of the screw, and the screw threads serve to hold the plate against accidental displacement.

The display characters 17 of whatever nature are each provided on their rear faces with locking pins 18 projecting therefrom and adapted to be inserted into some of the apertures in the plates when the apertures are aligned and be locked therein by a relative shifting of the plates to bring the apertures out of alignment. The pins may be undercut or headed to prevent their removal when clamped by the shifting of the plate 6, and I preferably construct them of flat strips of metal, secured at one end to the rear face of the character, and hav-

ing the other end 19 bent obliquely to the main portion of the pin to provide the locking head and to also furnish an oblique camming surface which will co-act with the walls of the apertures of the plates to pull the characters firmly against the surface of the plate 5 and hold the same in that position when the plate 6 is shifted relatively to the plate 5 during a locking movement.

10 In use, the milled head 14 is rotated by one's fingers to cause the plate 6 to be shifted relatively to the fixed plate 5 until the apertures or perforations of the two plates are brought substantially into alignment. The display characters are then located upon the display field or surface within the opening 2 of the frame in any desired order or arrangement, such as in rows, curves or in any other desired grouping, and the pins on the backs of the characters are passed through the aligned apertures presented to them. When all of the characters have been thus applied, the movable plate (6) is shifted relatively to the plate 5, by means of the screw 13, as far as it will go. This causes all of the pins on all of the characters to be gripped at the neck simultaneously by the plates, and be held in position firmly against the face of the plate 5. If some of the pins do not pass their full extent through the apertures the oblique surface of such pins will be engaged by an interior wall of the aperture in plate 6 through which the pin passes and the pin cammed inwardly into proper position. In assembling the device, the end of the frame through which the screw passes will be separated from the rest of the frame, the plates placed in position in the frame with the rods 7 and 8 disposed in the recesses in the other end of the frame. The separated end of the frame will then be placed in position in the frame and secured thereto in any suitable manner after which the screw 13 will be passed through the end wall of the frame into the boss 11, the screw 16 inserted into groove 15 to hold the screw 13 in position, and the rear cover applied.

I claim:

1. A display device comprising two superposed plates mounted for relative movement and each having a plurality of apertures, display characters and securing means carried by the characters adapted to enter aligned apertures in the respective plates and be locked therein by relative movement of said plates.

2. A display device comprising two superposed plates mounted for relative movement and each having a plurality of apertures, display characters and undercut pins carried by said characters to be passed through aligned apertures in the respective plates and be locked therein by relative movement of said plates to carry the apertures out of alignment.

3. A display device comprising two superposed plates mounted for relative movement and each having a plurality of rectangular apertures, display characters, and studs attached to said characters and adapted to be passed through aligned apertures in the respective plates and be locked therein by relative movement of the said plates to carry the apertures out of alignment, said studs comprising flat strips attached at one end to the display character and having the free end bent obliquely to the main portion of the strip.

4. A display device comprising a frame, two superposed plates mounted in said frame for movement relative to one another and each having a plurality of apertures distributed over the surface thereof, display characters, securing means carried by said characters and adapted to be passed through aligned apertures in the respective plates and be locked therein by relative movement of said plates, and means carried by the frame for producing relative movement between the plates to lock and unlock the display characters.

5. A display device comprising two superposed plates mounted for relative movement and each having a plurality of apertures, display characters, pins carried by the characters adapted to enter aligned apertures in the respective plates and be locked therein by relative movement of said plates, and means for producing relative movement of the plates and holding them in any set relative position.

6. A display device comprising two superposed plates mounted for relative movement and each having a plurality of apertures, display characters, pins carried by the characters adapted to enter aligned apertures in the respective plates and be locked therein by relative movement of said plates, said pins each having a cam surface adjacent the portion engaged by the plates for co-action with the walls of the apertures through which the pin passes to cam the pins inwardly to their full extent.

7. A display device comprising a frame, two superposed plates disposed within said frame and mounted for relative movement, each plate having a plurality of apertures therethrough, display characters, pins carried by the characters adapted to enter aligned apertures in the respective plates and be locked therein by relative movement of said plates, a screw rotatably mounted in said frame and held against longitudinal movement therein, and a threaded member carried by one of said plates and engaged by the screw, whereby rotation of the screw will produce relative movement of the plates.

8. A display device comprising a frame, two superposed plates disposed within said frame and mounted for relative movement,

each plate having a plurality of apertures
therethrough, display characters, pins car-
ried by the characters adapted to enter
aligned apertures in the respective plates
5 and be locked therein by relative movement
of said plates, means for producing relative
movement of said plates comprising a screw

and a follower therefor, one of which is car-
ried by the frame and the other of which is
carried by one of the plates.

In witness whereof, I hereunto subscribe
my signature.

DANIEL B. SAMUELS.