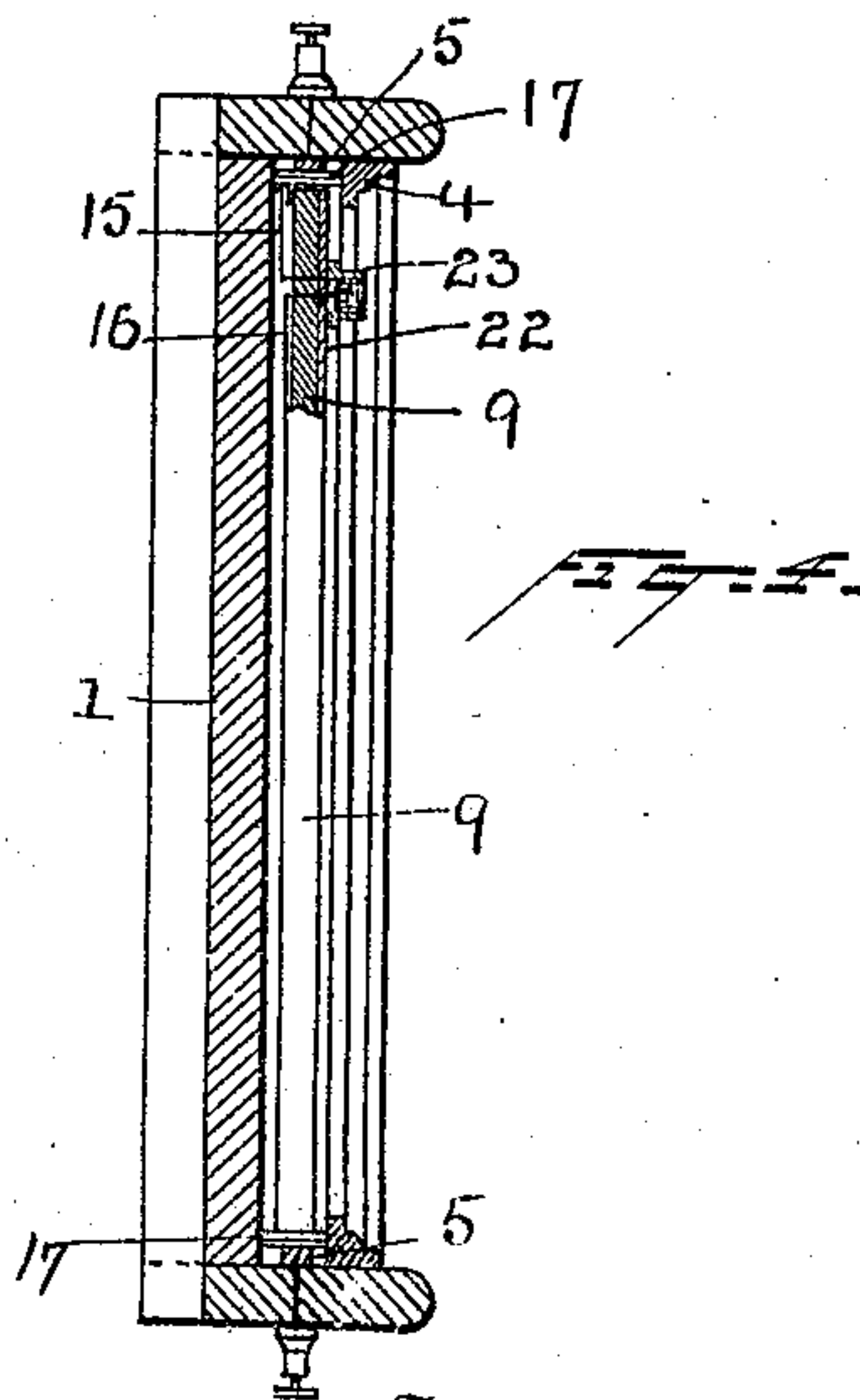
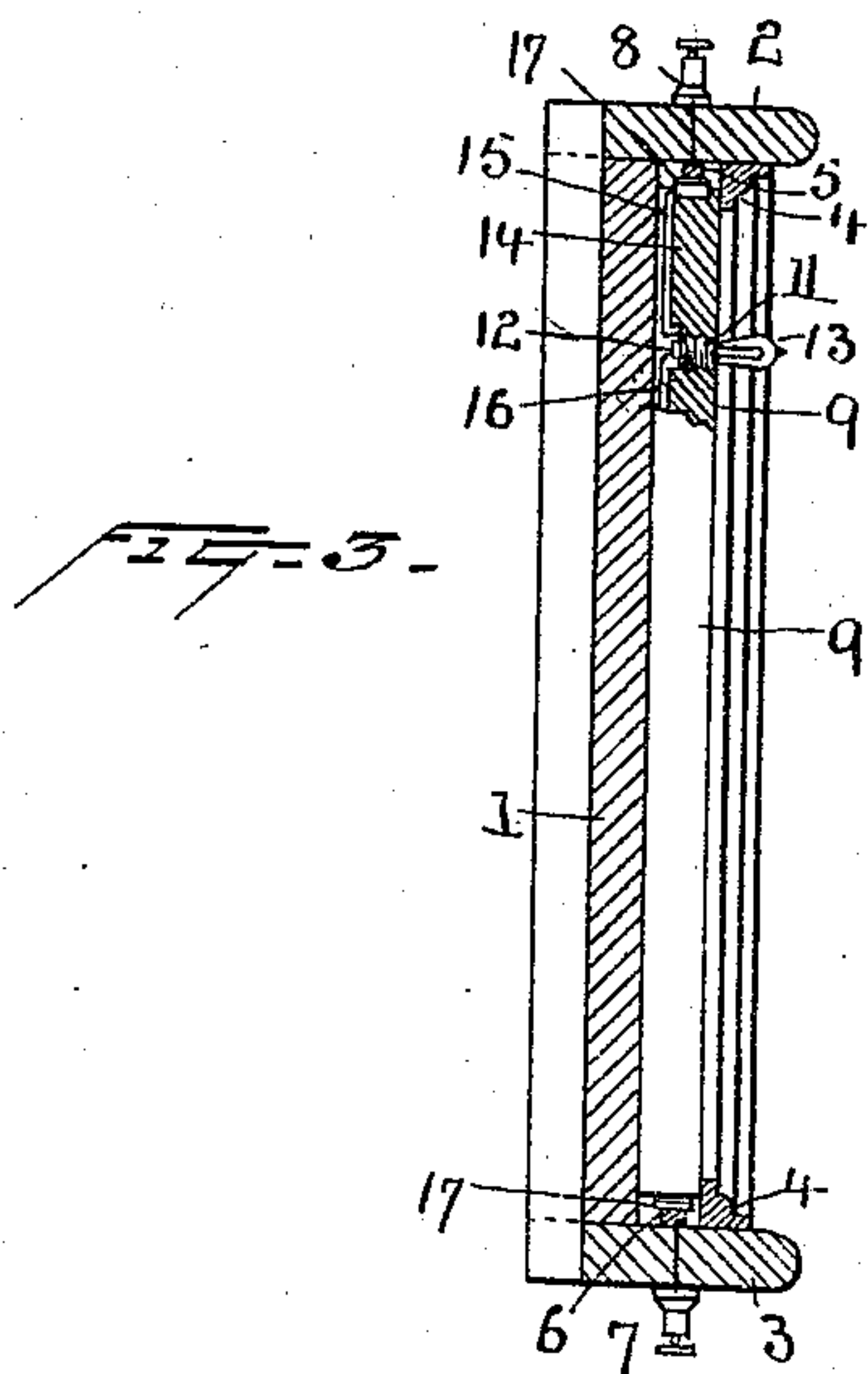
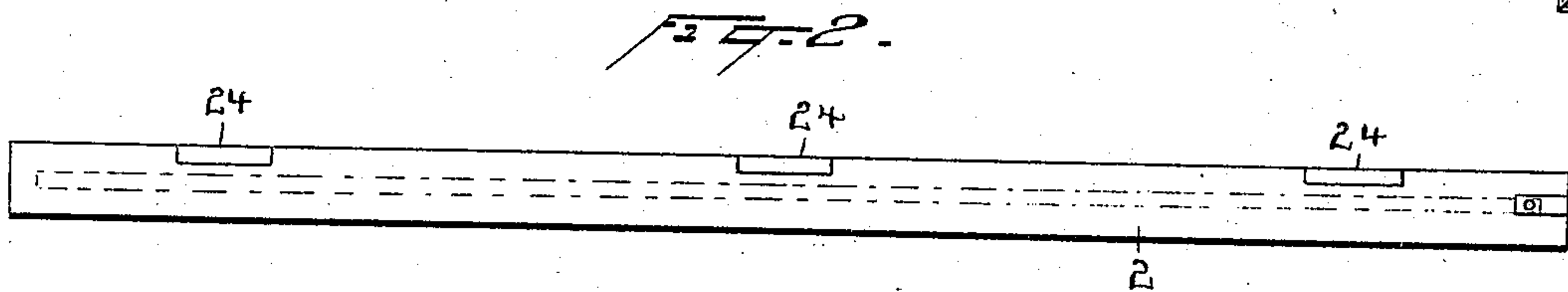
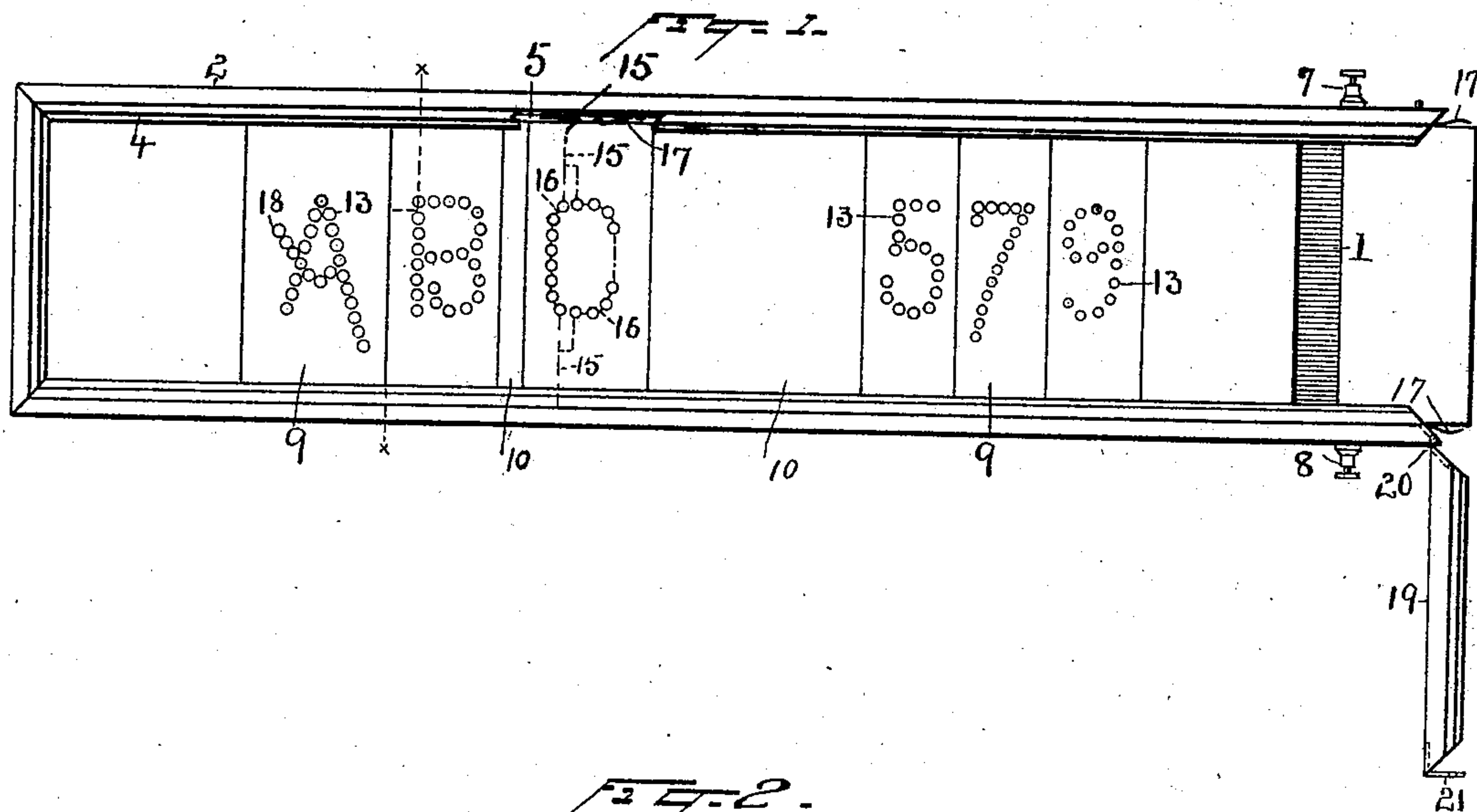


(No Model.)

A. D. PAGE & E. J. McALLISTER.  
UNIVERSAL SIGN.

No. 501,690.

Patented July 18, 1893.



2 Witnesses  
Jorris A. Clark.  
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A. A. Page and E. J. M. Allister.  
By their Attorneys  
Lyert Seely



# UNITED STATES PATENT OFFICE.

ALMON D. PAGE AND EDWIN J. McALLISTER, OF NEWARK, NEW JERSEY.

## UNIVERSAL SIGN.

SPECIFICATION forming part of Letters Patent No. 501,690, dated July 18, 1893.

Application filed May 14, 1892. Serial No. 432,973. (No model.)

*To all whom it may concern:*

Be it known that we, ALMON D. PAGE and EDWIN J. McALLISTER, both citizens of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented a certain new and useful Improvement in Universal Signs, of which the following is a specification.

The present invention relates to signs displaying names, numbers or other characters or devices, the construction being such that the sign can be changed at will and without difficulty.

The main object of the invention is to provide a sign in which the desired words or characters can be set up by inserting separate sections, each carrying electric lamps forming or illuminating parts of the sign, for example, if the sign is composed of words, each section carrying a letter, and if of numbers, each section carrying a number.

Another object is to provide an improved alphabet for the sign.

Other objects will appear from the following description.

The invention consists primarily in a sign constructed in sections carrying electric lamps arranged to form characters which together make up the words or indication of the sign; and the invention consists in a series of letters, numerals or characters having electric lamps arranged to form said letters, numerals or characters, the number of lamps on any section being the same or a multiple of the same number, for example, eight, sixteen or twenty-four, the groups of lamps, when there is more than one group on a section, being preferably connected in multiple series to terminals or contact devices, and the invention consists also in other constructions and combinations hereinafter described and set forth in the claims.

In the accompanying drawings, Figure 1 is a face view of a board having an arbitrary sign consisting of the letters A B C and the numerals 5 7 9 set up thereon. Fig. 2 is a plan of Fig. 1. Fig. 3 is a section on line  $x-x$  of Fig. 1; and Fig. 4 is a section, on a corresponding line, of a slightly modified form.

1 is a board or frame, around the edges of which are strips 2, 3 carrying on their inner sides moldings 4, and in the space between

the moldings and the board 1 along two sides of the board are exposed metal strips 5, 6, which serve as conductors or contacts and which are connected to the terminal posts 7, 8 adapted to be connected to any suitable source of current. The boards or sections 9 of which the sign is made up are provided with lamp sockets having terminal sleeves 11 and central contacts 12, as common in the well known Edison form of socket, or the sections may be provided with terminals arranged as in other forms of socket when another style of lamp than the Edison is to be used, and in these sockets are mounted electric lamps 13. On each section the sockets, which may be of proper size to receive miniature lamps, or which may be of any desired size, are arranged in such order that they form the outline of one of the letters of the alphabet or of a numeral or other desired device. In Fig. 3 the sockets are shown in holes in the boards 9. In the back of the boards 9 are preferably formed grooves 14, and in these grooves are wires or circuit connections 15, 16 extending from the exposed spring or contact device 17 on the end of the board to the first socket sleeve and from the first socket central terminal to the succeeding socket sleeve, and so on, to the spring or contact device at the opposite end of the board. The springs 17 at the tops and bottoms of the boards or sections 9 make electrical contact with the conductors 5, 6 and also guide and steady the plates.

10 are spacing boards adapted to be inserted in the track formed by the moldings 4 at the ends or between the character sections, and are similar in shape to the boards 9 on which the letters or figures of which the sign is composed are mounted. The spacing plates may or may not have springs corresponding to springs 17 for the purpose of holding them in place.

In Fig. 1 the circuit connections are indicated at the letter C only, but it will be understood that each section of the sign has corresponding circuit connections. In the arrangement illustrated, the small circles indicate the lamps, and each letter and numeral is composed of a number of lamps which is a multiple of eight, the lamps being connected to the conductors 5, 6 in multiple series of eight. The number of lamps in each letter



or figure might be a multiple of four, six or other suitable number, but there should be uniformity in all the sections. By forming the letters, &c., as just described, all parts of the sign will have the same degree of illumination when the sign is in use. When the proper number of lamps cannot be arranged in positions where they are needed in the formation of a character, or when desired, they can be put on to constitute ornamentations, as indicated at 18, Fig. 1. When it is desired to change the sign the end 19 of the frame, which is hinged at 20 and has a securing device 21, is turned down, as shown, and the parts constituting the old sign are removed, when said parts can be rearranged in any desired manner, or other sections substituted, the lamps being thrown into circuit by mere insertion of the sections into the frame.

In Fig. 4 the boards 9 are shown considerably thinner than in Fig. 3 and covered with an ornamental cloth or other layer 22 on which sockets 23 are secured to form the outline of characters, the wires 15, 16 being connected to the terminals thereof as already described. In this figure also the springs 17 are shown wider than the boards 9 so as to occupy the whole width of the grooves formed by the moldings 4 and thus to guide and secure the plates as well as to make contact with the conductors 5, 6. To prevent warping of the supporting board or frame, cleats 24 may be set into the back thereof, as shown.

Signs made as described are adapted for use in a large variety of situations, and the manufacturers by keeping on hand a small stock of letters and numerals will be able to quickly furnish signs indicating any desired name or number.

It will be clear that the arrangement of the contact springs on the boards or sections 9, as well as the construction and arrangement of the sockets for the lamps, and of some of the other parts of the apparatus, can be largely varied without departing from our invention.

What we claim is—

1. The combination, in a sign, of a support with exposed contacts to which a source of current may be connected, electrically illuminated letters or sections with suitable circuit connections and having exposed contact devices, the letters or sections being adapted to be placed in any desired order on said support, and said contact devices being arranged to complete the circuit through each letter or section by the act of putting it in place, substantially as described.

2. The combination, in a sign, of a support

with exposed contacts to which a source of current may be connected, electrically illuminated letters or sections adapted to be arranged removably and interchangeably on said support, said sections having suitable circuit connections and exposed contact devices making contact with the first mentioned exposed contacts when the sections are put in place, and means for holding the sections in position on the support and for releasing the same when desired, substantially as described.

3. The combination in a section of a sign, of a suitable body, electric lamps supported thereon in the form of a letter or part of a sign, circuit wires connected to said lamps, and exposed contact plates to which such wires are connected in position to co-operate with external exposed contacts connected to a source of current, substantially as described.

4. The combination, in a sign or similar device, of several boards or sections having characters formed of electric lamps, the number of lamps on each section being the same or a multiple of the same number, terminals for the lamps of each section, and conductors to which said terminals are connected, substantially as described.

5. A sign made up of letters, figures or parts on separate boards or sections, each letter, figure or part having the same number, or a multiple of the same number, of electric lamps as the other letters or parts so that the lamps on the separate sections can all be connected in equal groups to a supply circuit, substantially as described.

6. A series of letters or characters made up of electric lamps arranged in the desired form and adapted to be connected to a single circuit, each letter being separate from the others but having the same or a multiple of the same number of lamps, and means for connecting the lamps forming each character to such circuit in any desired order, substantially as described.

7. The combination, in a sign, of a support having a base-board, conductors in grooves formed along the edges of the base-board, and boards or sections carrying electric lamps and having contact devices adapted to bear on said conductors held in said grooves, substantially as described.

This specification signed and witnessed this 7th day of May, 1892.

ALMON D. PAGE.

EDWIN J. McALLISTER.

Witnesses:

FRANCIS R. UPTON,  
CHAS. H. HEELEY.