

No. 715,555.

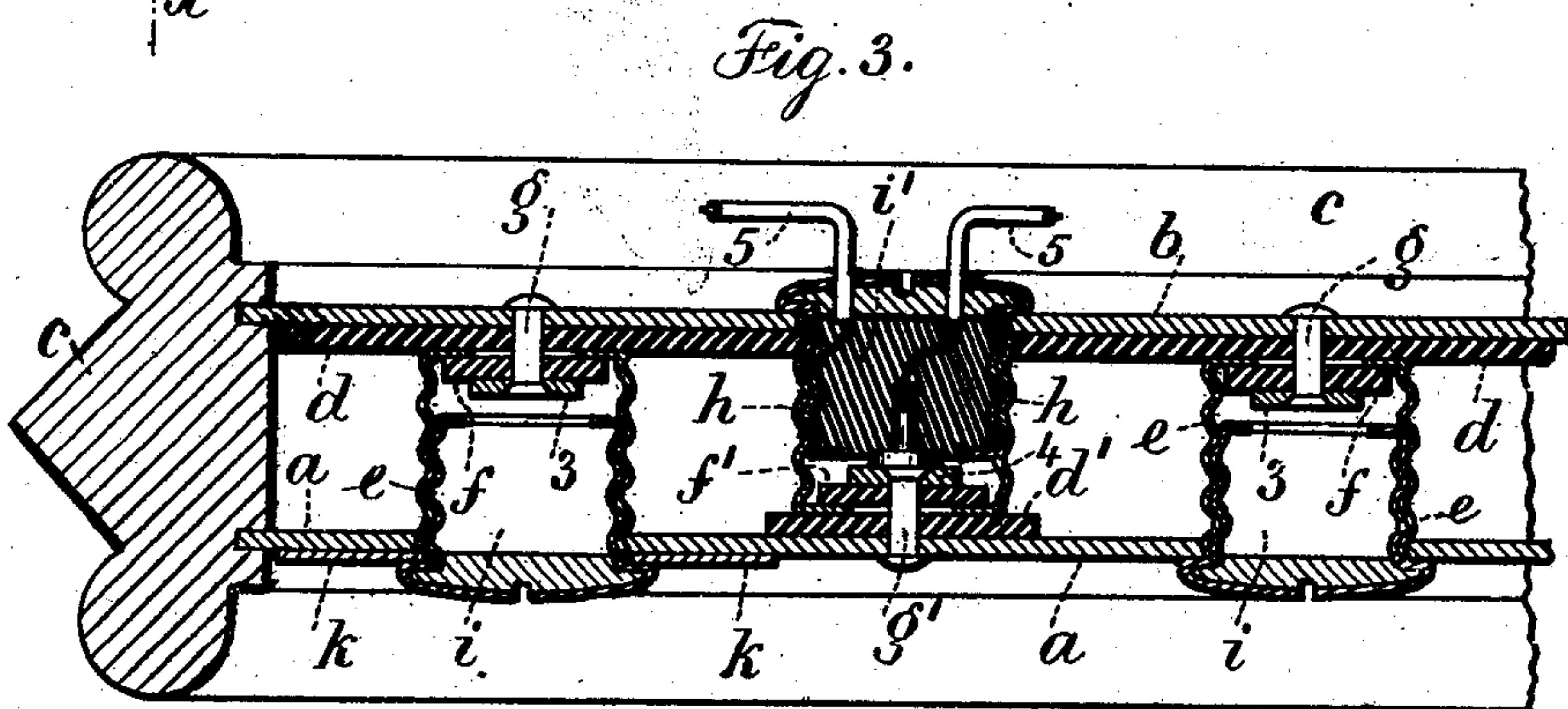
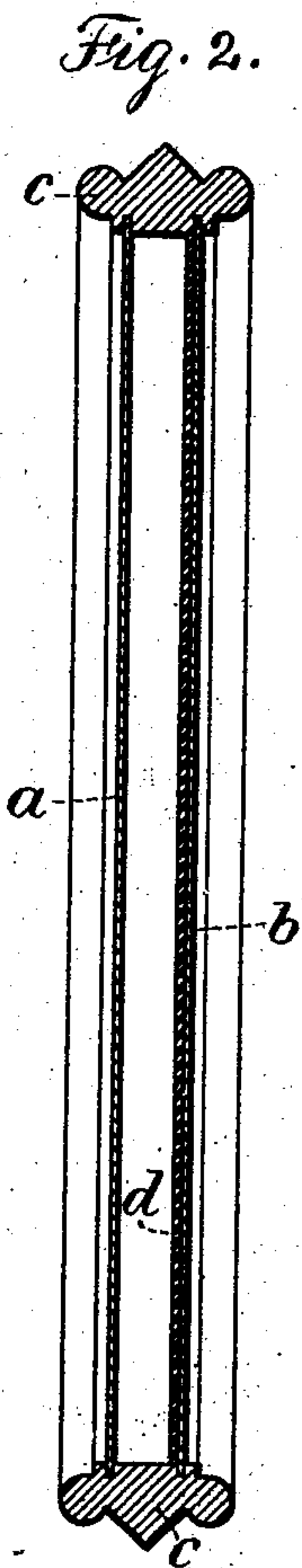
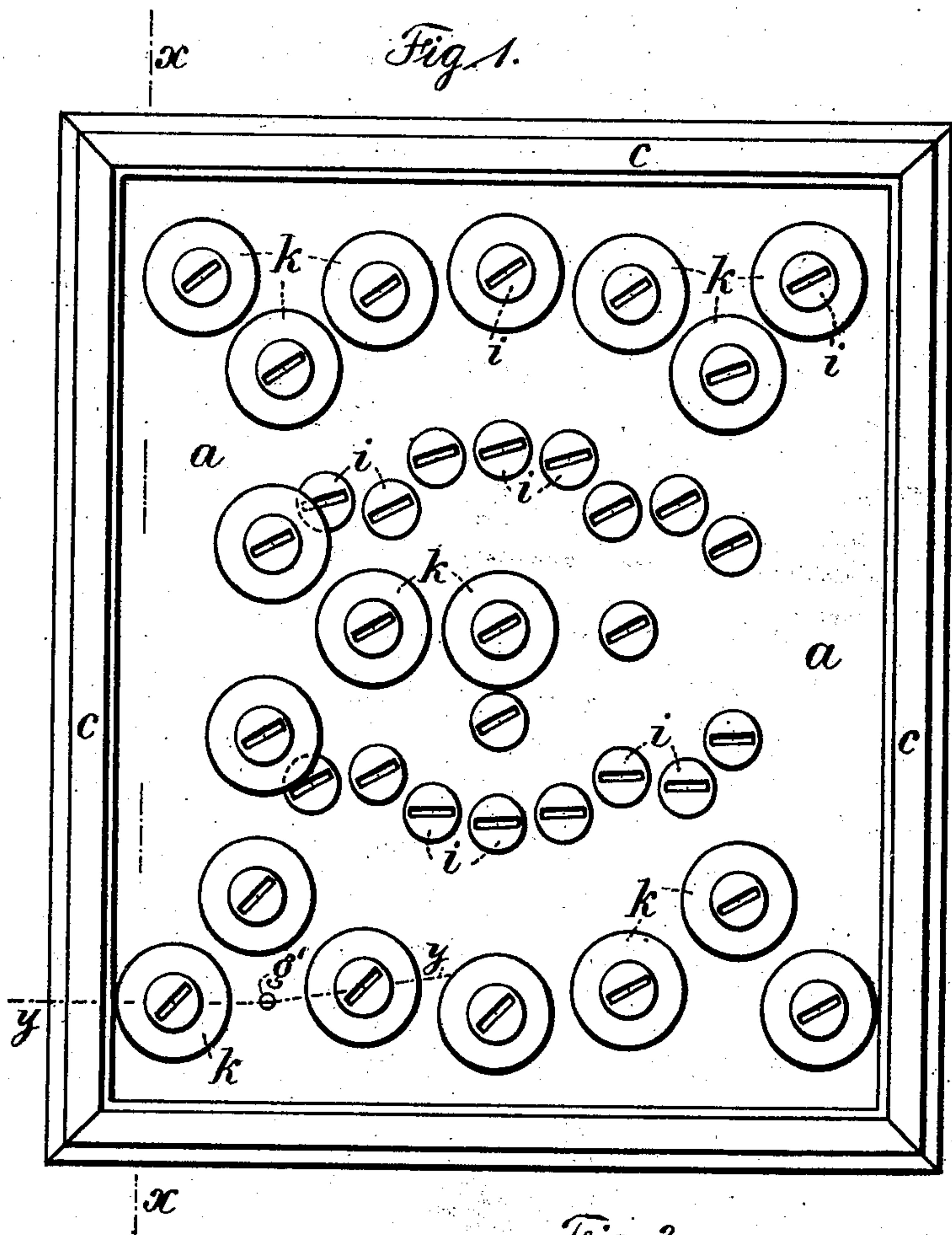
Patented Dec. 9, 1902.

L. S. CRANDALL.

ELECTRIC SIGN.

(Application filed Aug. 30, 1902.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

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ELECTRIC SIGN.

SPECIFICATION forming part of Letters Patent No. 715,555, dated December 9, 1902.

Application filed August 30, 1902. Serial No. 121,555. (No model.)

To all whom it may concern:

Be it known that I, LUCIEN S. CRANDALL, a citizen of the United States, residing in the borough of Brooklyn, county of Kings, city and State of New York, have invented a new and useful Improvement in Signs, of which the following is a specification.

My invention relates to a sign especially adapted for the reception of electric lamps and in which also groups of certain devices may be employed alone or associated with the incandescent electric lamps to form letters or numerals.

The object of my invention is the production of a sign in which the electric current is present or flows continuously in and through the parts of the apparatus and is available for bringing to incandescence electric lamps or groups of electric lamps wherever the same may be placed for the formation of an illuminated sign.

In carrying out my invention I prefer to employ parallel metal plates held in a frame of insulating or non-conducting material. The outer plate is provided with series of metal sockets arranged in a predetermined order, and the bases of these sockets come in contact with an insulating material which forms an inner surface to the other or back plate, and inner disks of insulating material are provided at the bases of these sockets and pins through the insulating material and back plate for connecting the bases of the sockets in place. These sockets are adapted to receive incandescent electric lamps, through which when screwed down to place the current immediately passes and illuminates the lamps. The lamps are to be arranged to indicate a letter or numeral, and any number of these signs may be arranged longitudinally or vertically. In place of the lamps plugs are provided which fit the sockets, and these plugs are adapted to hold flat rings having a polished or otherwise attractive surface. The plugs passing through the rings are advantageously made, with their surfaces agreeing with the surfaces of the rings, and these plugs and rings may be arranged, as hereinbefore stated, for the electric lamps, so as to indicate a letter or numeral. For a day-sign the plugs and rings alone may be employed. For a night-sign

either the electric lamps alone or the electric lamps and the rings may be employed, in which latter case the electric lamps become substitutes for the plugs. The rings and electric lamps may also remain as a day-sign, if desired, with good results and equal advantage. For the purpose of conveying the electric current to the parallel plates I provide a socket structure similar to the lamp-socket structures, only entering from the back of the sign and forming contact with the two plates. This socket is adapted to receive a plug carrying the electric-circuit wires.

In the drawings, Figure 1 is an elevation representing my improvement. Fig. 2 is a vertical section at xx of Fig. 1, and Fig. 3 is a horizontal section in larger size at yy of Fig. 1 excepting that one ring shown in Fig. 1 has been omitted in Fig. 3.

a represents the face-plate of the sign, b the back plate, and c the frame, which latter is preferably of insulating, non-conducting, or any suitable material, the plates a and b being received in grooves in the inner surface of the frame. I provide a plate d , of insulating material, lying upon the inner surface of the back plate b .

e represents the metal sockets in series extending through the face-plate a and terminating against the plate of insulating material d adjacent to the back plate b . I have shown and prefer to employ with the sockets e insulating-material disks or washers f and metal washers 3 in the bases of the sockets e , and through the metal washers 3 the disks f , the insulating-material plate d , and the back plate b pass rivet-pins g to secure the backs of the sockets to the back plate to prevent the sockets turning with reference to the front plate through which they pass and to hold the parts in a fixed relation.

i represents series of plugs adapted to screw into the metal sockets e , said plugs filling and their peripheries extending beyond the sockets. Figs. 1 and 3 show the sockets e and the plugs i , according to a predetermined arrangement, adapted in use to form letters or numerals. I provide a series of flat metal rings k , through which the sockets e may be passed. These metal rings are adapted to lie upon the surface of the face-plate a when the plugs are screwed down to place.

A metal socket *h* passes through the back plate *b*, through the plate of insulating material *d*, bears against a disk of insulating material *d'* on the back of the face-plate *a*, and a rivet-pin passes through a metal washer 4, through the insulating-material disk *f'*, through the disk *d'*, and through the face-plate *a* to secure the parts in position and to the face-plate, and a plug *i'* is received in the socket *h*. This plug *i'*, as shown, is simply illustrative of a plug of usual construction, which carries the electric-circuit wires 5, and from the same the electric current is communicated to the face-plate *a* and back plate *b* and from the same to the electric lamps through the rivet-pins *g* and the metal sockets *e* for illuminating the lamps.

The metal rings *k* are of liberal diameter and adapted to receive the plugs *i*, which pass through the same and into the sockets *e*. The surfaces of these rings *k*, as well as the surfaces of a proportion of the plugs *i*, are polished, plated, or ornamented, as desired, so that when the parts are arranged, as shown in Fig. 1, to form the letter "E" or some other letter or numeral the same constitutes a day-sign visible at quite an appreciable distance. To form a night-sign, the plugs *i* are removed, according to the letter or numeral to be shown by the illumination of the lamps, and the lamps replace the plugs *i* in the sockets *e* either alone without the rings or with the rings surrounding and held in place by the lamps. The rings if polished or plated will reflect the light of the lamps.

This device is not only adapted for a day-sign and for a night-sign, but may be quickly changed at the pleasure of the user by shifting or interchanging the parts so as to represent any desired letter or numeral.

I claim as my invention—

1. A sign comprising parallel metal plates, means for supporting the plates and for insulating them from one another, lamp-sockets in the outer plates in electric contact therewith but insulated from the back plate, devices in said sockets in contact with the back plate, means providing electrical connections to said plates for supplying the current, devices connected to said sockets for designating a letter or numeral by day, the removal of which permits the insertion of electric lamps for designating a letter or numeral, as set forth.

2. A sign comprising parallel metal plates, a frame or support therefor of insulating or non-conducting material, groups of electric-lamp sockets of predetermined arrangement passing through the face-plate and in electric contact therewith, an insulating-support for the bases of said sockets, a central pin in said sockets passing through the back plate making electric contact therewith and supporting the lamp-sockets at their bases, a series of plugs adapted to screw into said lamp-

sockets and devices supported thereby and concentric therewith and of attractive appearance which indicate letters or numerals and form a day-sign and which plugs when removed, permit of the introduction of electric lights to form a night-sign and means for supplying the electric current to said plates.

3. A sign comprising parallel metal plates, a frame or support therefor of insulating or non-conducting material, groups of electric-lamp sockets of predetermined arrangement passing through the face-plate and in electric contact therewith, an insulating-support for the bases of said sockets, a central pin in said sockets passing through the back plate making electric contact therewith and supporting the lamp-sockets at their bases, a series of plugs adapted to screw into said lamp-sockets, a series of rings adapted to fit around said plugs having a polished or attractive surface adapted with the plugs to form a day-sign and which when removed, permit the introduction of electric lamps to form a night-sign, a metal socket passing through the back plate in electric contact therewith but insulated from the front plate, a metal pin located centrally of said socket passing through and making electric contact with the front plate and a plug carrying the electric-circuit wires and adapted to screw into the latter socket for conveying the current to the sign.

4. A sign comprising a pair of plates occupying adjacent planes, a support for the plates and means for insulating the plates from one another, a series of sockets secured in the outer plate and in electric contact therewith but insulated from the other plate, devices in the bases of said sockets extending to electric contact with the back plate, means for supplying the electric current to the said plates through the said sockets and the devices in the bases thereof, means adapted to be connected to said sockets in a predetermined arrangement for designating a letter or numeral by day, the removal of which permits the insertion of electric lamps in said sockets in a predetermined arrangement for designating a letter or numeral at night.

5. A sign comprising parallel metal plates, means for supporting the plates and for insulating them from one another, lamp-sockets in the outer plates in electric contact therewith but insulated from the back plate, devices in said sockets in contact with the back plate, means for electrical connections to said plates for supplying the current and devices connected to said sockets for designating a letter or numeral.

Signed by me this 25th day of August, 1902.

L. S. CRANDALL.

Witnesses:

GEO. T. PINCKNEY,
S. T. HAVILAND.