

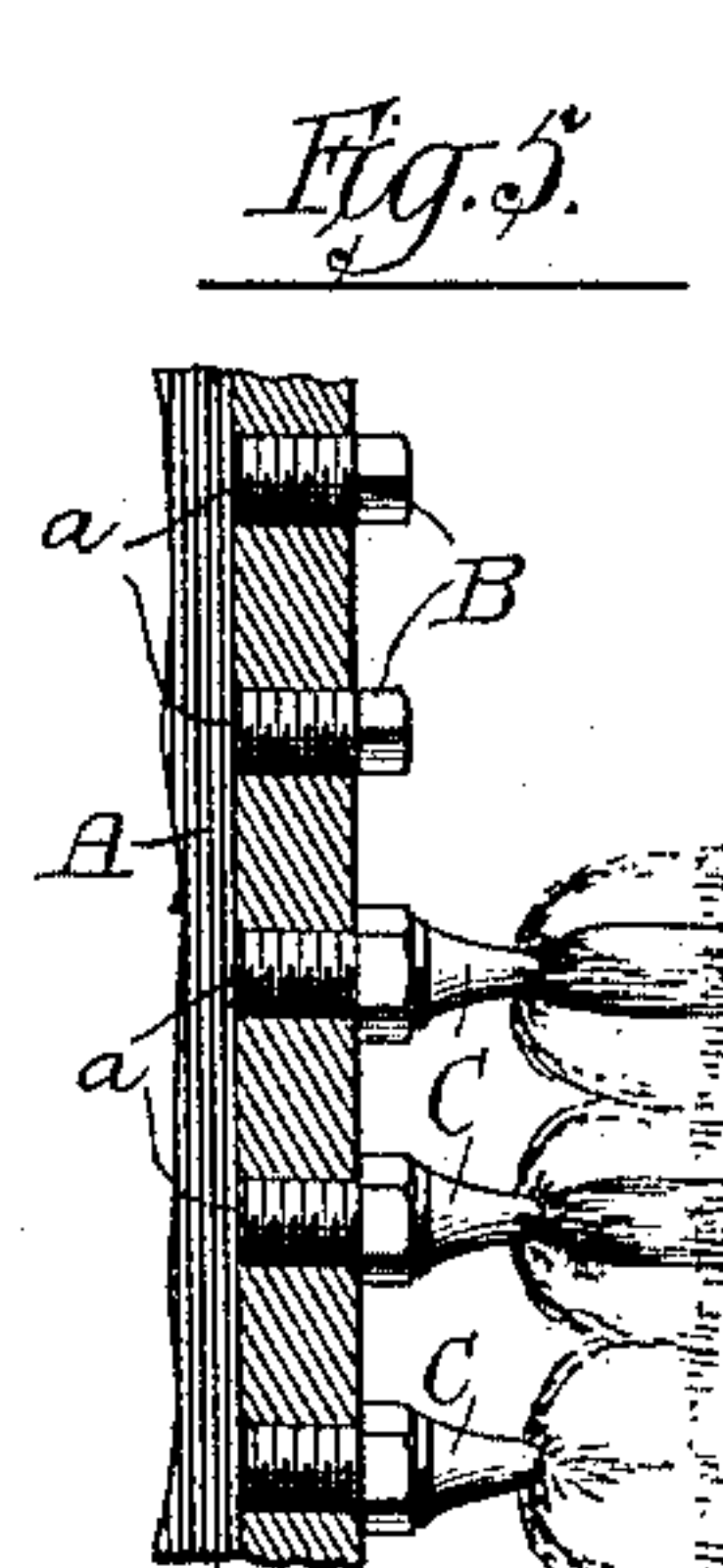
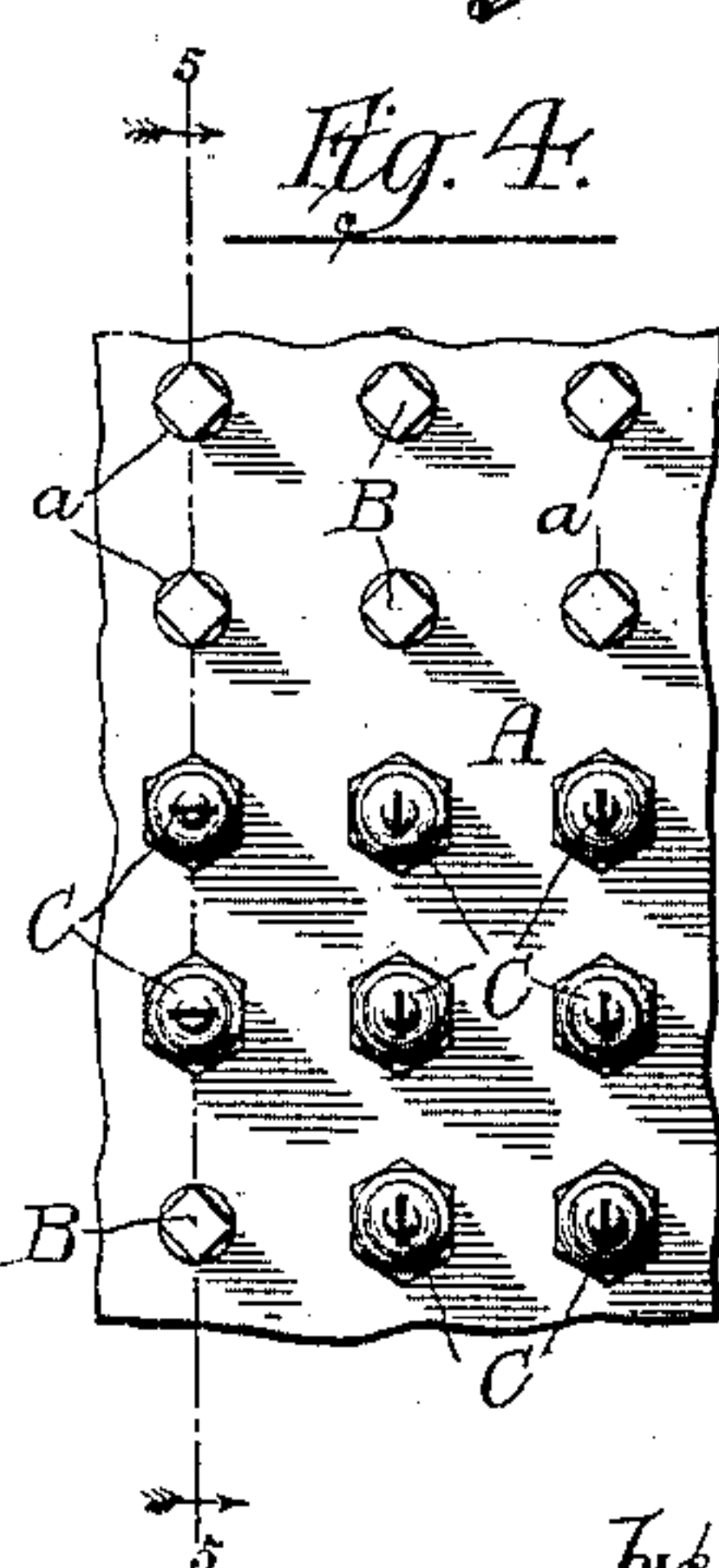
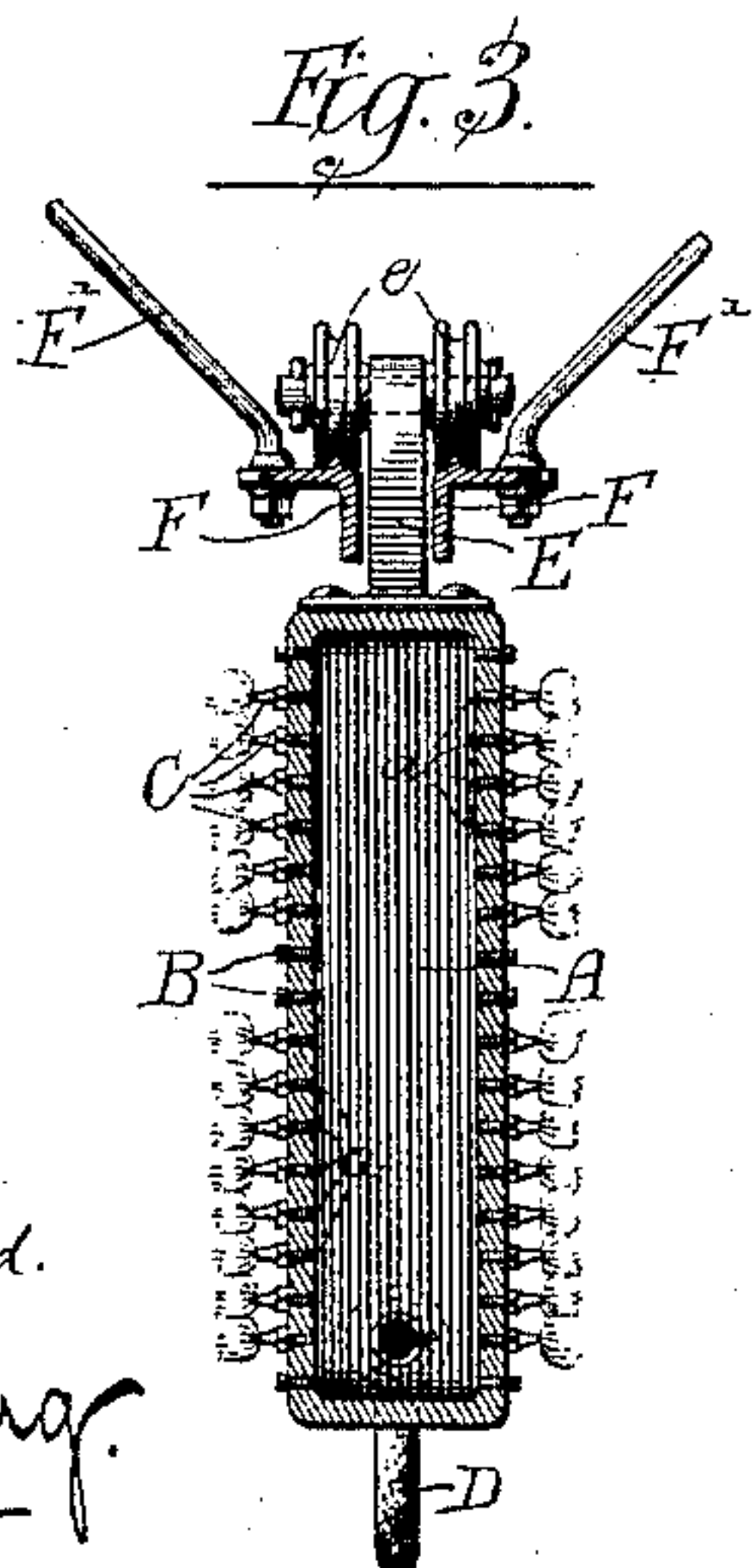
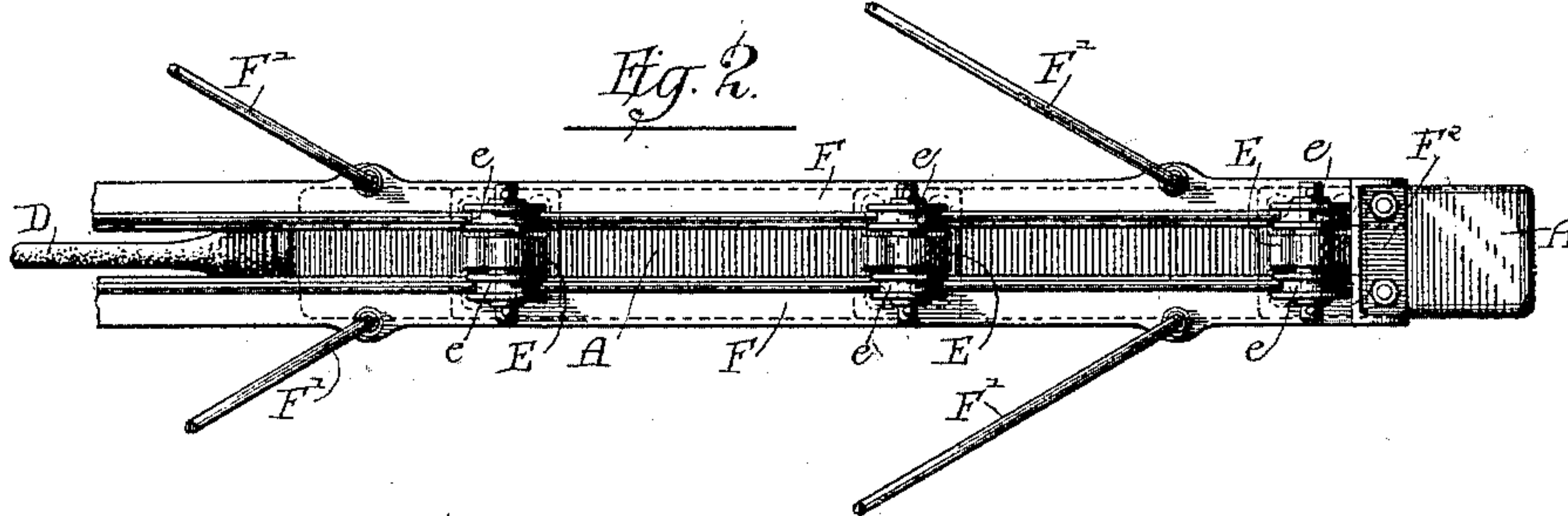
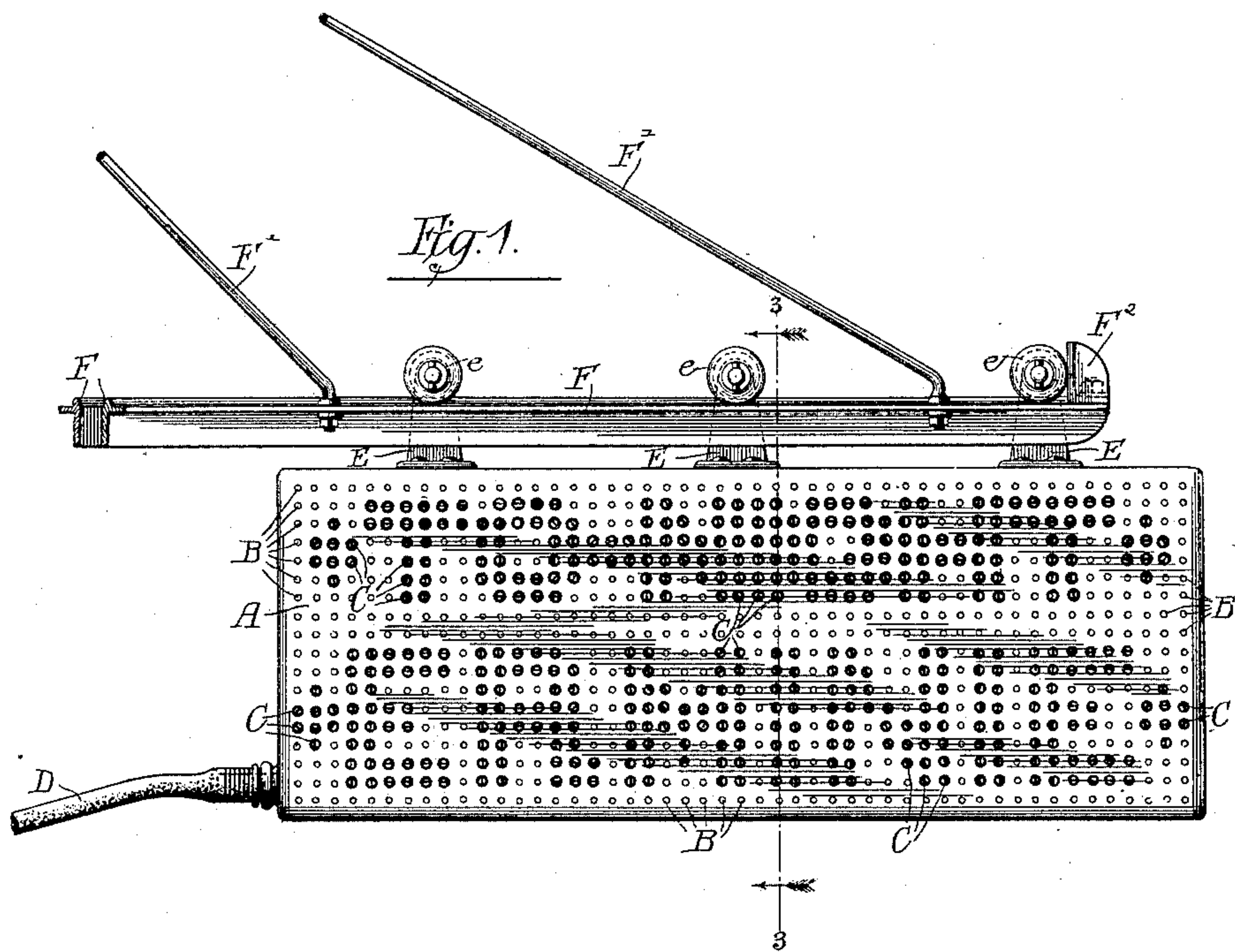
(No Model.)

2 Sheets—Sheet 1.

E. F. GAVIN.
ILLUMINATED SIGN.

No. 433,677.

Patented Aug. 5, 1890.



Witnesses:-

Louis M. Whitehead.

Wm. F. Hemming.

Inventor:-

Edward F. Gavin.

By:- Clayton, Poole & Brown

Attorneys:-

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Fig. 6.

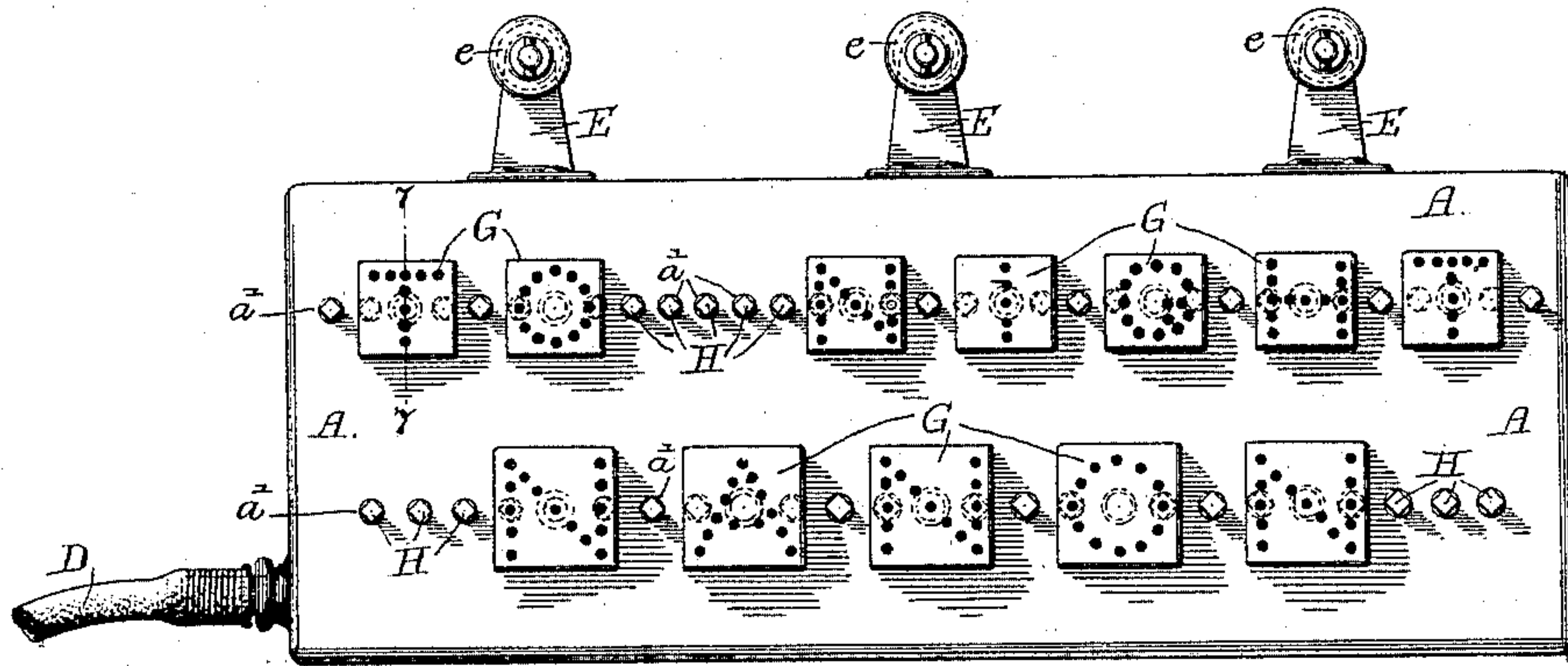


Fig. 7.

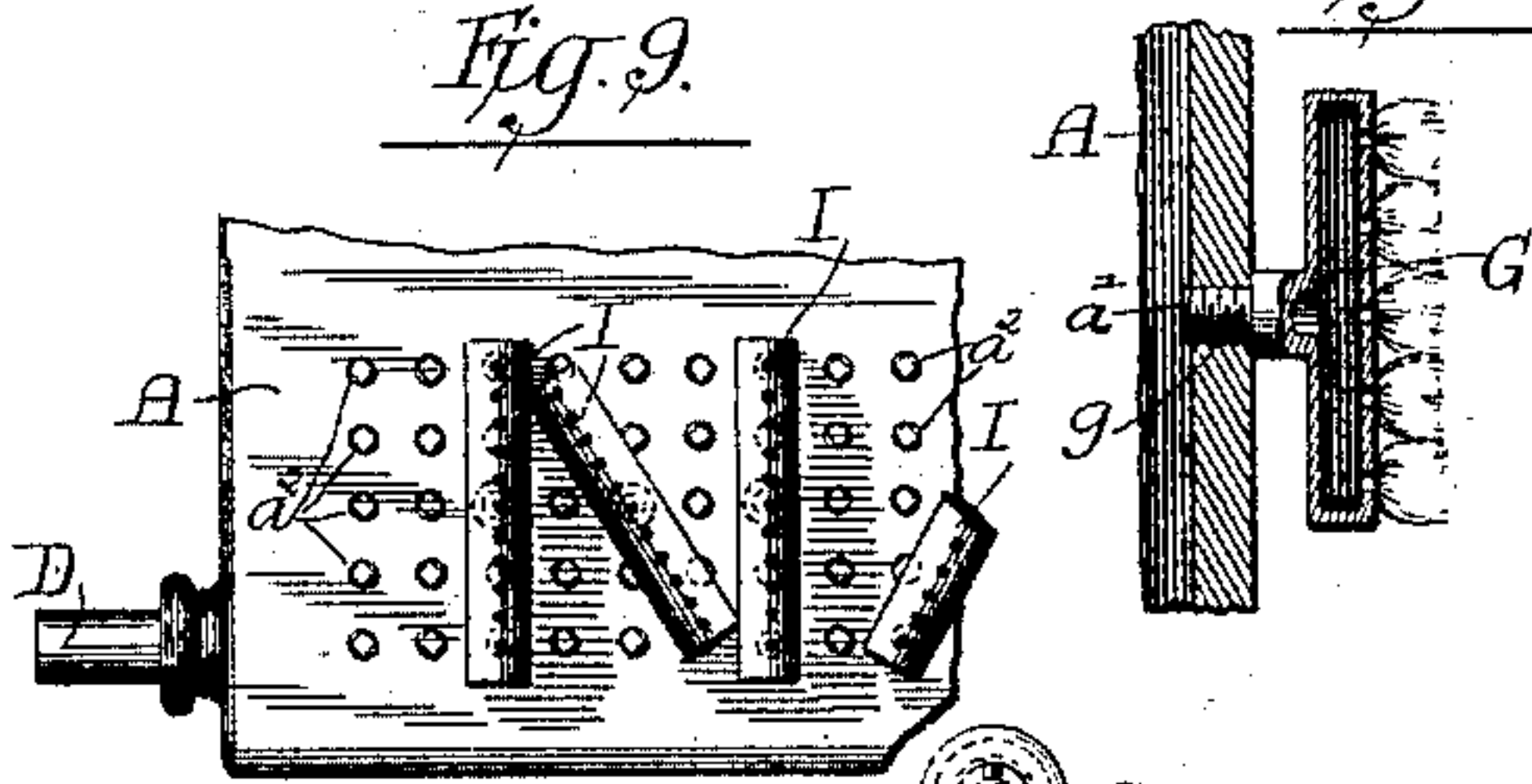


Fig. 8.

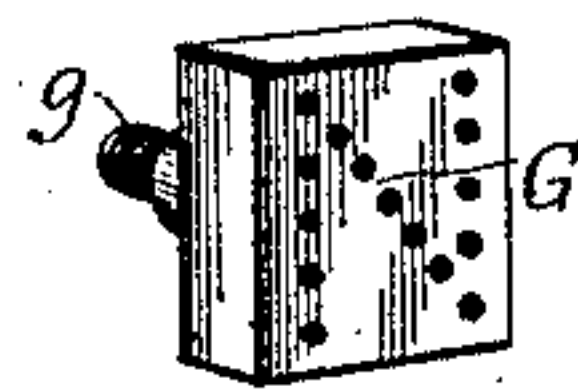


Fig. 10.

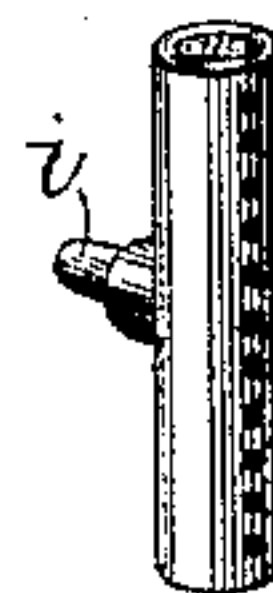


Fig. 11.

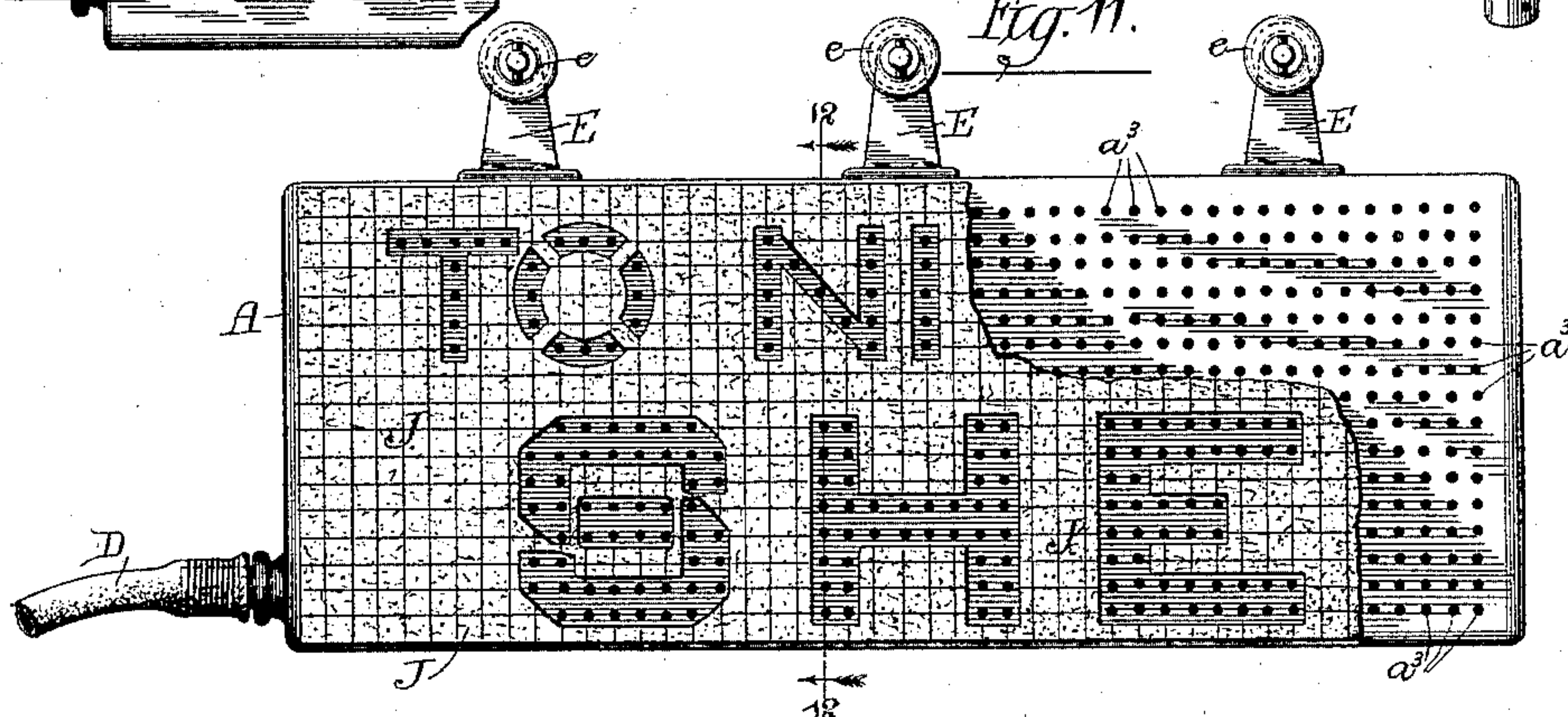
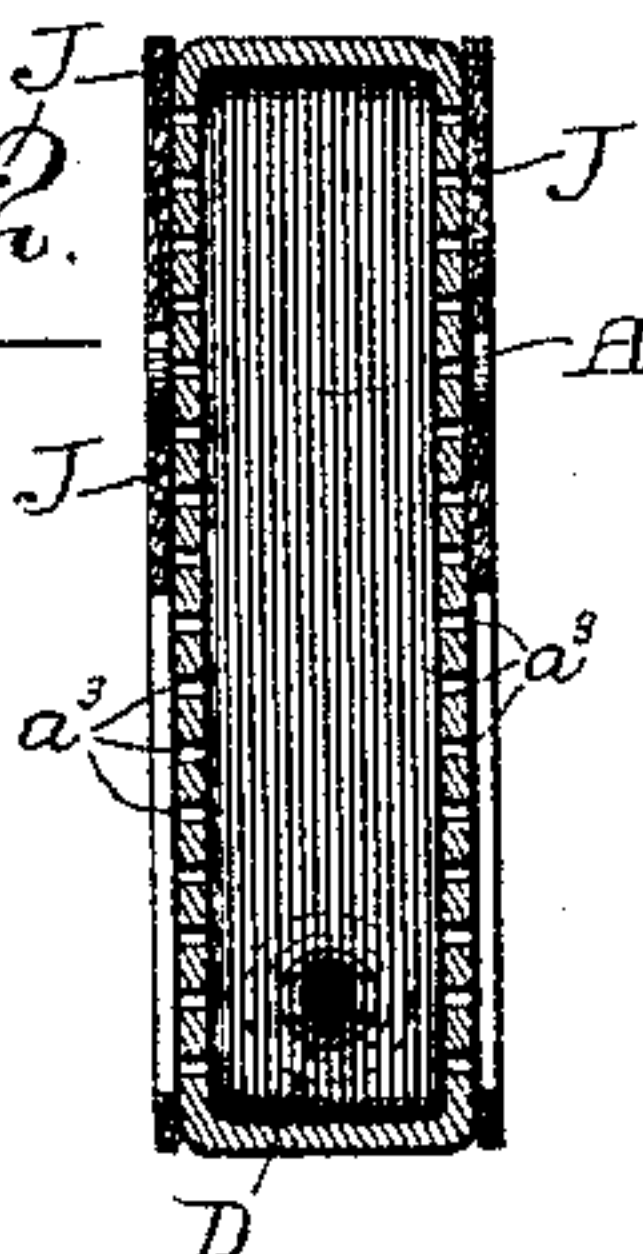


Fig. 12.



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UNITED STATES PATENT OFFICE.

EDWARD F. GAVIN, OF CHICAGO, ILLINOIS.

ILLUMINATED SIGN.

SPECIFICATION forming part of Letters Patent No. 433,677, dated August 5, 1890.

Application filed March 22, 1889. Serial No. 304,266. (No model.)

To all whom it may concern:

Be it known that I, EDWARD F. GAVIN, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful
5 Improvements in Illuminated Signs; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which
10 form a part of this specification.

This invention relates to a novel illustration of that class wherein the letters or characters on the sign are outlined by rows of gas-jets disposed in proper order to form the desired letters or characters.

The invention consists in the matters hereinafter described, and pointed out in the claims.

In the accompanying drawings, illustrating
20 my invention, Figure 1 is a side elevation of one form of sign embodying the main features of the invention. Fig. 2 is a top or plan view thereof. Fig. 3 is a section taken upon line 3 3 of Fig. 1. Fig. 4 is an enlarged detail ele-
25 vation of a part of the sign. Fig. 5 is a detail section taken upon line 5 5 of Fig. 4. Fig. 6 is a side view of a somewhat different form of the invention. Fig. 7 is a detail section taken upon line 7 7 of Fig. 1. Fig. 8 is a per-
30 spective view of a part containing a single character or letter removed from the sign. Fig. 9 shows in face view still another way of constructing the sign according to the general plan proposed. Fig. 10 is a perspective
35 view of one of the parts shown in Fig. 9 removed from the body of the sign. Fig. 11 illustrates in side elevation still another form of sign embodying the main features of my invention. Fig. 12 is a sectional view thereof,
40 taken upon line 12 12 of Fig. 11.

As shown in the said drawings, A indicates a closed metal box, provided on each side with a plurality of holes *a a*, arranged in regular order and adapted to receive either screw-
45 plugs or gas-burners.

B B indicate screw-plugs inserted in some of the said holes *a a* for closing the same, and C C indicate gas-burners, also inserted in some of the said holes. D is a flexible gas-pipe
50 leading from a suitable source of supply and connected at one end with the hollow metal box A for supplying gas to the same.

In using the device gas-burners are placed in the holes in such order as to form the desired letters or characters, the other holes in
55 the side of the box being filled by the plugs. The burners may be shifted at any time into other holes to change the letters on the sign as may be desired. The particular box or in-
60 closure illustrated is shown as provided with holes, plugs, and burners in both of its side walls, the latter being flat and parallel with each other. This construction is not essen-
65 tial, however, and my invention may be carried out by the use of a hollow inclosure or box of any other form and having such aper-
tures, plugs, and burners at either one or both sides.

It is obviously desirable that a sign constructed as above described should be mov-
70 ably supported in such manner that it may be easily shifted to a point convenient for changing the position of the burners and plugs in forming new letters. For this purpose I provide the following devices: To the upper part
75 of the box or inclosure A are connected two or more standards E E E, to the upper ends of which are secured rollers *e e e*, which rest upon horizontal tracks F F, arranged to sustain the sign in a desired position. When the
80 sign is supported in front of a building, over a sidewalk, for instance, the rails F F may be attached at their inner ends to the building and their outer ends may be supported by in-
clined rods F' F'. The employment of two
85 rails F F and two rollers *e e* upon each standard is desirable in order to hold the sign from swinging or moving laterally. This construction is not in all cases essential, however, and
90 the rollers and rails may be otherwise arranged, if preferred. At the outer ends of the rails F F is located a stop F², for limiting the outward movement of the box when thrust
95 outwardly on the rails, said stop being herein shown as bolted to both rails, so as to form a brace to hold the same parallel.

In Fig. 6 is shown another construction embodying the main features of my invention. In this instance the box A is provided with two or more horizontal rows of holes *a' a'*.
100 G G indicate hollow metal heads provided with flat front faces, in which are formed perforations arranged in a manner to constitute a single letter or character. Said hollow metal

heads are provided with tubular extensions $g\ g$, fitted to the screw-threaded apertures a' . $H\ H$ are plugs for filling the holes $a' a'$, which are unoccupied by the hollow heads G . The
 5 said heads G are provided with perforations arranged to form the different letters or characters required for making the word or words needed, and may be shifted or changed in position by insertion in the holes $a' a'$, so as to
 10 form any words desired.

In Figs. 9 and 10 is shown still another modification of the central or main feature of the invention, wherein the metal box A is provided with a plurality of apertures $a^2 a^2$, arranged in a plurality of horizontal lines or
 15 rows, the holes in this case being located at a greater distance apart than those shown in Fig. 1 and being less numerous. The letters in this case are made of short straight or
 20 curved pieces or sections of tubing $I\ I$, having tubular shanks i , which may be inserted in the holes $a^2 a^2$, so as to bring the interior of the tubes $I\ I$ in communication with the hollow interior of the box. Said tubes $i\ i$ are
 25 perforated along their outer faces so as to form lines of gas-jets which, when the tubes are placed together to form letters, serve to outline the latter. In a case of this kind the tube-sections $I\ I$ cannot conveniently be
 30 turned for screwing the shanks i into the box, and the said shanks will commonly be made smooth and slightly conical and fitted accurately to correspondingly shaped smooth holes in the box.

In Figs. 11 and 12 I have shown still another embodiment of the main features of my invention, which has some advantages in point of simplicity and economy over those hereinbefore described. In this instance the box
 40 A is provided with a large number of uniformly-spaced holes $a^3 a^3$, similar to those shown in Fig. 1, but smaller and without screw-threads, the gas in this instance being burned as it issues from said holes without the
 45 use of separately-attached burners. J is a sheet of paper, fabric, asbestos, or other suitable material rendered impervious to gas by being saturated or covered with paint, varnish, or the like, and secured to the said box by any
 50 suitable adhesive substance. In said sheet

are formed openings, affording egress for the gas from such of the holes $a^3 a^3$ as will form the desired letters or characters. As illustrated in the drawings, the sheet J is cut away to form openings having the shape of the desired letters or characters, so that the metal
 55 of the box A is uncovered in its parts adjacent to the holes at which the gas is burned. If desired, however, the sheet may be originally applied over the entire perforated surface of the box, and holes then punched
 60 through the sheet, coinciding with holes in the box, so as to outline the desired letters or characters.

I claim as my invention—

1. An illuminated sign comprising a box or inclosure having a plurality of apertures for the exit of the gas, removable plugs for closing a portion of the same, and a pipe supplying gas to said box.

2. An illuminated sign comprising a box or inclosure provided with a plurality of exit-apertures, a pipe supplying gas to the same, and a sheet of impervious material secured to said box by suitable adhesive substance
 75 and provided with openings or apertures allowing the gas to be burned at some of the holes in the box, substantially as described.

3. The combination, with a sign comprising a perforated box or inclosure and a pipe supplying gas to the same, of means for movably supporting the sign, consisting of track-rails and rollers attached to the sign resting on
 80 said rails, substantially as described.

4. The combination, with a sign comprising a perforated box or inclosure and a pipe supplying gas to the same, of means for supporting the sign, comprising two parallel horizontal rails, two or more standards attached to the top of the sign and extending upwardly
 90 between said rails, and rollers mounted upon said standards and resting on the rails, substantially as described.

In testimony that I claim the foregoing as my invention I affix my signature in presence
 95 of two witnesses.

EDWARD F. GAVIN.

Witnesses:

C. CLARENCE POOLE,
 HARRY COBB KENNEDY.