

No. 785,096.

PATENTED MAR. 21, 1905.

F. B. HALL.
CABLE BOX.

APPLICATION FILED NOV. 11, 1902.

2 SHEETS—SHEET 1.

Fig. 1.

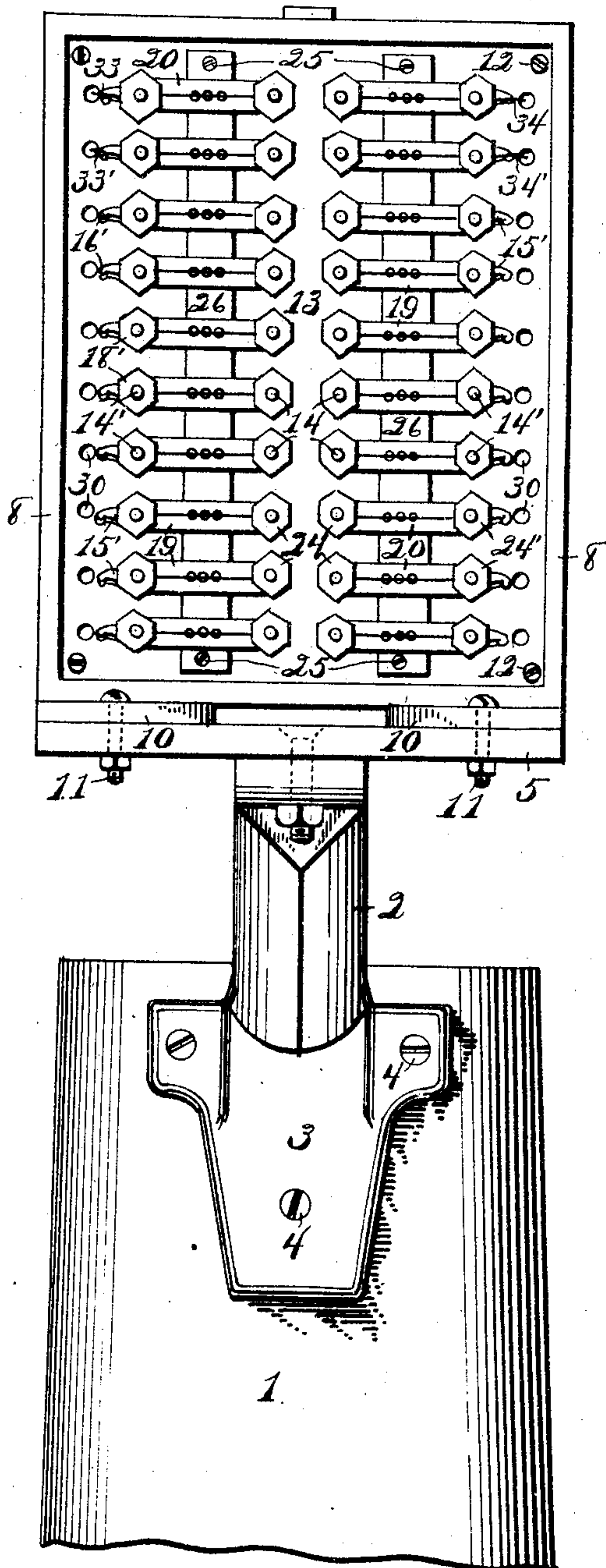
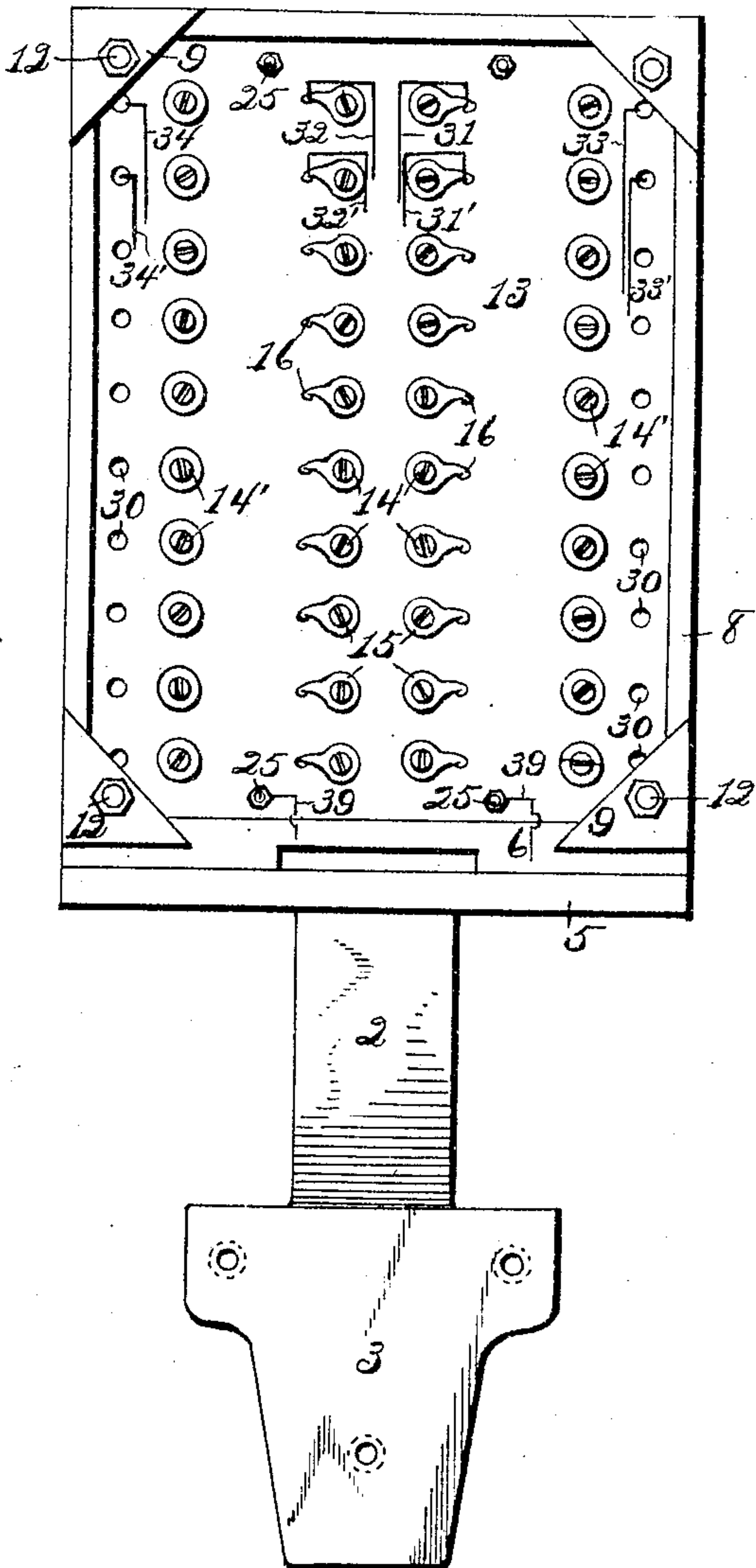


Fig. 2.



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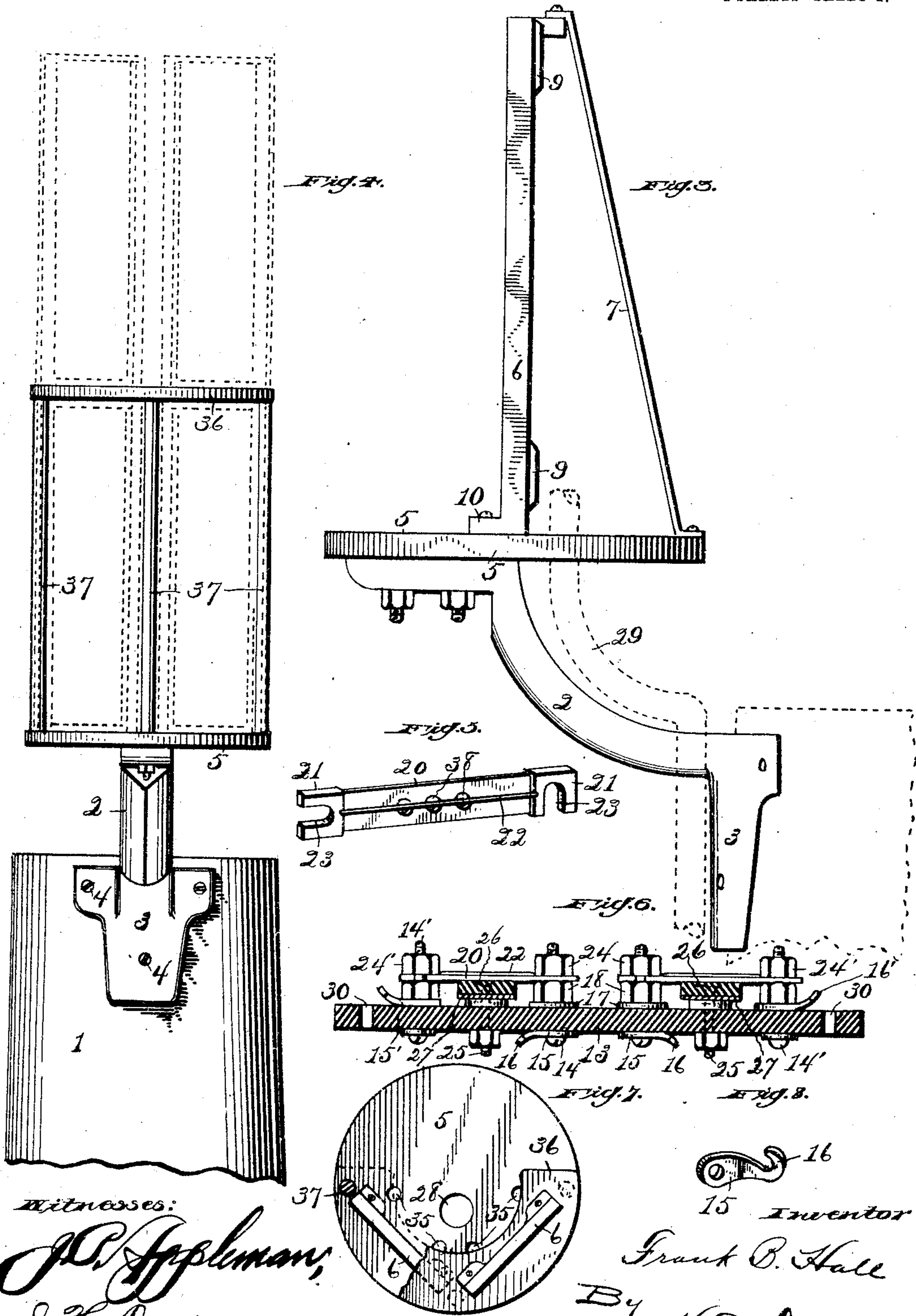
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UNITED STATES PATENT OFFICE.

FRANK BARR HALL, OF WHEELING, WEST VIRGINIA.

CABLE-BOX.

SPECIFICATION forming part of Letters Patent No. 785,096, dated March 21, 1905.

Application filed November 11, 1902. Serial No. 130,892.

To all whom it may concern:

Be it known that I, FRANK BARR HALL, a citizen of the United States of America, and a resident of Wheeling, county of Ohio, and State of West Virginia, have invented certain new and useful Improvements in Cable-Boxes, of which the following is a specification.

My invention relates to new and useful improvements in cable-boxes, and more particularly to a box for mounting and connecting electrical conductors, and still more particularly to a box for mounting and connecting at a central point telephone or telegraph wires as they emerge from a metallic cable with distributing-wires and to a bracket therefor.

The object of my invention is to provide an extremely simple and convenient device of the character mentioned which is so arranged as to be economical in space, as well as economical to manufacture, and, further, to provide a lightning-arrester for said box.

With these and other objects in view my invention finally consists in the particular construction, arrangement, and combination of parts, which will hereinafter be fully described, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a front elevation of my invention. Fig. 2 is a rear elevation of the same. Fig. 3 is a side elevation of the bracket. Fig. 4 is a front elevation of a bracket adapted for holding two or more connecting-plates, showing in dotted lines the respective positions of four plates. Fig. 5 is a perspective view of the connecting device or fuse. Fig. 6 is a cross-section of a connecting-plate. Fig. 7 is a top plan view of the bracket illustrated in Fig. 4, a portion of the cap being broken away; and Fig. 8 is a perspective view of a hook.

Referring to the drawings, in which like reference-numerals designate like parts throughout the several views, 1 indicates the top of a telephone or telegraph pole, to which is secured my supporting-bracket, said bracket consisting of an arm and frame for supporting the connecting-plates. 2 indicates the arm of said bracket, having an integral plate

3 for embracing the pole 1 on one side thereof and through which nails, bolts, or screws 4 are driven to secure the device to the pole. Secured to said arm 2 and supported thereby in a horizontal position is a circular plate 5, and mounted on said plate 5, preferably in a vertical position, is or are one or more frames. Said frames may be braced by supports 7, as shown. The frame 6 consists of a rectangular shell 8 with integral corner-braces 9 and integral base portions 10, through which pass bolts 11 for securing said frame to the plate 5. Mounted in the face of the frame 6 and secured therein by means of screws 12 passing into or through said corner-braces 9 is a fibrous non-conducting body or plate 13. Two longitudinal rows of screws or bolts 14 pass through said plate 13 from the rear face thereof along the medial portion thereof, each screw securing to the rear side of the plate 13 a hook 15, having its free or bent end 16 raised from the plane of the plate. On said screws or bolts 14 on the front face of the plate 13 are provided washers 17 and nuts 18.

At a distance from each side edge of the plate 13 and passing therethrough from the rear face thereof is a longitudinal row of screws or bolts 14'. On said screws 14', on the front face of the plate 13, are hooks 15' with ends 16', said hooks being similar in construction to the hooks 15. Securing said hooks 15' in place are nuts 18'. Connecting the screws 14 and 14' in pairs are fuses 19. (Clearly illustrated in Fig. 5.) Each fuse consists of a strip of mica 20, having secured thereon at each end a metal band 21. The bands 21 on the opposite ends of the mica strip 20 are connected by a fuse-wire 22 over the face of said mica strip. To facilitate the adjustment of the fuses 19 to connect the screws 14 and 14', the bands 21 are each provided with a U-shaped recess 23, the said recess in one end extending longitudinally and the recess of the other end extending transversely of the fuse, substantially as illustrated. Securing said fuses in place are nuts 24 and 24'.

Secured on the front face of the plate 13 by bolts or screws 25 and extending longitu-

dinally of said plate directly underneath each row of fuses 19 is a strip of carbon 26, which is held away from or above said plate by a metal strip 27.

5 In the plate 5 is provided a hole 28, into which the end of a metallic wire-inclosing cable 29 (shown in dotted lines in Fig. 3) is adapted to extend. From the end of said cable the wires are distributed up the middle
10 of the rear face of the plate 13, each wire being soldered to the point 16 of a hook 15. Passing through each of the holes 30, provided near the side edges of the plate 13, is a distributing-wire, the end of which is sol-
15 dered to the point 16' of a hook 15' on the face of the plate 13.

In Fig. 2 of the drawings, 31 and 31' indicate a pair of wires from the cable soldered to points 16, as also do 32 and 32'. 33 and 33'
20 indicate a pair of distributing-wires soldered to points 16', as also do 34 and 34'. (Shown in Figs. 1 and 2.) The distributing-wires are bunched along the rear face of the plate 13 and pass downward through holes or openings
25 35 in the plate 5, from which points they are distributed as desired.

In Figs. 1 and 2 is illustrated the device as used with but one plate 13. When it is necessary to use two or more plates 13, I prefer
30 to arrange the device as shown in Figs. 4 and 7, wherein two frames 6 are used, the same being set at an angle from each other with a semicircular cap 36 over the top, whereon, if desired, two more frames may be mounted,
35 as indicated in dotted lines in Fig. 4. Supporting said cap 36 are upright posts 37, having their lower ends mounted in the plate 5. Now the pairs of cable-wires 31 and 31' being connected with the hooks 15 and the distributing-
40 wires 33 and 33' being connected with the hooks 15', said cable-wires and distributing-wires are connected through the fuse-wire 22, thus permitting an electric circuit or current to pass from one to the other.

45 In the mica strip 20 directly over the carbon strip 26 are one or more holes or perforations 38. A ground-wire 39 is connected with one of the bolts or screws 25 in each carbon strip 26. When an undue charge or cur-
50 rent, such as is induced by lightning, comes in over the line, it jumps through the perforations 38 to the carbon strips 26 and is grounded through the ground-wires 39, and by this diversion the instruments on each circuit are
55 shielded from damage.

As is apparent, various minor changes may be made in the construction of my invention and in the arrangement of its parts without departing from the spirit or scope of the said
60 invention. Hence I do not wish to limit myself to the precise construction and arrangement of parts herein shown.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

65 1. In a cable-box, the combination with a pole, cable-wires and distributing-wires, of a bracket mounted on said pole, a non-conducting plate mounted in said bracket, longitudinal rows of screws extending through said
70 plate, a hook mounted on each screw, the hooks in one row adapted for connection with the cable-wires, and those of an opposite row for connection with the distributing-wires, fuses connecting the opposite rows, said fuses
75 provided with perforations therethrough, strips of carbon mounted underneath the perforations in the fuses, and ground-wires attached to said carbon strips, substantially as set forth and described. 80

2. In a cable-box, a bracket, a shell mounted on said bracket, corner-braces for said shell, a non-conducting plate mounted in said shell and secured thereto, two longitudinal rows of
85 binding-posts along the medial portion of said plate, a hook secured on each binding-post, each hook adapted for connection with a cable-wire, a longitudinal row of binding-posts on said plates near the side edges thereof, a
90 hook on each of the last-mentioned binding-posts, each hook adapted for connection with a distributing-wire, fuses connecting the binding-posts of the cable-wires and distributing-wires in pairs, said fuses provided with per-
95 forations therein, a carbon strip secured on said plate underneath each row of fuses, and a ground-wire connected with said carbon strips, all substantially as and for the purposes set forth and described.

3. In a cable-box, the combination with a
100 pole, cable-wires, and distributing-wires; of a bracket, consisting of a pole-embracing plate, an arm, a circular plate, having a cable-hole and distributing-wire holes therethrough, mounted on said arm, and a rectangular frame
105 mounted on said plate; a non-conducting plate mounted in the frame of said bracket, binding-posts extending through said non-conducting plate in parallel rows, a hook secured on each
110 of said posts, the hooks on the middle rows being secured on the rear face of the plate and adapted for receiving the ends of the cable-wires, and the hooks on the outer rows being secured on the front face of the plate
115 and adapted for receiving the ends of the distributing-wires, fuses for connecting each middle binding-post with its opposite in the outer row; said fuses each consisting of a strip of mica having perforations therethrough and having metal bands on each end thereof,
120 each metal band provided with a recess therein, one metal band being recessed from its end and the other from its side, and a fuse-wire connecting said bands across the face of the mica strip over the perforations there-
125 through; carbon strips secured on the front

face of said non-conducting plate underneath the perforations in the fuses, and ground-wires connected with said carbon strips, all substantially as described and for the purposes
5 set forth.

4. In a bracket for cable-boxes, the combination with a pole, of a plate for embracing the pole on one side thereof, an integral arm,
10 a circular horizontal plate supported by said arm, a rectangular frame mounted on said

plate, integral corner-braces and integral base-pieces carried by said frame, and a brace for holding said frame firmly, substantially as described.

Signed by me at Wheeling, West Virginia, 15
in the presence of two witnesses.

FRANK BARR HALL.

Witnesses:

H. E. DUNLAP,

J. H. DUNLAP.