

No. 636,905.

Patented Nov. 14, 1899.

C. J. KLEIN.

DISTRIBUTING PANEL FOR ELECTRIC CIRCUITS.

(Application filed Mar. 31, 1897.)

(No Model.)

2 Sheets—Sheet 1.

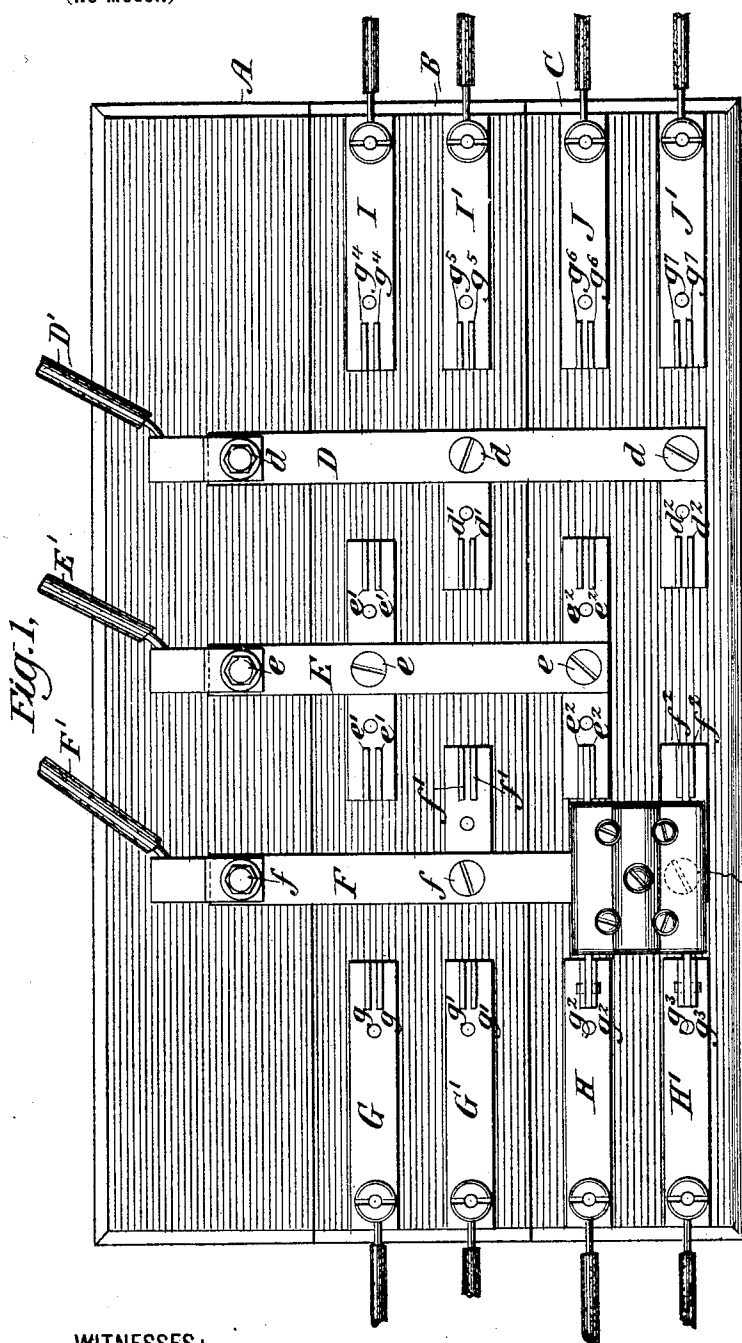


Fig. 1.

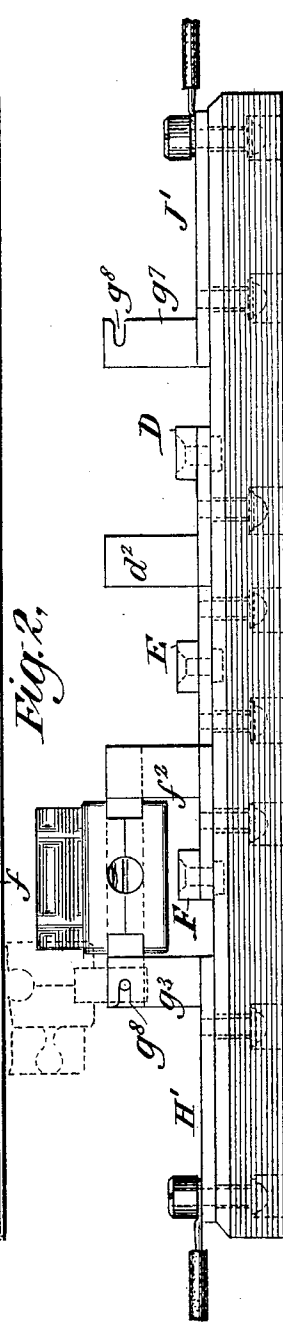


Fig. 2.

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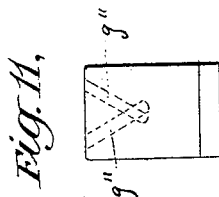
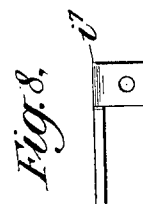
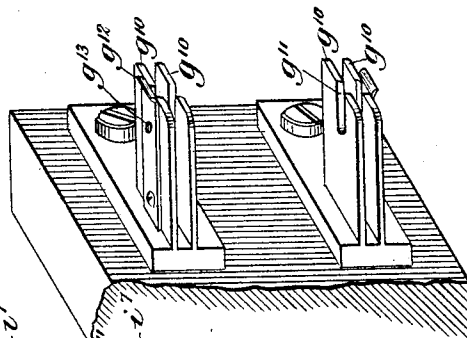
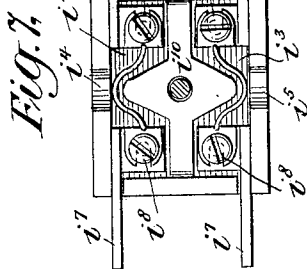
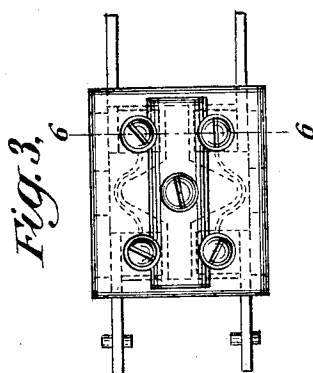
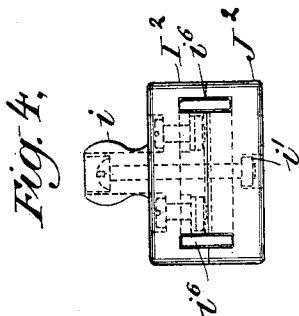
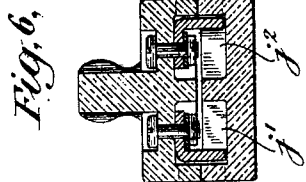
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2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE

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DISTRIBUTING-PANEL FOR ELECTRIC CIRCUITS.

SPECIFICATION forming part of Letters Patent No. 636,905, dated November 14, 1899.

Application filed March 31, 1897. Serial No. 630,078. (No model.)

To all whom it may concern:

Be it known that I, CHARLES J. KLEIN, a resident of the city, county, and State of New York, have invented certain new and useful Improvements in Distributing Devices for Electric Circuits, of which the following is a specification.

My invention relates to distributing-panels for electric circuits.

10 The object of my invention is to improve the construction of distributing-panels; and to that end it consists in the construction and arrangement of parts hereinafter set forth and claimed.

15 The invention may be described generally as a removable fuse-holder connecting the mains of the panels to the branches, the principal features of which are an insulated block, preferably arranged in two halves, one half
20 containing the metal terminal pieces, to which are attached binding-screws for the fuse-links, the other half acting as a cover inclosing the fuse-links, ventilating-holes being provided in the side of the structure, thus entirely inclosing the fuses in insulating material and
25 providing a vent. The removable fuse-block just described is designed to enter the clips or contact-pieces provided in the panel in order to connect the mains of the panels to the
30 branches. One set of these clips is provided with slots cut horizontally or vertically or at an angle therein and designed to receive pins fastened in the projecting metal terminal
35 pieces of the fuse-holder, so that the fuse-holder may turn on the pins which are entered into the slots of the clips, and thus serving the double purpose of a fuse-holder and a
40 hinged switch. With this explanation I will proceed to describe the embodiment of my invention contained in the annexed drawings, forming part hereof, to which reference is hereby made.

In the drawings, Figure 1 is a plan view of a distributing-panel constructed according to
45 my invention. Fig. 2 is a side elevation thereof. Fig. 3 is a plan view of the fuse-holder, and Fig. 4 is an end view thereof. Fig. 5 is a side view, and Fig. 6 a section on line 6 6 of Fig. 3. Fig. 7 is an underneath view of the
50 principal half of the fuse-holder, showing the fuses in place, and clearly exhibits the bridge between the fuses. Fig. 8 is a top view of

one of the metallic terminal pieces, and Fig. 9 is a detached detail view of the fuse. Fig. 10 is a perspective of a modified form of
55 leaves, hereinafter described; and Fig. 11 shows a modified form of upright panel-board leaf.

The base of the structure is shown as consisting of a number of insulating-slabs A B C, 60 across which run the main or bus bars D E F, to which the mains D' E' F' are suitably connected. The main or bus bars are fastened to the sections A B C by screws $d e f$, thus holding the three sections together constituting the base-slab of the structure. The
65 main bar D is shown as provided with two sets of metallic leaves or contacts $d' d^2$, extending toward the bus-bar E. The bar F is shown as provided with two sets of upright leaves or contacts $f' f^2$, extending toward the
70 bus-bar E, and the bar E is shown as provided with four sets of upright leaves or contacts $e' e^2$, extending in opposite directions. Mounted also upon the base-sections B and C
75 are pairs of branch bars G G' H H' I I' J J', to which the usual branch conductors are connected. These branch bars are provided with pairs of upright leaves or contacts $g g' g^2 g^3 g^4 g^5 g^6$, &c., each pair of branch bars being
80 upon the same section of the base-board. The leaves $g' g^2 g^3$ upon the branch bars G G' H H' extend toward the main bar F, and the leaves on the bars I I' J J' extend toward the bar D. These branch bars are adapted to be connect-
85 ed to the main bars, which are in the present instance shown as the main bars of a three-wire circuit—that is to say, for instance, the branch bars H H' are adapted to be connected to the branch bars E F by means of the mov-
90 able fuse-holder, as shown in Figs. 1 and 2, the leaves g^3 of the branch bar H being connected to the leaves e^2 of the main bar E and the leaves g^3 of the branch bar H' being connected to the leaves f^2 of the main bar F,
95 thus bridging the bar F, as shown. The mode of connection is through the medium of the fuse-holder, which will now be described.

Referring particularly to Figs. 3 to 9, the fuse-holder is shown as consisting of an up- 100 per section I² and a lower section J², the section I² having a handle i , the two sections being laid together face to face and connected by a bolt i' .

Referring particularly to Figs. 6 and 7, it will be noted that the upper section I² is recessed at *i*² *i*³ for the reception of the fuses and has apertures *i*⁴ *i*⁵ for vent-holes, the lower section J² being likewise recessed at *j* *j*¹ and apertured at the side *j*². (See Fig. 5.) At the ends of the fuse-holder apertures *i*⁶ are provided, through which the metal terminal pieces pass. One of these metal terminal pieces is shown clearly in Fig. 8, consisting of an L-shaped piece *i*⁷, having one arm of the L bent away at right angles from the plane of the other arm. These metal terminal pieces extend into the recess between the sections of the fuse-holder and are held in place in the fuse-holder by screws *i*⁸. The fuses *i*⁹ may be of any usual construction and are likewise held in place by the screws *i*⁸. A bridge-wall *i*¹⁰, lozenge-shaped at its middle, separates the fuses from each other and serves to bring the middle of the fuses near to the apertures or vent-holes, where they may be readily observed, the said bridge-wall being an integral part of one of the sections (the upper) of the fuse-holder. One set of the metallic terminal pieces *i*⁷ is provided with pivots *i*¹¹, which pivots are adapted to coöperate with recesses *g*⁸ in the leaves *g* to *g*⁷, so that the fuse-holder may be pivoted to the leaves. As shown, the fuse-holder bridges the main bars. Thus the terminal pieces *i*⁷, carrying the pivots *i*¹¹, are inserted between the pairs of upright leaves *g*² *g*³ and *g*³ *g*³ and the pivots thereof engaged in the recesses *g*⁸ of the said leaves. The fuse-holder is now swung downward from the dotted-line position shown in Fig. 2 and the free

terminal pieces *i*⁷ brought down between the upright leaves *e*² *e*² of the main bar E and *f*² *f*² of the main bar F after the manner of a knife-switch, all of which will be clearly apparent to one skilled in the art.

In Fig. 10 I have shown a modified form of upright leaves *g*¹⁰. These leaves are shown as provided with slots *g*¹¹ for the reception of the pivots *i*¹¹ of the fuse-block. Each pair of leaves *g*¹⁰ is flanked by a spring-piece *g*¹², perforated at *g*¹³. In Fig. 11 the upright leaves are shown as slotted at *g*¹¹ in either direction.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a fuse-holder for electric circuits, the combination of a plurality of apertured recessed sections placed together with their recessed portions in communication with each other, a bridge-wall dividing the said recessed portions into two compartments, the said bridge-wall being of diamond shape and having the points of the diamond opposite apertures in the wall of the said fuse-holder, substantially as described.

2. In a distributing device for electric circuits, the combination of a switchboard or panel-board, slotted contact-pieces mounted thereon for receiving a removable fuse-holder and springy pieces *g*¹² flanking the upright slotted contact-pieces and arranged opposite the slots thereof.

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