(No Model.)

L. B. MATSON.

ELECTRICAL CUT-OUT.

No. 503,867. Patented Aug. 22, 1893.

Fig. 1.

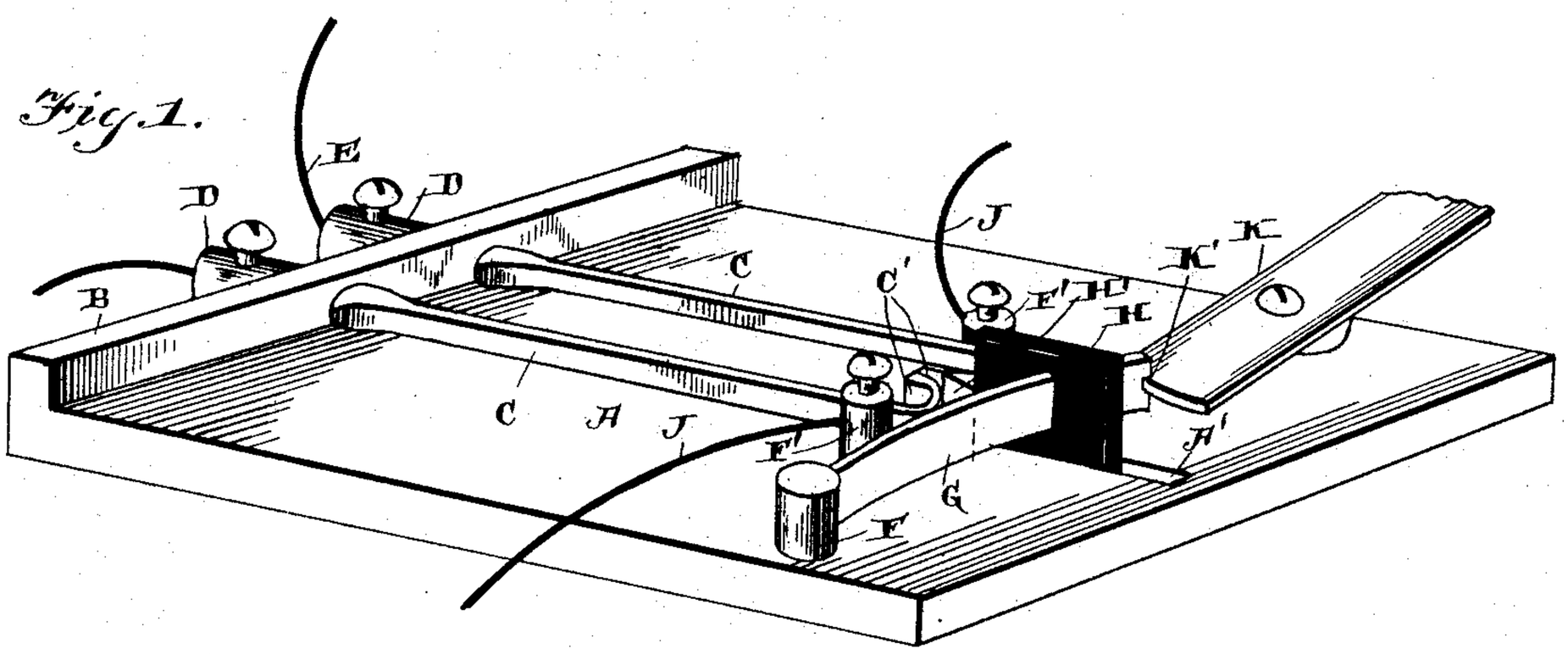


Fig. 2.

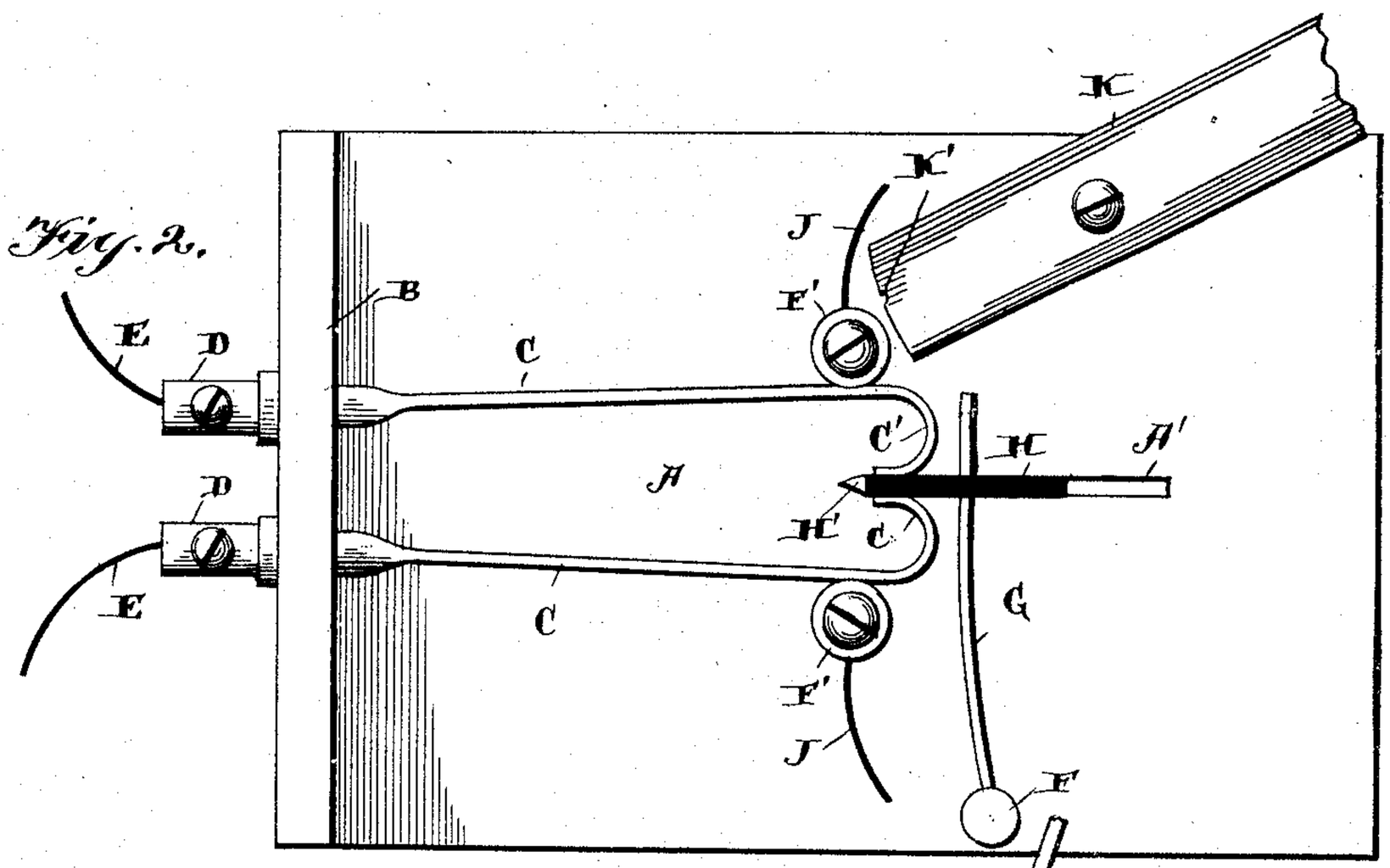
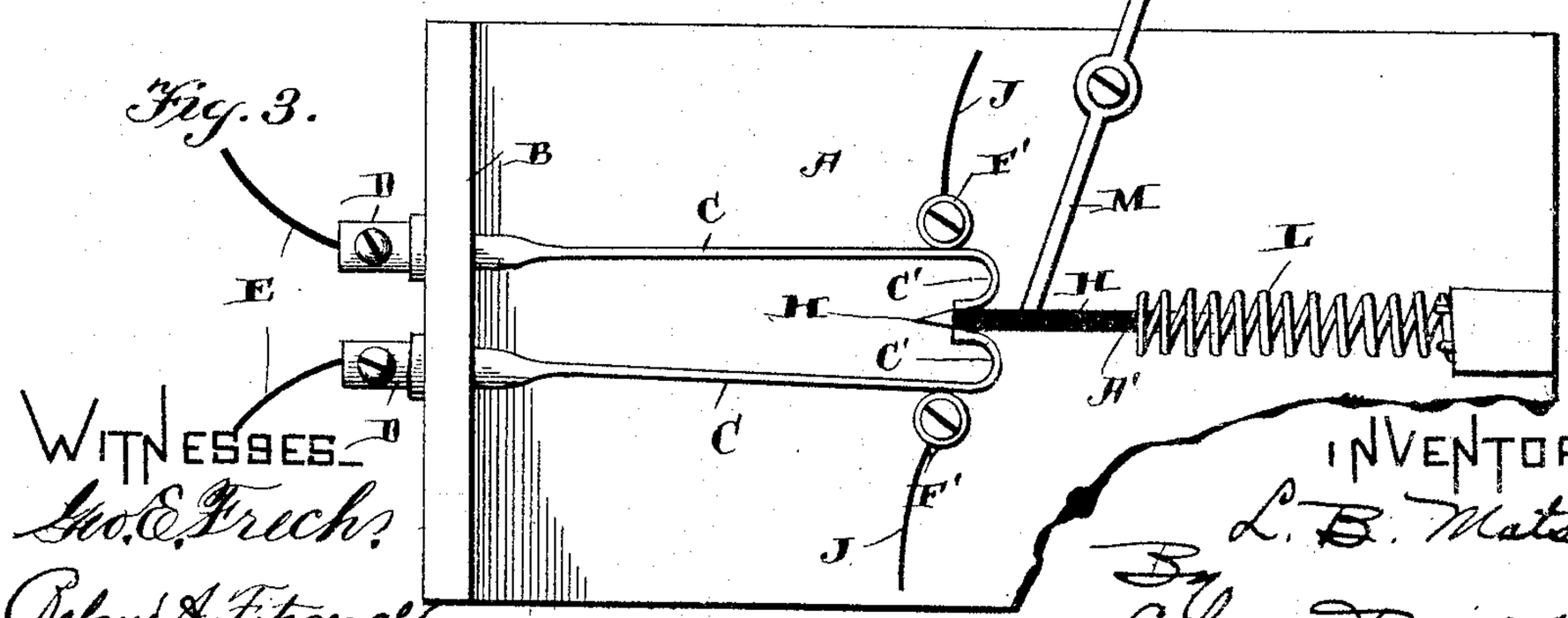


Fig. 3.



UNITED STATES PATENT OFFICE.

LEWIS B. MATSON, OF ELMIRA, NEW YORK.

ELECTRICAL CUT-OUT.

SPECIFICATION forming part of Letters Patent No. 503,867, dated August 22, 1893.

Application filed January 19, 1893. Serial No. 458,938. (No model.)

To all whom it may concern:

Be it known that I, LEWIS B. MATSON, of Elmira, in the county of Chemung and State of New York, have invented certain new and useful Improvements in Electrical Cut-Outs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in electrical cut outs; and it consists in the novel combination and arrangement of parts which will be fully described hereinafter, and especially referred to in the claims.

The object of my invention is to provide a simple mechanism for throwing the current of a street or other circuit around a loop wire for illuminating coal yards or other similar places where the light is not needed at all times, and which mechanism also constitutes an instantaneous cut out of the said loop so that the lamps on the main circuit are not affected in the least by starting or extinguishing the lamps on the loop.

Referring to the accompanying drawings,—Figure 1 is a perspective view of my improved cut out. Fig. 2 is a plan view, the loop being in the circuit. Fig. 3 is a similar view showing a slight modification of the wedge mechanism.

A, designates the base board which may be secured in any suitable position and B, a projecting strip at one end thereof. Projecting through this strip and rigid therewith are the parallel spring arms C having at their outer ends the clamp D, to which the circuit wire E, is connected at its opposite ends. The inner ends of the arms are curved inward as at C′, so that when simply closing the main circuit these curved ends are in engagement as shown in Fig. 1. A post F, projects from the base A, and extending therefrom is the flat spring G, which extends through a slotted wedge H, which latter moves in a groove A′, in the board A. The main portion of the wedge H, is formed of fibrous or other non-conducting material while its extreme end H′, is of metal.

Adjacent the outer sides of the inner ends of the arms C, are the posts F′, to which the respective ends of the loop wire J, are secured and upon which loop wire a suitable number of lamps may be placed for illuminating coal or lumber yards or other similar places which may not be sufficiently illuminated from the main street circuit. Now when the wedge H, is forward between the arms C, as shown in Fig. 2 the latter bear against posts F′, thus throwing the current around the loop J, and feeding the lamps thereon. The spring G, holds the wedge normally in this position. When the wedge is withdrawn the arms C, engage of their own volition thus closing the main circuit. When the arms C, leave the posts F′, upon the partial withdrawal of the wedge H, the point H′, of the latter is brought into position between the ends of arm C, and thus closes the main circuit before the wedge is entirely withdrawn, whereas were the wedge formed entirely of nonconducting material there would be a break in the current from the time the arms C, left the posts F′, at starting to withdraw the wedge until the complete withdrawal thereof. My improved wedge obviates this difficulty and avoids any break in the main circuit. For throwing the said wedge a lever K, is provided which is fulcrumed between its ends to one side of the board A, and which at its inner ends is notched as at K′. This notched end is adapted to engage the end G′, of the spring G, and hold the same drawn backward and with it the wedge H, from between the arms C, as in Fig. 1. By turning the spring still farther on its pivot this engagement will be broken and the spring moving back to its normal position will project the wedge between the said arms.

In Fig. 3 a modification is shown in which a coiled spring L, may be used for forcing the wedge H, forward and which is conveniently operated by a lever M, which is adapted to engage the said wedge by either of its ends and thus hold the same withdrawn from between the arms C, against the pressure of spring L.

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

1. The combination of a main circuit, longitudinal and separable arms therein formed of spring metal which normally engage each other at their free ends, a loop, posts to which

the ends of the same are connected, and a means for separating the said springs and moving them in contact with the loop posts, substantially as shown and described.

2. The combination of a main circuit, separable spring arms therein having curved adjacent ends which normally engage each other, a loop, posts to which its ends are secured, and a movable wedge for throwing the said arms outward against said loop posts, substantially as shown and described.

3. The combination of a circuit, separable contact points therein, a cut out consisting of a movable wedge formed of nonconducting material, and a point for the said wedge of conducting material, substantially as shown and described.

4. The combination of a main circuit, separable contact points therein, a cut out consisting of a recessed wedge, and a spring arm extending through the recess of the wedge for moving the same, substantially as shown and described.

5. The combination of a circuit, separable contact points therein, a cut out consisting of a recessed wedge, a spring extending through the recess of the wedge which spring holds the wedge normally between the contact points, and a lever adapted to engage the end of the said spring and withdraw the wedge from the said position, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

LEWIS B. MATSON.

Witnesses:

L. F. JACKSON,

JNO. A. WATROUS.