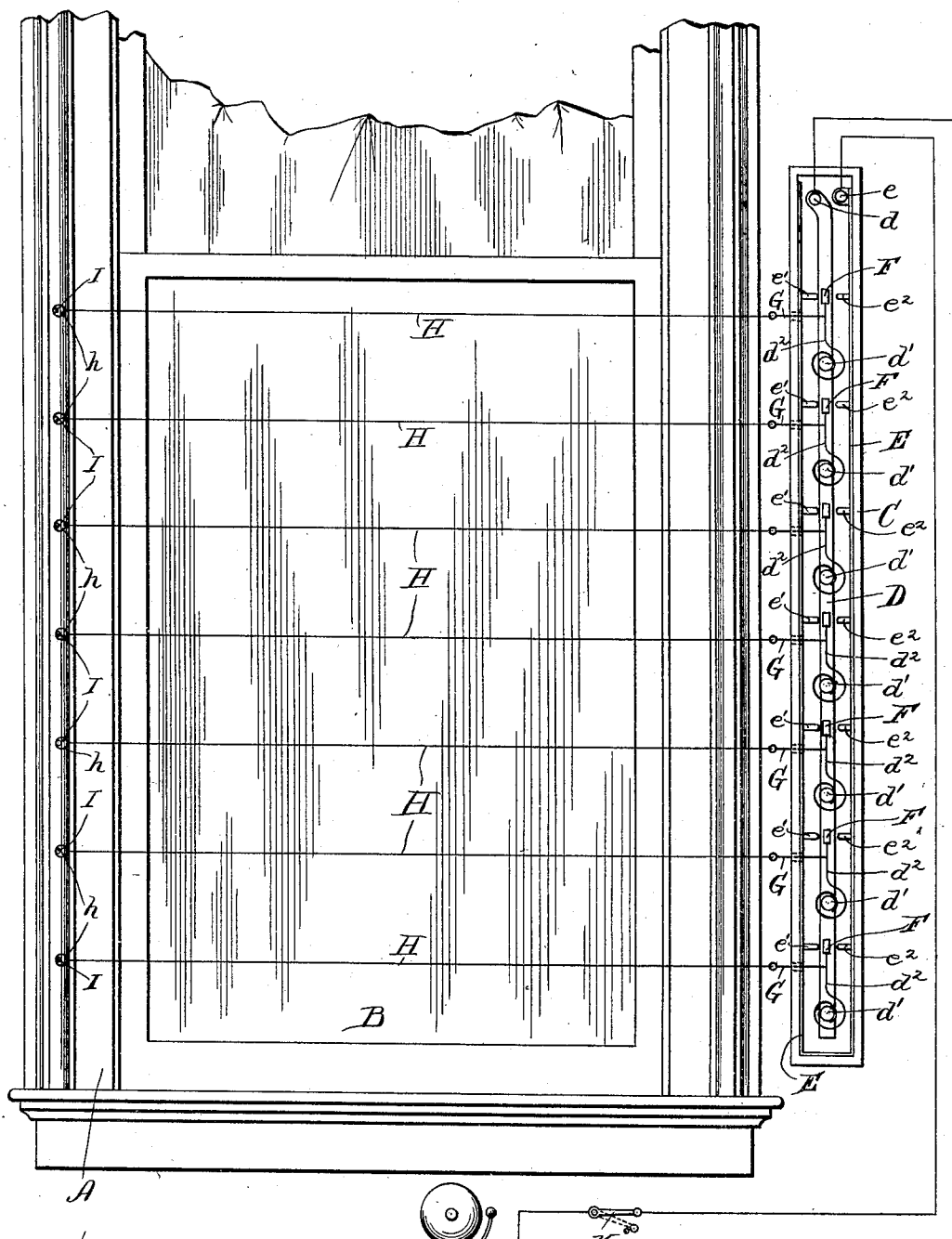


(No Model.)

J. C. A. XIEZOPOLSKI & C. BODE.
ELECTRIC SIGNAL APPARATUS.

No. 507,869.

Patented Oct. 31, 1893.



Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN C. A. XIEZOPOLSKI AND CHARLES BODE, OF MILWAUKEE, WISCONSIN.

ELECTRIC SIGNAL APPARATUS.

SPECIFICATION forming part of Letters Patent No. 507,869, dated October 31, 1893.

Application filed June 29, 1893. Serial No. 479,192. (No model.)

To all whom it may concern:

Be it known that we, JOHN C. A. XIEZOPOLSKI and CHARLES BODE, subjects of the Emperor of Germany, residing at Milwaukee, county of Milwaukee, State of Wisconsin, have invented a certain new and useful Improvement in Electric Signal Apparatus; and we 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 the same, reference being had to the accompanying drawing, which forms a part of this specification.

Our invention relates to new and useful improvements in electric signaling devices, and relates more particularly to devices of this nature, which are designed for use as burglar or fire alarms.

Our said invention will be fully hereinafter described with reference to the accompanying drawing, which is a representation in elevation of a window to which our improved signaling apparatus has been applied.

Referring by letter to the drawing, A designates the casing of the window and B the sash. Adjacent to one side of the window casing, is provided a suitable housing or casing C which is conveniently arranged vertically and secured to the inner face of the wall, or to any other convenient support. Within this housing or casing C, are provided two conducting strips D and E respectively, the former of which is secured to the back of the wall of the housing and arranged to extend vertically upon the central part of the front surface of said back wall, and is arranged at one end to terminate in a suitable binding post *d*, as shown. The other conducting strip E is arranged to extend downwardly upon the inner face of one of the side walls of the housing, across the lower end and upwardly upon the inner face of the other side wall, and terminates in a second binding post *e*. By means of these binding posts, electrical communication is established between the wires of an electric circuit, which includes a battery or other source of current, and a signaling device, such as an electric bell or annunciator.

A series of posts *d'* *d'* are arranged to extend from the front face of the conducting strip D and to the outer ends of these posts

are secured suitable conducting springs *d*² *d*² which carry at their upper ends suitable contact buttons F F and these springs are conveniently made in the form shown in the drawing, being curved spirally around the supporting posts *d'* *d'* so as to afford greater elasticity to the springs.

A series of contact posts *e'* *e'* are arranged to extend inwardly from the conducting strip E upon one side of the housing and a similar series of contact posts *e*² *e*² are arranged to extend in like manner from the opposite side of the housing, as shown. These two series of contact posts are arranged in pairs and the posts of each pair, are arranged upon opposite sides of one of the contact buttons F in such manner as to form electrical contact therewith in an obvious manner.

Secured to each of the springs *d*² *d*² is a suitable wire or other connection G arranged to extend through the side wall of the housing, and adapted for engagement at its outer end with a suitable cord or other flexible connection H. Each of these flexible connections H is provided upon its other end with a loop or eye *h* adapted for engagement with a pin or hook I upon the opposite side of the window casing from the housing C.

J designates the bell or other signaling device and K designates a suitable switch for opening or closing the circuit between the bell or signal J and the contact devices in the housing C.

In adjusting our improved device, the pins or hooks I I are arranged upon the window casing at points in substantially the same horizontal planes with the connections G G and the cords H H are made of sufficient length to engage with said pins or hooks, and to hold the springs *d* *d* in the positions indicated in the drawing in which the contact buttons F F will be held out of contact with the posts of either series. In this condition, supposing that the switch K is closed, no current will traverse the circuit, but in case an attempt is made to enter the window or door to which the device is applied, any tension upon any one or more of the cords H, will operate to draw the springs *d*² *d*² engaged therewith toward the contact posts *e'* *e'* so as to establish electrical connection between the two strips D and E through the medium of

the springs and contact buttons carried thereby. If on the other hand any one or more of the cords H be severed, or disconnected from the pins or hooks I the springs $d^2 d^2$ connected therewith will instantly be freed, and by their own elasticity will carry the buttons upon their free ends into engagement with the corresponding posts $e^2 e^2$ at the opposite sides of the casing C. It will thus be seen that by the least disturbance of the adjustment of the contact devices, the signal will be caused to operate, and in practice, the transverse cords H H may be located at any suitable or desired distances apart so as to prevent the admission of objects or bodies between the cords, without disturbance, of the contact devices.

It may be convenient in some instances to employ a signaling device which is constructed so as to operate continuously after a contact has been made to close the circuit, until the signal has been adjusted by hand to stop its operation, but this form of construction being a common article of manufacture it is not deemed necessary to illustrate the same in detail in the accompanying drawing.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent of the United States, is—

1. An electric signaling device comprising a suitable housing, metallic strips extending longitudinally upon opposite sides of said housing, and electrically connected together and with one wire of an electric circuit including an audible signal, contact posts projecting inwardly from opposite points upon said metallic strips, a second longitudinal metallic strip provided with a series of supporting posts or studs and electrically connected with the other wire of said circuit, a series of contact springs engaged with said posts or studs and each arranged to extend at

its free end, between one pair of said contact posts, and suitable connections extending to the outside of said housing, for holding the free ends of said contact springs midway between said contact posts, substantially as described.

2. An electric signaling device comprising a vertically disposed housing, a metallic strip arranged to extend downwardly upon one side, across one end and upwardly upon the other side of said housing, and provided with oppositely disposed contact posts or points, said strip being electrically connected with one pole of an electric circuit which includes an audible signal, a second metallic strip secured to the rear wall of the housing and arranged to extend longitudinally thereon, said strip being electrically connected with the other pole of said circuit and provided with a series of supporting posts or studs, a series of volute contact springs secured to said posts or studs, and arranged to extend at their free ends, between the respective pairs of posts or points, and arranged to normally rest in contact with the posts or points at one side of the housing, suitable connections extending to the outside of said housing and having operative engagement with the contact springs and arranged to hold said springs midway between the respective contact posts and suitable cords operatively engaged with said connecting devices and adapted for engagement at their free ends with suitable pins or hooks, substantially as, and for the purpose described.

In testimony whereof we sign this specification in the presence of two witnesses.

JOHN C. A. XIEZOPOLSKI.
CHARLES BODE.

Witnesses:

JOHN E. WILES,
M. M. WILES.