(No Model.) 2 Sheets—Sheet 1.

W. R. PATTERSON.

TERMINAL BOX FOR TELEGRAPH CABLES.

No. 292,848. Patented Feb. 5, 1884.

Fig. 1.

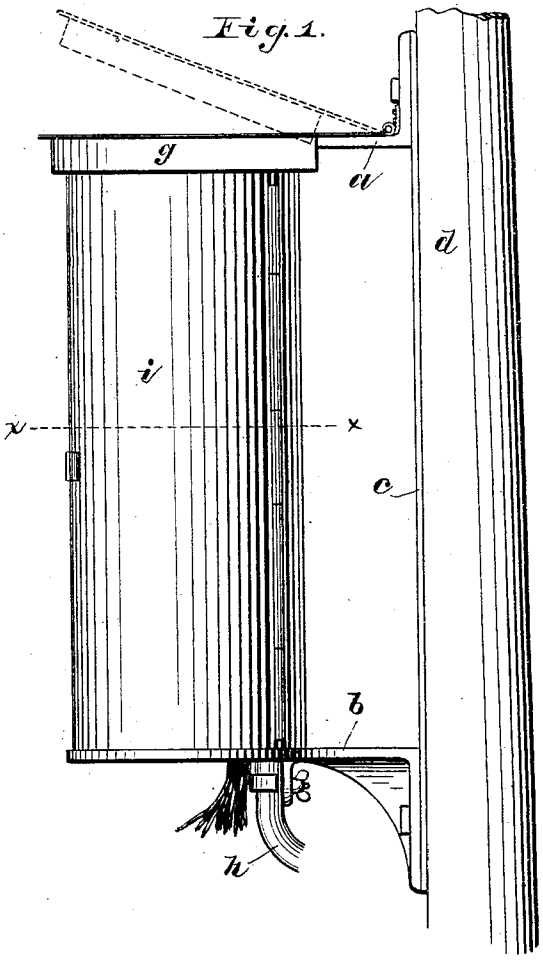


Fig. 3.

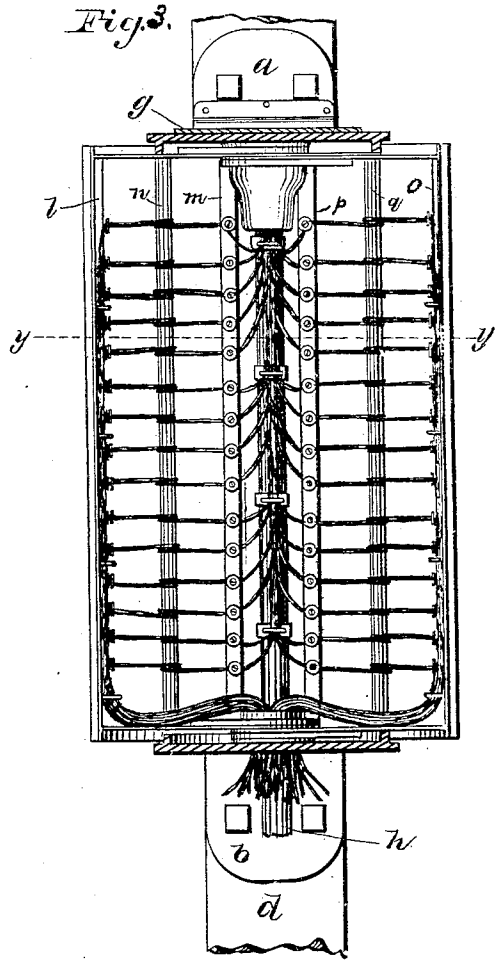


Fig. 2.

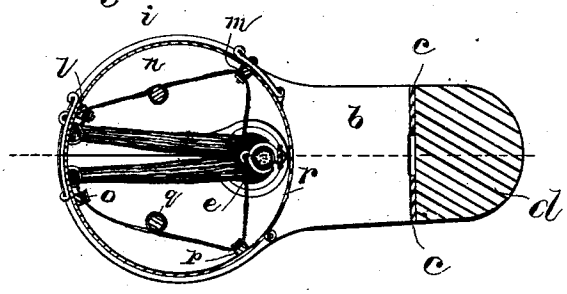
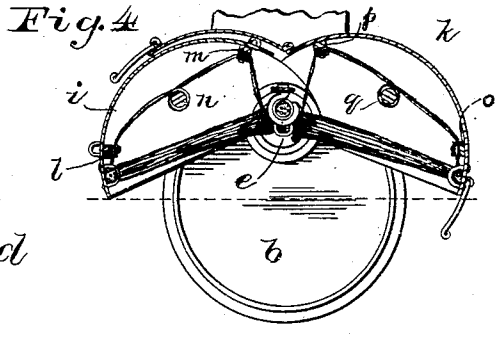


Fig. 4.



Attest

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Inventor

William R. Patterson

By his Attorney E. P. Barton

N. PETERS, Photo-Lithographer, Washington, D. C.

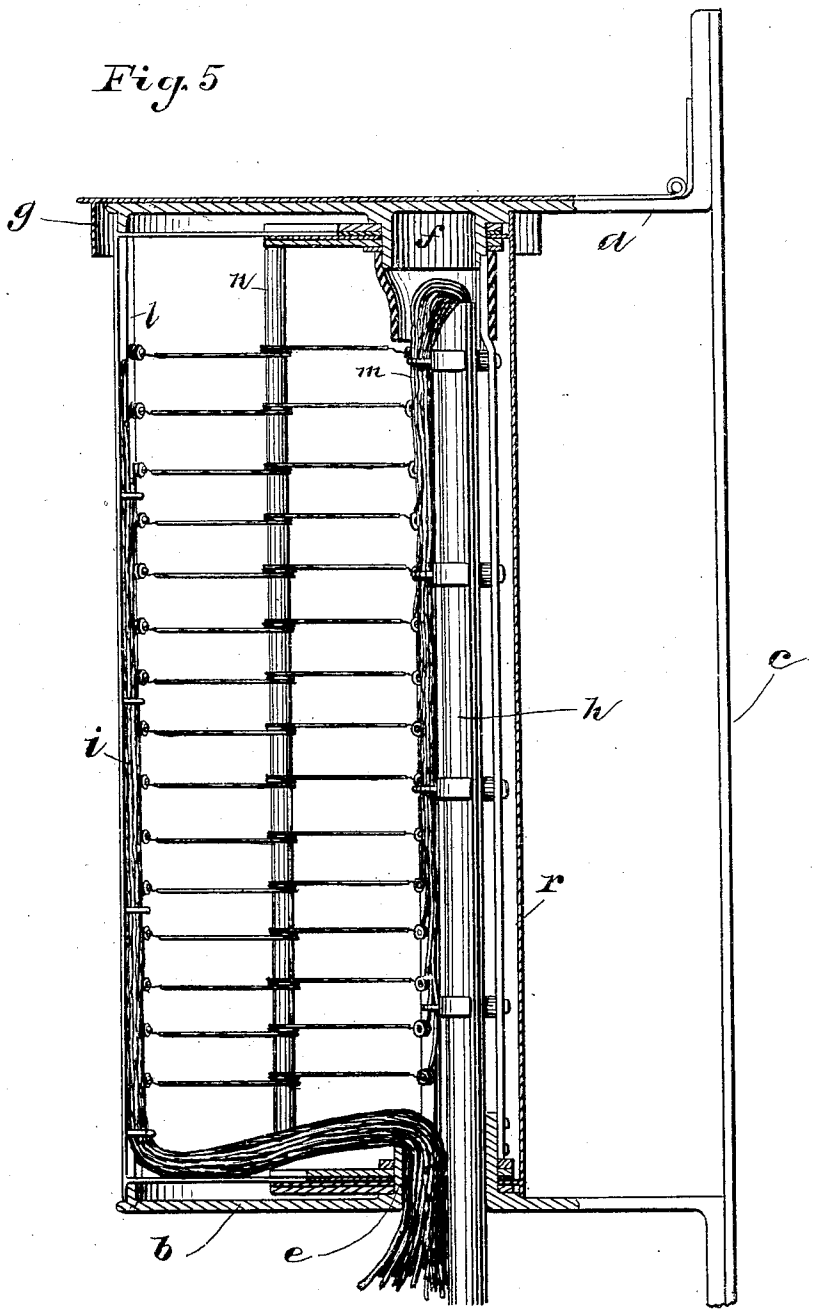
(No Model.) 2 Sheets—Sheet 2.

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Fig. 5



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UNITED STATES PATENT OFFICE.

WILLIAM R. PATTERSON, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE WESTERN ELECTRIC COMPANY, OF SAME PLACE.

TERMINAL-BOX FOR TELEGRAPH-CABLES.

SPECIFICATION forming part of Letters Patent No. 292,848, dated February 5, 1884.

Application filed July 9, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM R. PATTERSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Terminal-Boxes for Telegraph-Cables, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to terminals for telegraph-cables, and is designed to afford facilities in small compass for connecting the wires of a cable with the outside or distributing wires.

The frame of my terminal-box may consist of two cast-iron pieces or brackets fixed to a board or connected by iron straps. This frame or support is designed to be bolted or otherwise fastened to the telegraph-pole or side of a building. The cylindrical box is pivoted to eccentric hubs provided upon the brackets. The hub of the lower bracket should be hollow and large enough to admit the cable, and also to allow the distributing-wires to pass down through the opening outside the pipe of the cable. The case of the box is made of any suitable sheet metal, and consists of two longitudinal semi-cylindrical pieces, which may be opened and closed in front, turning upon the eccentric hubs or pivots provided upon the brackets or cast-iron disks of the frame. I also provide a flap, which is hinged to one of the semi-cylindrical pieces, and adapted to close against the other piece, so as to securely close the joint at the rear between the two pieces of the case. When the case is closed, one piece shuts over the other a little way in front. Thus the interior of the box is protected from rain. I provide also a cap, which is adapted to close over the upper bracket or disk when the case is closed.

I will now describe, briefly, the lightning-arresters and binding-posts and the system of distributing the wires from the cable within my box.

I arrange within my box strips of wood or other insulating material for the binding-posts, preferably four in all, two—that is, one pair of strips—for each of the semi-cylindrical pieces. A rod, preferably of brass, is placed between each pair of strips. The wires are run from the cable to the binding-posts nearest—that is, to the binding-posts of the two strips near the cable on either side, right and left. Corresponding binding-posts of the pair of strips on a given side are connected by fine insulated wire, which is insulated, preferably, with silk. Each of the connecting-wires is wound two or three times around the intervening rod, which thus serves as a lightning-arrester. The wires are run from the last binding-posts outside the box, preferably through the lower hub, which is made hollow and large enough for this purpose.

My invention is illustrated in the accompanying drawings, in which Figure 1 is a side elevation of my terminal-box closed. Fig. 2 is a plan view thereof as seen from section *x x* of Fig. 1. Fig. 3 shows the box open. Fig. 4 is a plan of the open box as seen from section indicated by line *y y* of Fig. 3. Fig. 5 is a vertical longitudinal central section of the box closed.

Like parts are indicated by similar letters of reference throughout the several views.

The frame which supports the box consists of the cast-iron pieces *a* and *b*, attached to the straps *c*, and bolted to the telegraph-pole *d*. The lower disk or bracket, *b*, is provided with the hollow eccentric hub *e*. The upper disk is provided with the hub or pivot *f*, which is arranged vertically above hub *e* of the lower disk. The cap *g* is adapted to shut over the top of the box, as shown in Fig. 1. The cable *h* passes into the box through the hollow hub, and is clamped, as shown, to the rear portion of the opening in the hub. The cable extends, preferably, toward the top or upper portion of the box. The semi-cylindrical pieces *i k* are pivoted to the hubs eccentrically, so that they may be opened or closed, as desired, and, moreover, may be turned together either to the right or left. The piece *i* is provided with the strips *l m* for binding-posts, and between these strips is placed the rod *n*. In like manner the insulating-strips *o p* and rod *q* are arranged in piece *k*. The binding-posts, preferably of the form shown in my Patent No. 279,274, of June 12, 1883, are arranged in series upon the strips, as shown. Corresponding binding-posts of strips *l m* are connected to-

gether by insulated wires. Each connecting-wire is wound around the rod *n*. In like manner the binding-posts of pieces *o p* are connected, the connecting-wires being wound around the rod *q* of the lightning-arrester. The distributing-wires pass from binding-posts of strips *m p* out through the opening in the lower disk, *b*. The wires of the cable are severally connected with the binding-posts of strips *l o*. Thus the circuit of a wire may be traced from the cable to a binding-post, thence to the lightning-arrester, and thence to a second binding-post, and thence by one of the distributing-wires out to line.

I have found my terminal-box as thus described very useful where it is desired to distribute a large number of wires from a cable. A wire burned by lightning may be readily repaired by simply opening the box and putting a new piece between the binding-posts of the damaged line. The case, while open, may be turned partially around in either direction out of the sun or rain. The distributing-wires, which pass in bunches from the lower ends of strips *m p* to the opening in the hub, are not strained when the box is closed, since they pass down through the outer portion of the opening—that is, preferably in front of the pipe of the cable. If strained at all, it will be when the box is open. There is thus little danger of breaking a wire. The flap is indicated by *r*, and is hinged as shown.

I claim—

1. The combination, in a terminal-box for telegraph-wires, of one or more pairs of strips provided with corresponding binding-posts, and a lightning-arrester rod between the strips of each pair, said strips and rod being substantially parallel, whereby the wires may be distributed, substantially as set forth.

2. The combination, with the brackets, of the semi-cylindrical pieces, the pivots or hubs, one of said hubs being hollow, and the flap hinged to one of said cylindrical pieces, whereby the binding-posts and lightning-arresters are protected, substantially as and for the purpose specified.

3. The cable extending toward the top of the case, in combination with the lightning-arresters and distributing-wires and the eccentrically-pivoted segmental semi-cylindrical pieces, as and for the purpose specified.

4. The disks attached to the support, in combination with the parts of the case pivoted eccentrically, the pipe of the cable and distributing-wires passing through the hollow hub, and the pairs of strips for the binding-posts and the lightning-arresters, as described.

In witness whereof I hereunto subscribe my name this 23d day of June, A. D. 1883.

WILLIAM R. PATTERSON.

Witnesses:

GEORGE P. BARTON,

PAUL A. STALEY.