

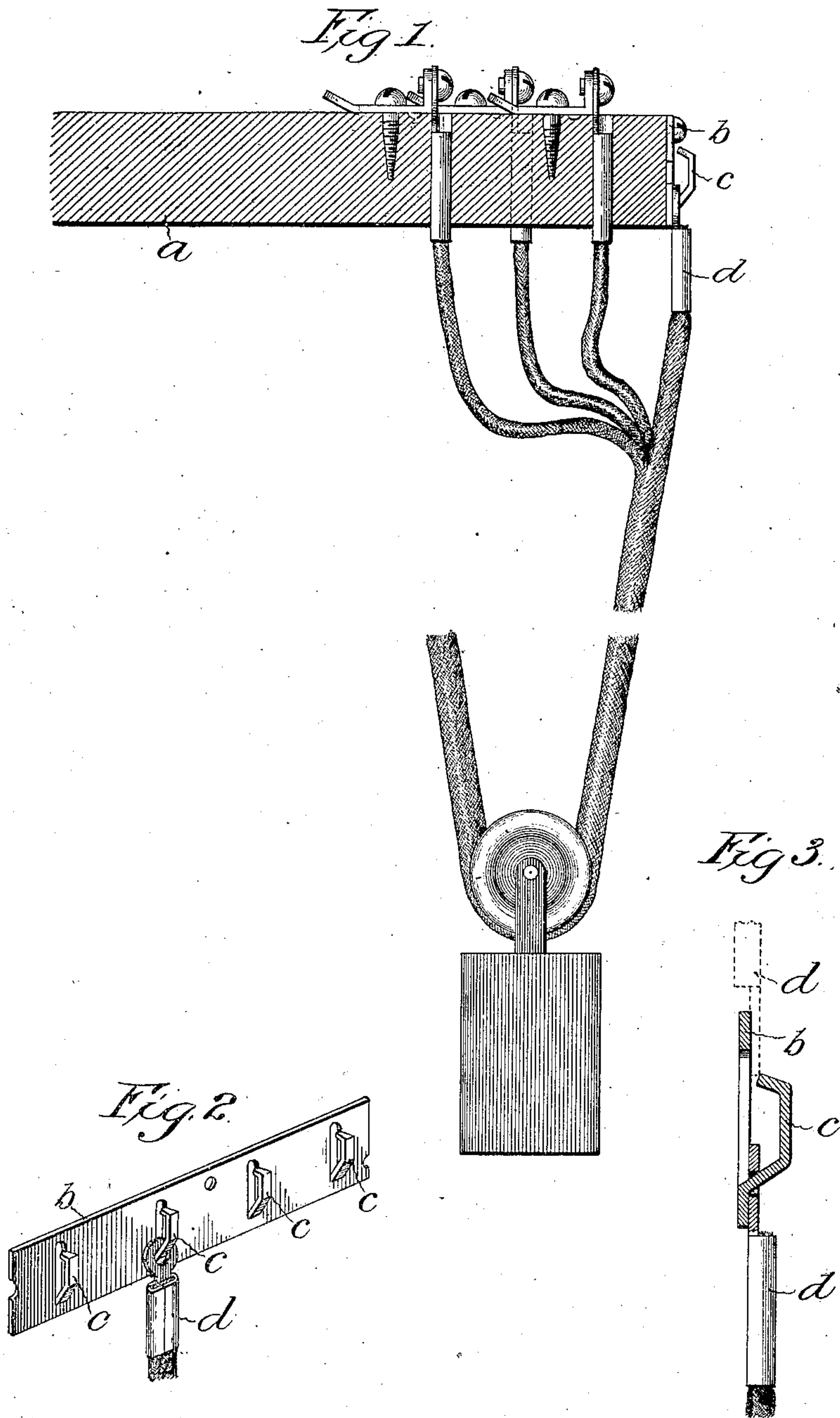
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PATENTED OCT. 23, 1906.

E. B. CRAFT.

FASTENING DEVICE FOR SWITCHBOARD CONNECTING CORDS.

APPLICATION FILED DEC. 7, 1904.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

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## FASTENING DEVICE FOR SWITCHBOARD CONNECTING-CORDS.

No. 833,778.

Specification of Letters Patent.

Patented Oct. 23, 1906.

Application filed December 7, 1904. Serial No. 235,852.

*To all whom it may concern:*

Be it known that I, EDWARD B. CRAFT, 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 Fastening Devices for Switchboard Connecting-Cords, of which the following is a full, clear, concise, and exact description.

Telephone-switchboard cords are attached to a cord-shelf at the rear of the switchboard, the slack of the cord being maintained taut by a weight suspended from a pulley riding in the bight of the cord. A portion of the cord-covering is extended without containing any conductors and is used for suspending the cord to the rear edge of the cord-shelf. This portion of the cord is usually termed the "tie-cord." This tie-cord in any case being shorter than the conductors which are attached to their binding-posts relieves the conductors from all strain from the weight. At the end of the tie-cord is provided a metal eyelet which is adapted to pass over a suitable hook.

Heretofore three different styles of hooks have been employed with which I am familiar: First, I mention the common screw-hook; second, a screw-hook in which the loop is brought up and bent to meet the shank, making it necessary to spring the end out in order to place the eyelet of the suspending-cord over the same; third, I mention a right-angled wire hook, several of these being screwed into a plate and soldered, the upright open end of each hook being of such form that the eyelet may pass over the same. These various forms have been largely used, the two former practically ever since flexible cords have been used in telephone-switchboard service. All these former styles of hooks possess certain objections which have resulted in considerable trouble. The small screw-hook being inserted in the edge of the shelf and its end being open permits the eyelet to be drawn off, resulting in bringing strain upon the conductors, and the installation of such screw-hooks required care and individual treatment. The second form, in which the free end was bent up against the shank, has not been satisfactory, for the reason that the eyelet is liable to be bent and broken, this form also requiring that each

hook shall be handled and inserted separately. The third form, while possessing the advantage that it may be manufactured and installed in strips, is quite expensive to build and has the disadvantage of the first form in that the eyelet is liable to be accidentally thrown off, so as to bring a strain upon the conductors.

My invention contemplates a fastening device comprising a metal strip having transverse tongues stamped therefrom to form hooks, the upper ends of said hooks extending inwardly and close to the surface of the strip, together with eyelets adapted to be supported by said hooks, the inner diameters of said eyelets being less than the length of the inwardly-projecting ends of said tongues. With this construction an eyelet, to be placed upon or removed from a hook, must be completely reversed in position, and so cannot be accidentally dislodged.

My invention will be more readily understood by reference to the accompanying drawings, in which—

Figure 1 illustrates a section of the cord-shelf with my invention applied thereto. Fig. 2 is a perspective view of the metal plate provided with the integral tongues or ears, and Fig. 3 is an enlarged sectional view showing the manner of placing the eyelets upon the hook.

Like parts are indicated by similar letters of reference throughout the different figures.

The cord-shelf *a* extends to the rear of the switchboard, and on the rear or inner edge is mounted the strip *b*. This strip may be of brass, and transverse tongues or ears *c c c c* are formed therein, as shown, preferably by stamping. Open slots are thus left in the strip back of the tongues, and each tongue *c* is bent at its upper end backwardly, so that the free end thereof approaches closely to the surface of the strip *b* at the upper portion thereof. An eyelet, as indicated by dotted lines in Fig. 3, may be readily thrust under the free end of a tongue and passed onto the bar of the hook and brought into the position indicated by the full lines in said Fig. 3. The eyelets have inner diameters less than the length of the inwardly-projecting ends of said tongues *c*, said eyelets preferably comprising flat metal punchings with small holes therein, the distance between said holes and the outer



edges of said punchings being greater than the distance between said projecting tongue ends and the surface of the strip. When once in place, the eyelet cannot be disengaged from the hook by any manipulation of the cord—that is to say, in order that the eyelet may be taken off from the hook it is necessary to bring the top of the tie-cord to the position indicated by dotted lines in Fig. 3, which cannot be done by any manipulation of the cords in making connections or disconnections with the switches upon the face of the telephone-switchboard. In other words, to place an eyelet upon or remove it from a hook its position must be completely reversed.

The strips are made of such length as may be required. I have made the hooks upon inch centers and half-inch centers and have made the strips of sufficient length for ten and sometimes fifteen hooks.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent, the following:

In a telephone-switchboard, the combina-

tion with a cord-terminal shelf, of a metal strip secured to the edge of said shelf, said strip having transverse tongues stamped therefrom and forming hooks, the upper ends of said tongues extending inwardly and close to the surface of said strip, flexible conducting-cords, and eyelets upon the tie-cords thereof adapted to be supported by said hooks, said eyelets comprising flat metal punchings with small holes therein, of diameters less than the length of the inwardly-projecting ends of said tongues, the distance between said holes and the other edges of said punchings being greater than the distance between said inwardly-projecting tongue and the surface of the strip; whereby to place an eyelet upon or remove it from a hook, its position must be completely reversed.

In witness whereof I hereunto subscribe my name this 16th day of September, A. D. 1904.

EDWARD B. CRAFT.

Witnesses:

JOHN G. ROBERTS,  
FREDERICK P. McINTOSH.