

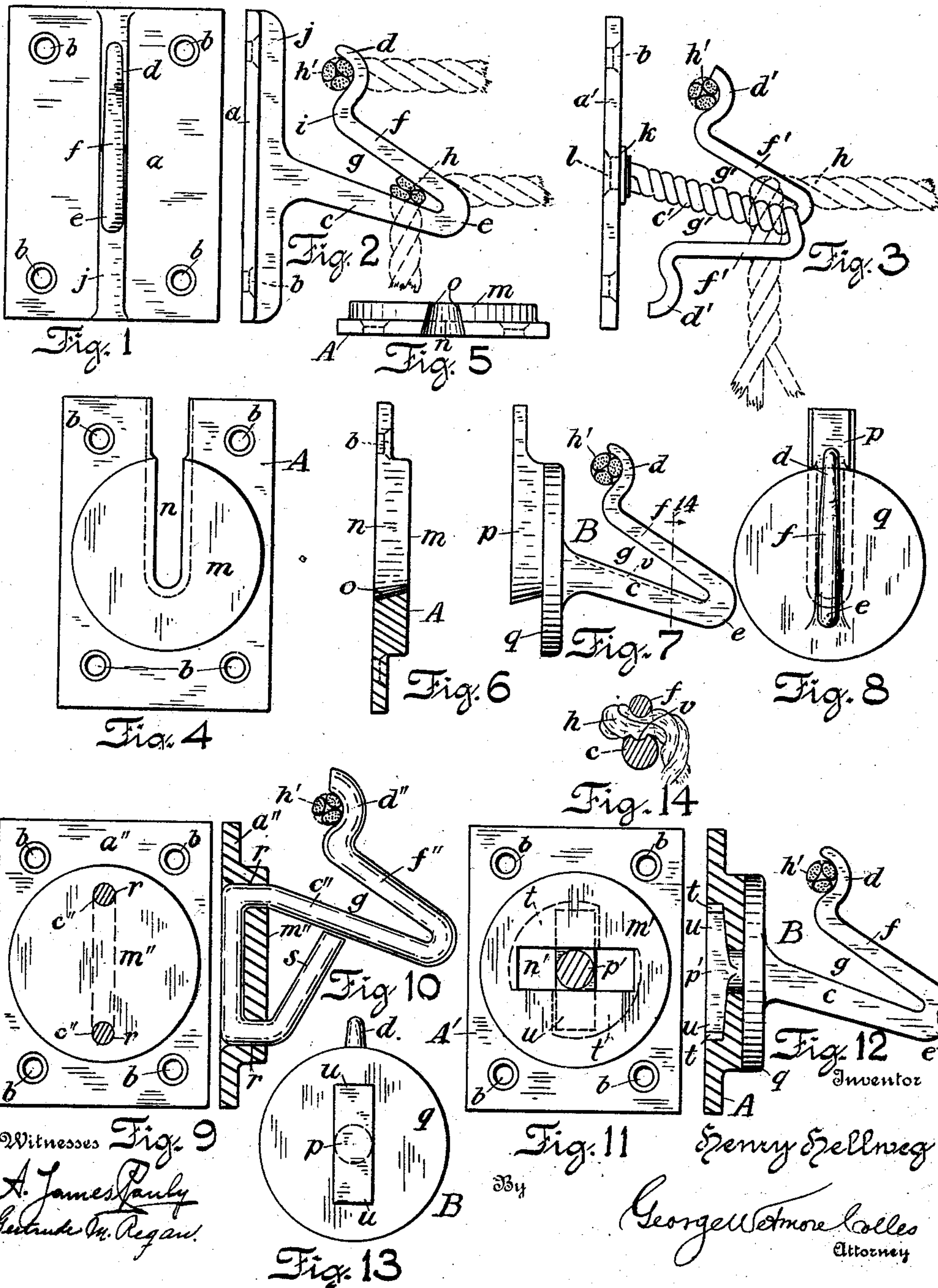
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PATENTED JAN. 29, 1907.

H. HELLWEG.

CORD FASTENER.

APPLICATION FILED FEB. 11, 1905.



UNITED STATES PATENT OFFICE.

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CORD-FASTENER.

No. 842,459.

Specification of Letters Patent.

Patented Jan. 29, 1907.

Application filed February 11, 1905. Serial No. 245,191.

To all whom it may concern:

Be it known that I, HENRY HELLWEG, of Milwaukee, Wisconsin, have invented a Cord-Fastener, of which the following is a specification.

This invention relates to means for quickly securing the end of a rope or cord of any kind in place, as to a wall or post; and it has particular reference to cases where the rope or cord is stretched between two points and it is desirable to have a device for securing the end without loosening the rope or cord and without tying a knot or other manipulation. One such application, which is of frequent occurrence, is in the case of a clothes-line which is temporarily stretched between the walls of an apartment or between posts and which should be readily attachable and detachable to these objects for the saving of time and trouble.

The object of my invention is to produce a device for tightening the rope or cord and securing the end thereof firmly in place with a single movement of the hand and which shall enable the rope or cord to be detached likewise with a single movement of the hand.

My invention embodies a hook over which the rope may be thrown for tightening up and from which it passes directly into said wedge-shaped recess, thus preventing any loosening of the rope between the time it is tightened and the time it is fixed in the recess.

My invention embodies also other detail combinations, which will be hereinafter more specifically described, and set forth in the accompanying claims.

In the accompanying drawings I have shown several forms which may be assumed by my device in its particular construction, all embodying the general principle of my invention, and herein—

Figures 1 and 2 are respectively a front and side view of a simple one-piece form of the fastener. Fig. 3 is a side view of a form of different construction having a double hook made of wire. Figs. 4 to 8 are views of a two-part fastener, Figs. 4, 5, and 6 showing the base-piece in front elevation, plan, and central median section, respectively, and Figs. 7 and 8 showing the attachment-piece in side and front view, respectively. Figs. 9 and 10 are respectively a front view of the base and a vertical central section of another form of fastener manufactured of wire. Figs.

11, 12, and 13 show another two-part fastener and are respectively a front view of the base, (the attachment-piece being in section,) a side view of the attachment-piece, showing the base in median section, and a rear face view of the attachment-piece. Fig. 14 is a transverse section through the fastener-hook in any of the forms shown except that of Fig. 3, as, for example, on the line 14, Fig. 7.

In Figs. 1 and 2 is shown one of the simplest forms of my invention, comprising a base-plate *a*, having screw-holes *b* therein, whereby it is attached to a wall or post, the fastener-hook *c*, and the supplemental or tightening-hook *d*. As ordinarily the rope or cord will be stretched in a direction at right angles to the wall or post, the base-plate *a* in the drawings makes an approximate right angle with the hook *c*; but this is not essential to the principle of my invention, inasmuch as the plane of the base-plate might assume any convenient relation or be set at any angle to the hook *c* corresponding with the angle between the attachment-surface and the direction in which the cord extends. The essential feature is that the hook *c* shall extend in nearly the same direction as the cord which is attached thereto.

The fastener-hook *c* has, as will be seen, a sharply-bent elbow *e*, and the reëntrant portion *f* of the hook makes an acute angle with the base portion, so as to form a wedge-shaped recess *g*. This wedge-shaped recess is so formed in order that the cord may be squeezed and pinched therein, as indicated at *h*.

On the extremity of the reëntrant portion *f* is a tightening or supplemental hook *d*, which is shown as slightly concave in such manner as to retain the cord when thrown thereover in the position *h'* and that it may slide easily over the heel *i* between the two hooks into the wedge-shaped recess *g*. A strengthening-rib *j* is preferably formed on the base-plate *a*, and the whole may be cast or drop-forged, as found most convenient.

The mode of operation, as will be obvious, is first to throw the end of the rope over the tightener-hook *d* and draw it as tight as possible. Then by depressing the end which is held in the hand the bight is drawn over the heel *i* and falls into the wedge-shaped recess *g*, in which it becomes pinched more tightly in proportion to the strain on the rope.

When so lodged in the recess *g*, it is absolutely impossible to dislodge it or cause it to slip by pulling on the rope itself.

In Fig. 3 is shown another form having a base-plate *a'*, in which is fixed the end of the fastener-piece *c'*, which latter is composed of two wires twisted together and preferably welded and upset to form a collar *k* at the point where they are inserted into a center hole in the plate *a'*, to which they are riveted, as indicated at *l*. The free ends *f'* of the two wires are bent backwardly on opposite sides of the stem and are each provided with a supplemental hook *d'*. This form may be used either to doubly secure the cord *h* by passing it first through one recess *g'* and then around the stem of the hook *c'* and through the other, as indicated in the drawings, or it may be used as a point of attachment for two independent cords, one of which is engaged in each of the recesses *g'*.

The fastener shown in Figs. 4 to 8 comprises a base-plate *A*, having a circular boss *m* and a vertical slit *n* from the top to the center of the plate, the edges of said slit being beveled or undercut, as indicated at *o*, Figs. 5 and 6. This slit engages the beveled lug *p* on the attachment-piece *B*, which has a circular flange *q*, which abuts on the surface of the boss *m*. The piece *B* is formed with a hook *c*, having a reëntrant portion *f* and a supplemental hook *d*, the same as first hereinbefore described. This form of fastener is adapted for outdoor use and in places where it is likely to be stolen or would be in the way if permanently attached. The attachment-piece *B* being readily removed by simply slipping it up and out of the slit *n*, the base-plate which remains will not project in the way of anything, nor will it be stolen, as by itself it is useless, and if out of doors the attachment-piece cannot become rusty from exposure, as it will be taken away when not in use. A further advantage of this form is that a few attachment-pieces will serve for any number of bases in case it is desirable to place the attachment-pieces in various positions, and, conversely, if any attachment-piece becomes broken it can be removed in a moment and a new one substituted therefor.

In Figs. 9 and 10 is shown a form which is structurally convenient, because it can be cheaply made. It comprises a base-plate *a''*, having a hub *m''*, through which are pierced two holes *r*, connected by a groove in the back of the plate. A piece of wire *c''*, having two rectangular bends therein, is inserted, one end thereof through each hole *r*, and the upper end is then bent into the shape of a fastener *f''* and a supplemental hook *d''*, similar to those previously described, while the other or shorter end of the wire *s* is bent up obliquely to form a support or brace for the shank of the fastener-hook, as shown.

In Figs. 11, 12, and 13 is shown a second

form of two-part fastener. The base-plate *A'* is similar to that of Fig. 4, except that in place of the slit *n* a rectangular slot *n'* is formed in the center of the hub *m'*, and on its rear side the hub is hollowed out quadrantly at one side of each of the arms of the slot *n'*, as indicated at *t*. The attachment-piece *B'* has a hook *c*, supplemental hook *d*, and flange *q*, all as in Fig. 7; but in place of the lug *p* a T-shaped lug *p'* is provided, the head whereof is made rectangular to fit the rectangular slot *n'*, the length of the head being in the vertical plane when the hook is in position. To engage the attachment-piece *B'* with the base *A'* when the latter is secured to a wall, the head of the lug *p'* is inserted through the slot *n'* and the attachment-piece then rotated through ninety degrees, the overhanging ends *u* of the lug engaging in the quadrantal recesses *t*, and thus holding the attachment-piece in place, and, if desired, the surface of the quadrantal recesses *t* may be slightly oblique, so as to draw the flange *q* tightly against the boss *m'*, and thus hold the attachment-piece snugly against the base.

Although the shape of the recess *g* is such that it is practically impossible for the rope or cord to slip when jammed therein, still in order to still further secure it against possible slipping I prefer to form a longitudinal groove *v* in the upper side of the shank *c* of the hook, as illustrated in Fig. 14, which groove, interacting with the opposing convex surface of the reëntrant member *f*, causes a sharp kink to be formed in the cord, and the side edges of the groove *v* engage and grip the cord, so as to obviate possibility of slippage.

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

1. A cord-fastener having a tapered recess, and a surface adjacent to said recess over which the cord is adapted to be thrown and pulled tight, and thence while still tight shifted into and gripped by said recess.

2. A cord-fastener comprising a base adapted to be secured to a fixed object, and a member having a tapered recess whose narrow end extends away from said base, and a tightener-surface at the wider end of said recess and approximately at right angles to the plane of the recess, and over which the cord is adapted to be thrown and tightened previously to being slipped into said recess.

3. A cord-fastener comprising a base adapted to be secured to a fixed object, a fastener-hook extending therefrom and having a tapered recess, and a supplementary hook at the wider end of said recess.

4. A cord-fastener comprising a base adapted to be secured to a fixed object, a fastener-hook having a tapered recess project-

ing from said base, one side of said recess having a groove therein, and a supplementary hook formed on the recurved end of said fastener-hook.

5 5. A cord-fastener comprising a base adapted to be secured to a fixed object, a fastener-hook extending outwardly therefrom and having a backwardly-bent end portion forming a wedge-shaped recess, and a tight-
10 ener-surface at the wide end of said recess over which a cord is adapted to be thrown and pulled tight and thence shifted into said recess.

6. A cord-fastener comprising a base

adapted to be secured to a fixed object, a member *c* extended outwardly therefrom in a plane substantially at right angles thereto, a backwardly-bent portion *f* forming an elbow *e* and a wedge-shaped recess *g*, and a supplementary hook *d* formed on the end of
15 said portion *f*. 20

In testimony whereof I have hereunto set my hand this 8th day of February, 1905.

HENRY HELLWEG.

In presence of—

GEORGE W. COLLES,
GERTRUDE M. REGAN.