(No Model.)

J. A. KERR.

BELT FASTENER.

No. 456,993. Patented Aug. 4, 1891.

Fig. 1.

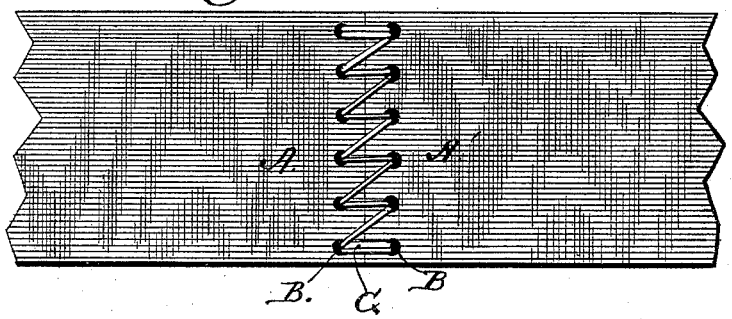


Fig. 2.

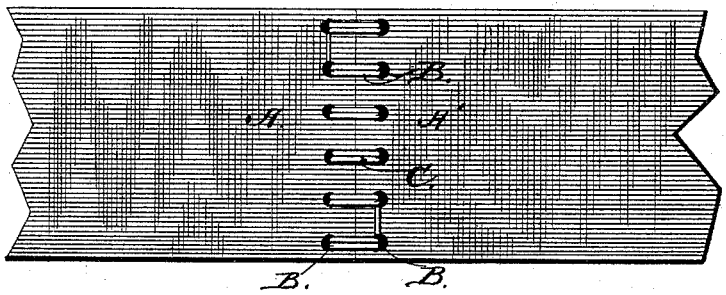


Fig. 3.

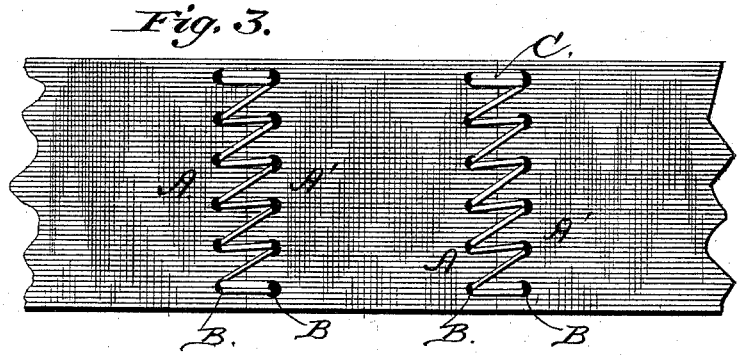
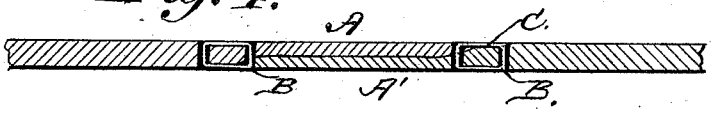


Fig. 4.



Witnesses:
J. M. Fowler Jr.
W. A. Falconer

Inventor
John A. Kerr.
By Parker & Sweet
Atty.

UNITED STATES PATENT OFFICE.

JOHN A. KERR, OF NEW YORK, N. Y.

BELT-FASTENER.

SPECIFICATION forming part of Letters Patent No. 456,993, dated August 4, 1891.

Application filed September 22, 1890. Serial No. 365,727. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. KERR, a citizen of the United States, and a resident of New York city, in the county of New York and State of New York, have invented new and useful Improvements in Belt-Fasteners; and I do hereby declare the following to be a full, clear, and exact description of said invention, reference being had to the accompanying drawings, and to the letters of reference, marked thereon which form a part of this specification.

My invention relates to improvements in that class of belt-fasteners in which the abutting ends of the belt are secured together by means of wire lacing, the object of my improvements being to provide a belt lacing or fastening that will produce a smooth, even, and compact joint, one that will insure as great strength and durability at the joint as at any other portion of the belt, and one in which the joint is equally smooth on both faces of the belt.

To these ends my invention consists, essentially, in the novel arrangement of the fastening-wire and in the peculiar method of forming the joint, as will be hereinafter more fully described, and specifically designated in the claims.

Heretofore in lacing or fastening the abutting ends of belts or sections of belts a double strand of wire has been threaded from one side of the belt to the other and crossed or lapped upon itself at the center of the joint, or a single strand of wire has been threaded from one side to the other and then back again, thus crossing or lapping the first strand. In all such constructions, where one strand laps over another, the portion crossing the strand is forced outward by the continued use of the belt, resulting in the wire breaking at such points, and presenting sharp projecting ends which are liable to inflict wounds upon the workmen's hands and also unfit the belt for use. Furthermore, a very uneven fastening is thus produced, requiring the joint to be renewed quite often. By means of my improvements the above defects are obviated, and the belt made practically endless, the joints being no thicker where laced than at other parts of the belt.

In the accompanying drawings, Figure 1 represents a plan view of the outer face of a belt having abutting ends provided with my improved fastening; Fig. 2, a plan view of the bottom or pulley face of the same; Fig. 3, a plan view of the outer face of a belt having overlapping ends provided with my improved fastening, and Fig. 4 a vertical longitudinal section of the same.

Similar letters of reference occurring on the several figures indicate corresponding parts.

Referring to said drawings, A A′ represent the abutting ends of a belt or the abutting ends of sections of a belt. Lacing-holes B are formed near the ends of each of said sections and extend from one side of the belt to the other, said holes forming two parallel rows when the abutting ends are properly arranged, and through the holes B is threaded the lacing-wire C, from one side of the belt to the other without crossing or lapping.

In threading the wire through the holes B it is started at one side of the belt, passed through one hole B directly across the outer face of the belt to the opposite hole, then down through said hole, under the belt, and up again through the same hole at which it was started. From here the wire is carried diagonally over to the next hole, on the opposing end of the section of belt, and passed down through the same, under the ends, and brought up through the hole directly opposite. From here it is again passed down through the hole diagonally opposite the first one, and up through the hole directly opposite, and it is then carried diagonally across the outer face to the next hole on the opposing end. This operation is continued until the wire has been threaded from one side or edge of the belt to the other without crossing or lapping.

It will be seen that on the face of the belt which is usually run upon the pulley the opposing ends are bound together by a series of parallel stitches, transverse to the line of cut, and that upon the opposite face of the belt the ends are united by a series of stitches, one of which is transverse and the other diagonal to the line of cut. It will also be seen by reference to the drawings that at the sides or edges of the belt, upon the outer face, the ends are united by two parallel

stitches transverse to the line of cut. This is done to provide secure end fastenings for the wire strand. At both sides of the belt the ends of the wire strand project inwardly upon the pulley-face of the belt, and are secured by bending them down parallel with the line of cut and passing them through the next holes directly within, and then bending said ends down between the adjacent transverse and diagonal stitches and in the angles of the same, as clearly shown. In this manner a single strand of wire has been threaded from one side or edge of the belt to the other, forming double stitches on both sides of the same and having each of its ends secured with a single cross or lap, thereby producing a fastening which will permit the belt to be run with either side next to the pulley, the continuous wire lacing securing an equalizing strain along the entire length of the joint, and at the same time preventing any stretching or widening of the same.

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

1. The herein-described belt-fastener, consisting of a single straight or loopless strand of wire threaded through holes near the abutting ends of the belt, said wire being passed from one side or edge of said belt to the other without crossing or lapping upon itself, and having its ends passed through the outer holes at the sides or edges of said belt, extended inwardly therefrom, and secured in holes adjacent to said outer holes, substantially as and for the purpose described.

2. The herein-described belt-fastener, consisting of a single strand of wire threaded through holes near the ends of the belt, the wire being passed from one side or edge of said belt to the other and formed into double parallel stitches upon its under face, and into parallel and diagonal stitches upon its upper face, the latter stitches being arranged intermediate of the former and without said wire crossing or lapping upon itself, substantially as and for the purpose specified.

3. The herein-described belt-fastener, consisting of a single strand of wire threaded through holes near the opposing ends of the belt, said wire being passed from one side or edge of said belt to the other and formed into double parallel stitches upon its under face and into parallel and diagonal stitches upon its upper face the latter stitches being arranged intermediate of the former and without said wire crossing or lapping itself, the ends of said wire at the sides or edges of said belt being bent down parallel with the line of cut, passed through the next adjacent hole toward the middle of said belt, and secured in said hole, substantially as and for the purpose described.

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

JOHN A. KERR. [L. S.]

Witnesses:
W. H. CHAPMAN,
R. B. TAYLOR.