(No Model.)

H. KERR.

BELT FASTENER.

No. 456,992. Patented Aug. 4, 1891.

Fig. 1.

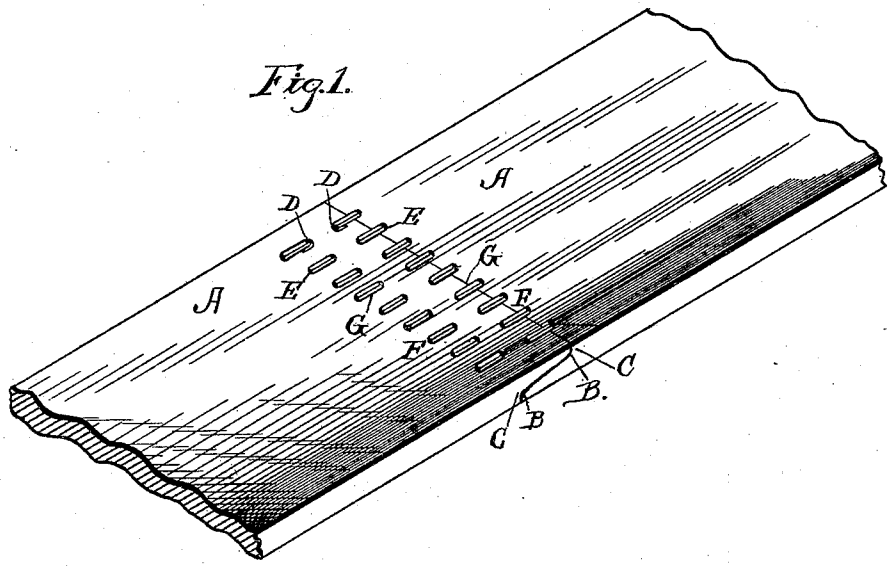


Fig. 2.

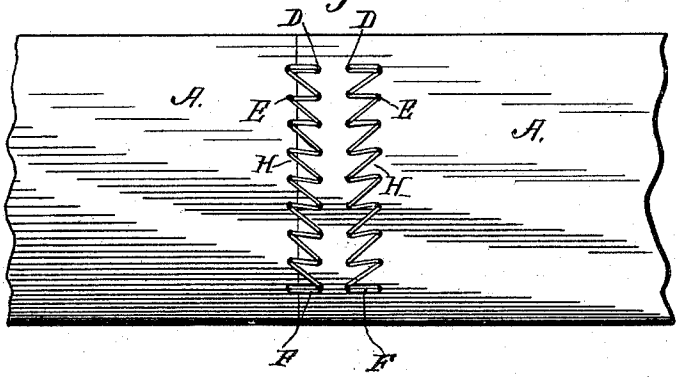


Fig. 3.

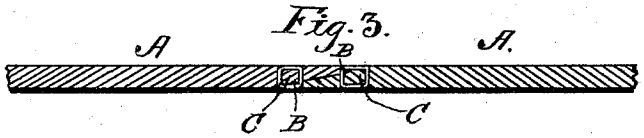
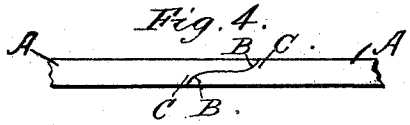


Fig. 4.



Witnesses
J. M. Fowler Jr.
Riley A. Sweet.

Inventor
Hugh Kerr.
By his Attorney
Parker H. Sweet Jr.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HUGH KERR, OF NEW YORK, N. Y.

BELT-FASTENER.

SPECIFICATION forming part of Letters Patent No. 456,992, dated August 4, 1891.

Application filed October 22, 1889. Serial No. 327,805. (No model.)

To all whom it may concern:

Be it known that I, HUGH 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 generally to belt-fasteners, and particularly to improvements in that class thereof in which the ends of leather belts are planed down and tongued, lapped, and secured together by strands of wire; and it consists in the peculiarities of construction and arrangement of parts and features hereinafter fully disclosed in the description, drawings, and claims.

The object of my invention is to provide a novel and improved construction of belt-fastener, in which is combined simplicity, cheapness, great strength, durability, and smoothness of surface in running. This object is accomplished by the improvements illustrated in the accompanying drawings, forming part of this specification, in which the same reference-letters indicate the same parts, and in which—

Figure 1 represents a perspective view of a portion of the upper surface of the belting, showing two sections connected by my improved joint or fastener; Fig. 2, a plan view of the same, showing the under surface thereof and the metallic lacings or wire strands; Fig. 3, a vertical longitudinal section of the same; and Fig. 4, a detail edge view of the lapped tongues thereof, showing their ogee or rounded and concaved contact-surfaces.

In the construction of my invention the sections A A of the belt are provided with short lapped tongues at their adjoining ends and with the wave-like, contracted, or ogee curves B B, which are formed in their upper and lower surfaces, whereby when said tongues are secured together the surfaces of said ogee curves will lie in close contact with each other, form a firmly or tightly closed union or lap-joint, and secure perfectly even or smooth surfaces upon both faces of the belting. Also, as the contiguous ends of the two sections A A of the belt are provided with short reduced tongues, which are lapped and have each one-half the thickness of the belt, and which are formed upon their opposing surfaces with the convex and concave, round and hollow or ogee curves B B, the destruction or separation of the lap-joint is rendered a practical impossibility. Also, when these short tongues are in contact their ends abut against the curved shoulders C C, which are formed at the bases of said tongues in the sections of the belt and produce a shorter lap-joint than is usually employed, the result being a great saving in the leather belting, which, as is well known, is very expensive. In the ordinary long, inclined, and smooth-surfaced lap-joints of belts the same or a greater length of leather is required for making said joints than is equal to the width of said belts, (hence the weakness of said joints,) whereas with joints of my improved construction laps of from five-eighths to three-fourths of an inch in length are amply sufficient for any width of belt, the results being greater strength in said joints and also greater saving in the leather removed in forming the same than with the ordinary joints, the amount saved being about one-tenth of one per cent.

After the ends or tongues of the belt-sections are constructed and placed in contact, as just described, they are each formed with the two closely-arranged transverse rows of holes D D near their bases and ends, and are arranged parallel with the two closely-adjacent rows of transverse holes E E, which are formed in the body of the belt. Through these transverse rows of holes are threaded the two single and separate strands of wire F F, which are passed therethrough in such manner as to form two parallel and double sets of closely-arranged stitches G G upon the upper surface of the belt and two sets of single, parallel, and inclined or oblique closely-arranged stitches H H upon the lower surface thereof. The wires forming these sets of stitches do not lap or cross each other at any point; also said oblique stitches are arranged intermediate of the parallel stitches upon the lower surface of the belt, and also the ends of the two single and separate strands of wire, after passing through the outer holes of the

two separate rows of holes at the sides or edges of the belt, are secured in any suitable manner.

Heretofore it has been the common practice to connect the long smoothly and gradually inclined lapped ends or tongues of the sections of belts by means of lacing-cords passed through leather loops and incased within the body of the belt by double-pointed tacks and by staples arranged at long distances apart and to straddle and unite the joints; but these means of fastenings have not been found altogether satisfactory, as they are difficult to make and apply, expensive to manufacture, liable to permit the lapped tongues to separate under slight strain, and do not form firm or well-united joints, whereas, as I have found in practice, the wave-like, rounded, and concaved or ogee-curved surfaces formed upon the short lapped ends or tongues of my improved fastening, prevent all possibility of their separation, are comparatively inexpensive to manufacture, and produce a joint and belt which possess great strength and durability, which will not break, stretch, or slip at either a high or low rate of speed. The joint of this belt is also so tight as to be water-proof. Also it may be further observed that a belt provided with a joint having the construction just described is as pliable at said joint as at any other point, that it does not bend more easily or abruptly at said joint than at any other point, and that by passing the strands of wire over the ends of the tongues the latter are prevented from curling up on account of dampness and interfering with the smooth running of the belt.

As shown in the drawings, the sections of the belt are composed of a single thickness of leather or other suitable material, although belts formed of one or more thicknesses with lapped ends may be employed, if necessary or desired.

Having thus fully described my invention, the construction and arrangement of its parts and its advantages, what I claim as new is—

1. The herein-described belt-fastener, comprising the belt-sections provided with short-lapped tongues, which are formed with rounded and concaved or ogee curves upon their contact-surfaces, and the separate sets of closely-arranged stitches, each set being formed of a continuous strand of wire for securing said tongues together, substantially as and for the purpose described.

2. The herein-described belt-fastener, comprising the belt-sections provided with short-lapped tongues, which are formed with rounded and concaved or ogee curves upon their contact-surfaces, and the two separate sets of stitches, each set being formed of a single strand of wire and made double upon one surface of the belt, substantially as described.

3. The herein-described belt-fastener, comprising the belt-sections provided with short-lapped tongues, which are formed with rounded and concaved or ogee curves upon their contact-surfaces, and the two separate sets of closely-arranged stitches, each set being formed of a single strand of wire and made double and parallel upon one surface of the belt and single, parallel, and oblique upon its opposite surface, substantially as described.

4. The herein-described belt-fastener, comprising the belt-sections A A, provided with the curved shoulders C C, with the transverse rows of holes E E, and with the short-lapped tongues, which are formed with the transverse rows of holes D D near their bases and ends and with the rounded and concaved or ogee curves B B upon their contact-surfaces, and the two single and separate strands of wire F F, which are threaded or passed through said rows of holes and formed into the two parallel and double sets of closely-arranged stitches G G upon the upper surface of the belt and into the two sets of single, parallel, and closely-arranged oblique stitches H H upon its lower surface, substantially as described.

5. The herein-described belt-fastener, comprising the belt-sections A A, provided with the curved shoulders C C, with the transverse rows of holes E E, and with the short-lapped tongues, which are formed with the transverse rows of holes D D near their bases and ends and with the rounded and concaved or ogee curves B B upon their contact-surfaces, and the two single and separate strands of wire F F, which are threaded or passed through said rows of holes and formed into the two parallel and double sets of closely-arranged stitches G G upon the upper surface of the belt and into the two sets of single, parallel, and closely-arranged oblique stitches H H upon its lower surface, the wires forming said sets of stitches being arranged to avoid lapping or crossing upon either surface of said belt, and also said sets of inclined or oblique stitches being arranged intermediate of said sets of parallel stitches upon the lower surface of said belt, substantially as described.

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

HUGH KERR.

Witnesses:
JOHN SHERMAN,
GEO. H. SHERMAN.