No. 803,492. PATENTED OCT. 31, 1905.

J. & P. B. LANDGRAF.

BELT SPLICING IMPLEMENT.

APPLICATION FILED MAR. 20, 1905.

Fig. 1.

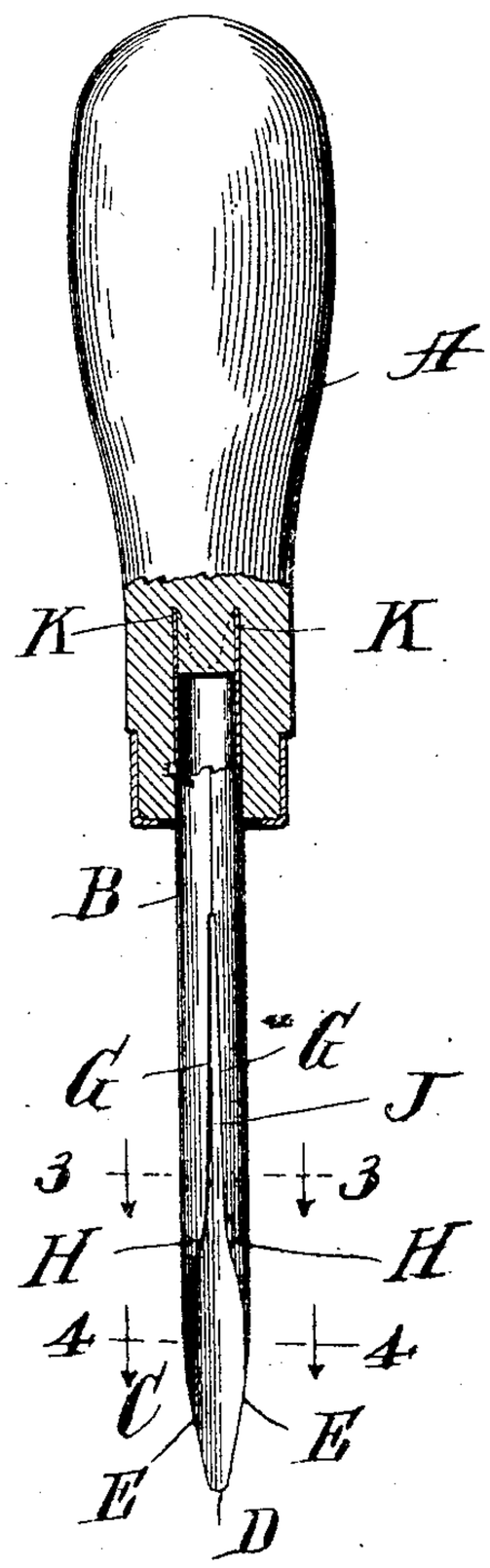


Fig. 2.

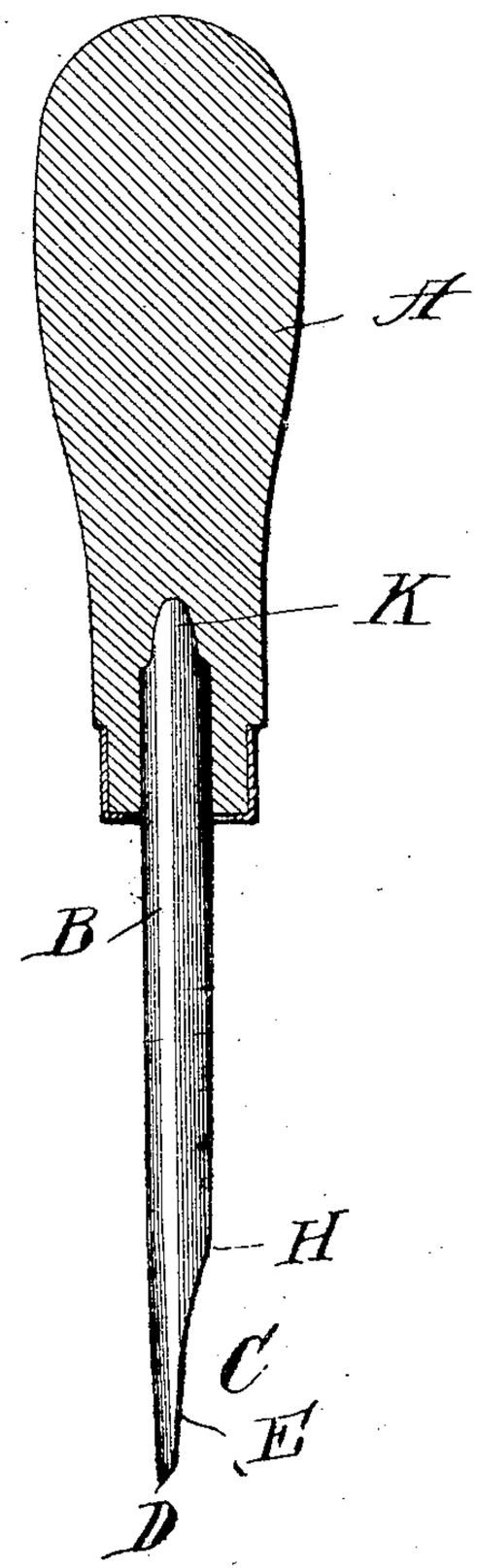


Fig. 3.

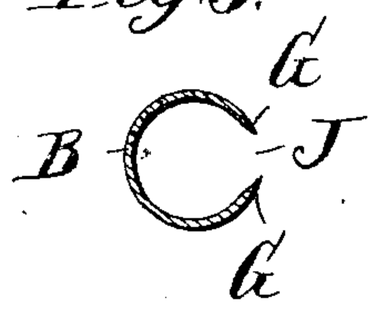
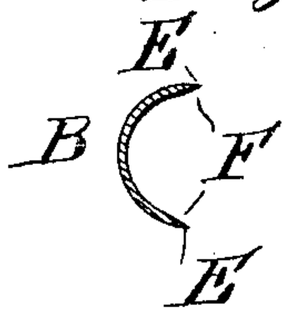


Fig. 4.



Witnesses
G. A. Rauberschmidt.
C. H. Seem

Inventors
Joseph Landgraf
and Philip B. Landgraf
By Brown & Darby
Attys.

UNITED STATES PATENT OFFICE.

JOSEPH LANDGRAF AND PHILIP B. LANDGRAF, OF CHICAGO, ILLINOIS.

BELT-SPLICING IMPLEMENT.

No. 803,492. Specification of Letters Patent. Patented Oct. 31, 1905.

Application filed March 20, 1905. Serial No. 251,030.

To all whom it may concern:

Be it known that we, JOSEPH LANDGRAF and PHILIP B. LANDGRAF, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Belt-Splicing Implement, of which the following is a specification.

This invention relates to belt-splicing implements.

The object of the invention is to provide a construction of implement which is simple, economical, and efficient for use in splicing belts, forming the holes therein for the splicing thong or cord, and for trimming where necessary or desirable.

Other objects of the invention will appear more fully hereinafter.

The invention consists, substantially, in the construction, combination, location, and arrangement of parts, all as will be more fully hereinafter set forth, as shown in the accompanying drawings, and finally pointed out in the appended claims.

Referring to the accompanying drawings, and to the various views and reference-signs appearing thereon, Figure 1 is a view in front elevation, a portion broken out and a portion in section, of an implement embodying the principles of our invention. Fig. 2 is a side elevation of the same, the handle part being in longitudinal section. Fig. 3 is a view in transverse section on the line 3 3 of Fig. 1 looking in the direction of the arrows. Fig. 4 is a similar view on the line 4 4 of Fig. 1 looking in the direction of the arrows.

In the operation of splicing together the ends of belts and the like it is customary to punch or otherwise form holes along the ends of the belt to be spliced, through which the splicing lace, cord, or thong is passed. In the formation of these holes it has heretofore been customary to employ punches or awls. The use of punches necessitates ordinarily the use of mallets or hammers and a backing-plate of wood or other suitable material, except in the case of lever-punches; but in that case the distance from the end or edge of the belt to the point where such punch is capable of producing or forming a hole through the belt is limited and restricted. The use of the awl necessitates considerable manual power in order to form the hole and especially where the belt is of any material thickness, frequently rendering the use of the awl difficult. Moreover, in either the use of a punch or of an awl only one size of hole is produced with each tool, and frequently the holes are left with rough or uneven edges or surfaces. Again, in the operation of splicing together the ends of the belt it is frequently necessary to trim the ends of the lacing thong or cord or to trim or cut other parts associated with such operation.

It is among the special purposes of our present invention to avoid the objections above noted and to provide an implement which is simple and inexpensive wherein through manual operation similar to the operation of a gimlet or an auger holes may be readily cut or formed through the belt at any desired point in the length thereof or any desired distance from the end or edge thereof and of any suitable or desirable size and of different sizes with the same implement and wherein provision is made of cutting edges by which any desired or necessary trimming may be readily and easily effected with the same implement. We also propose to embody in our implement means whereby the implement may be used to secure a purchase or leverage upon the lacing thong or cord in order to draw the same through the holes formed through the belt during the lacing operation. These objects we accomplish in a most simple manner in the implement shown in the accompanying drawings and wherein reference-sign A designates the handle thereof. This handle may be of any suitable or convenient form of construction and such as is ordinarily employed for the handles or grip portions of tools of this character. Suitably secured in the end of the handle A is the tool proper, B. This tool proper is preferably of generally tubular shape and is preferably constructed of tool-steel suitably shaped to form the tool. The tool-steel material in the form of a blank strip or plate is rolled or formed into tubular shape by bringing the edges thereof together. At its extremity the tool is beveled off on the side thereof corresponding to the meeting edges of the tool, and, as indicated at C, this bevel when viewed in side elevation is slightly concave. The bevel extends to the extreme free end of the tool,

thereby forming a somewhat-sharpened point D, and in order to produce efficient cutting or shearing edges we also propose to bevel or sharpen the edges E from the inside thereof or from inside the tubular tool, as indicated at F, Fig. 4. Instead of the edges of the tubular tool meeting throughout the entire length of the tool to the point where the bevel C is formed said edges for a portion of the length thereof, as indicated at G, are slightly separated, the separation or distance between the meeting edges increasing toward the free end of the tool and finally merging into the bevel C at the points H, thereby leaving an opening J of increasing width toward the free end of the tool between the meeting edges of the tool-blank. The tool may be secured in the handle A in any suitable or convenient manner, and we do not desire to be limited or restricted in this respect. We have shown an ordinary manner of securing the tool in the handle wherein the tool is received through a counterbore in the end of the handle and is then driven into the body of the handle at the base of the counterbore, the tool being formed with wings or flanges K, serving to prevent the tool or the handle from relatively rotating.

The operation of the tool will be readily understood from the foregoing description. When it is desired to form a hole through a belt or other article, the point of the tool is forced slightly into the body of the belt or other article by hand-pressure, the sharpened and beveled edges facilitating the entrance of the tool into the body of the belt, and by imparting rotative movement by hand to the tool the tool is advanced through the belt, the cutting edges E shearing from the belt a plug which when removed leaves a smooth-bored hole. By regulating the extent of movement of the implement transversely or through the belt the size or diameter of the hole produced may be regulated, the farther the tool is inserted through the belt the larger being the diameter of the hole produced. The provision of the cutting edges E enables any trimming or cutting that may become necessary or desirable to be accomplished readily by the same tool by which the holes are formed. The provision of the opening J between the edges of the tubular tool-body enables the implement to be employed to secure a purchase upon the lacing thong or cord to draw the same through a hole in the lacing operation. This result may be accomplished by inserting the end of the lacing or thong through the opening J and then shifting the end of the thong or the tool relatively to each other, so as to crowd the end of the lacing or thong toward the smaller end of the opening J, and then wrapping one or more times the thong or lacing about the tool, thereby forming a handle by which the lacing-thong may be tightly pulled through the holes in the belt ends in the lacing operation.

From the foregoing description it will be seen that we provide an exceedingly simple, economical, and efficient tool for the purposes stated, and while we have described the use of the tool in connection with splicing-belts we do not desire to be limited in respect to the use to which the implement is to be put, as it is obvious that the tool is readily capable of use in other relations and for other purposes.

Having now set forth the object and nature of our invention and a construction embodying the same, what we claim as new and useful, and desire to secure by Letters Patent, is—

1. An implement of the class described, comprising a handle portion and a split-tube tool portion, the tool portion being secured in the handle portion against relative rotative movement, and having its extreme end beveled off to form tapering side cutting edges and a cutting-point, the meeting edges of the split-tube tool portion being separated for a portion of the length thereof, and to an increasing extent, the separate meeting edges merging into the cutting edges formed by the bevel at the end of the tool, whereby a tapering slot is formed and adapted to receive the end of the lacing-thong.

2. An implement of the class described, comprising a handle portion and a tubular tool portion secured in the handle portion against relative rotation, the tool portion being beveled off at the outer extremity thereof to form a tapering rotary cutter and a cutting-point and an open-ended slot extending from the beveled portion inwardly toward the handle portion, whereby the extremity of the thong or lacing may be inserted into said slot from the beveled end of the tool and the tool portion then rotated for wrapping the thong therearound.

3. An implement of the class described, comprising a handle portion and a tubular tool portion fixed against rotary movement in the handle portion, the tool portion having its outer extremity beveled off to form a tapering cutter, said tool portion also having a longitudinal slot whose edges converge toward the handle portion, whereby the end of the thong may be inserted into said slot and gripped by thereafter sliding the tool portion longitudinally over the end of the thong to enable the tool portion to be utilized as a winding implement for drawing the thong through its perforation.

4. An implement of the class described, comprising a handle portion and a tubular tool portion fixed against relative rotation, the tool portion having its outer extremity

sharpened to constitute a cutter for cutting eyes, and also having a longitudinal slot extending inwardly toward the handle portion, the outer end of said slot being larger than the inner end, whereby a lacing-thong may be inserted in the slot and thereafter gripped by the edges of the slot when the tool is pushed longitudinally.

In witness whereof we have hereunto set our hands, this 16th day of March, 1905, in the presence of the subscribing witnesses.

JOSEPH LANDGRAF.
PHILIP B. LANDGRAF.

Witnesses:
C. H. SEEM,
S. E. DARBY.