W. TRAFFORD.

SEAM CUTTER.

APPLICATION FILED FEB. 16, 1910.

1,095,606. Patented May 5, 1914.

Fig. 1.

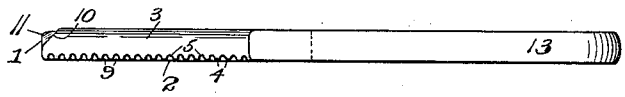


Fig. 2.

Fig. 3.

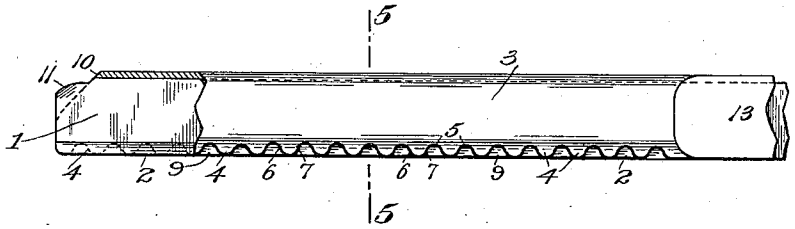


Fig. 4.

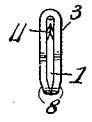


Fig. 6.

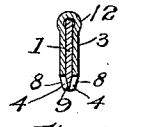


Fig. 5.

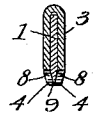


Fig. 7.

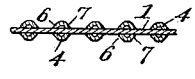


Fig. 9.

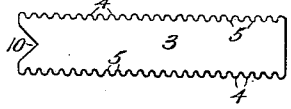
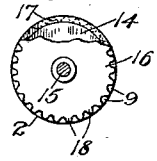


Fig. 8.



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UNITED STATES PATENT OFFICE.

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SEAM-CUTTER.

1,095,606. Specification of Letters Patent. Patented May 5, 1914.

Application filed February 16, 1910. Serial No. 544,186.

To all whom it may concern:

Be it known that I, WESLEY TRAFFORD, a citizen of the United States, residing at 224 West One Hundred and Forty-first street, New York city, county of New York, and State of New York, have invented certain new and useful Improvements in Seam-Cutters, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention relates to certain improvements in seam ripping devices, and it is the especial object of the present invention to provide an improved safety device for use with seam rippers which shall act to spread the material apart, out of the path of the cutting edge of the ripper as it is advanced across a seam to sever the same, so that the material cannot be injured, and by the use of which the ripping operation may be more quickly and certainly effected than with ripping devices now in use.

A further object of the invention is to provide a safety device and ripper which shall be very simple and consequently cheap to make, and which will be durable.

The safety device by which these objects are accomplished comprises a guard which is adapted to be secured on the knife blade of the ripper, which guard is provided with a plurality of projections which have wedge shaped surfaces, the ends of which are rounded. The guard is so positioned on the blade that the ends of the projections come flush with the cutting edge of the blade, and the wedge shaped projections act to spread the material out of the path of the cutting edge when it is advanced across a seam to sever the same. The guard and blade are held in a suitable handle or shank when the ripper is to be used as a hand tool, or they may be constructed and mounted so as to be operated mechanically.

For a better understanding of the invention a detailed description of the same will now be given in connection with the accompanying drawings, in which the improved ripper is shown in its preferred form.

In these drawings:—Figure 1 is a side view of the ripper. Fig. 2 is a bottom view. Fig. 3 is a view on an enlarged scale of the cutting knife and the guard therefor, certain parts being shown in section and certain other parts being broken away for illustrative purposes. Fig. 4 is an end view looking toward the right of Fig. 3. Fig. 5 is a cross section, the section being taken on line 5—5 of Fig. 3. Fig. 6 is a view similar to Fig. 5 showing a modified form of guard. Fig. 7 is a longitudinal detail section through a number of the projections, on the same scale as Fig. 3. Fig. 8 is a side view, partly in section and partly broken away, of a rotary seam cutter and guard therefor, embodying the invention; and Fig. 9 is a view of the preferred form of guard blank before it is positioned on the cutter blade.

Referring now to said drawings, the seam cutting device or seam ripper in its preferred form embodies a knife 1 of any suitable material, such as tempered steel, capable of taking a sharp cutting edge. To economize in material, this knife may be made just thick enough to enable a cutting edge to be formed thereon. This knife, which forms the cutting element of the device, may have a varied configuration, but will, however, be provided with a continuous cutting edge 2, being either a straight thin blade, as shown in Figs. 1 to 7, or a thin disk, as shown in Fig. 8, this latter form being used for special purposes hereinafter referred to.

As stated above, there is provided a safety device for use with this knife blade, which safety device acts to spread apart the abutting edges of the material out of the path of the cutting edge as the cutting edge is advanced across a seam to sever the same, thus preventing injury to the material. This safety device comprises a guard 3, provided with a plurality of projections 4 which are provided with wedge shaped surfaces and which act as spreading devices. These projections are so formed on the guard that when the guard is in position on the blade the ends thereof are substantially flush with the cutting edge and act to spread the abutting edges of the material apart as the blade is advanced to sever the seam. The guard may be formed with these projections 4 and the projections 4 may be given a wedge surface so as to perform this function, in different ways. Preferably the guard 3, when the ripper is to be used as a hand tool is formed from a sheet or strip of suitable material, as sheet metal which may be bent over

the knife blade, and has each of its longitudinal edges notched or serrated to form a plurality of projections or teeth 4 and recesses 5 there between. The projections 4 are formed with wedge shaped surfaces, so that each projection will form a spreading device and will spread the material apart out of the path of the knife edge, as the latter may be advanced in either direction to sever a seam. In the preferred construction the projections 4 are formed on the guard by suitable dies, the dies acting to bend inward the side edges and the ends or points of the projections. Each projection has therefor a wedge surface 6 on one side and a wedge surface 7 on the other side of a vertical line drawn centrally through the projection, these wedge surfaces facing in opposite directions; and each projection has a further wedge shape in vertical cross section as shown at 8 in Figs. 5 and 6 owing to the end being turned or bent in by the dies. The ends of each projection 4 are rounded, as shown in Fig. 3, so that they will not catch on the material. The guard, when this form of guard is employed, is bent over the blade 1 so that the ends or points of the projections come substantially flush with the cutting edge 2 of the blade on each side, the guard being of the requisite dimensions to be so bent. The cutting edge 2 is thus divided into a number of short cutting edges 9, these edges lying between the projections. One end of the guard (Fig. 9) is notched as at 10 to bare a nicking point 11 on the knife blade, this nicking point being used to start the seam. The guard is or may be bent over the blade so as to form a ridge or bead 12 (see Fig. 6), this construction being somewhat more rigid. The guard being thus bent over the blade acts also as a support therefor and so allows a very thin blade to be used. The construction is therefore very economical.

The guard is secured on the cutting blade in any suitable manner, as by soldering, and the cutting blade and guard will be secured in a shank or handle 13 of any suitable configuration, such as an elongated loop of any cheap material, preferably drawn steel, the cutting blade and the guard being soldered or otherwise secured thereto.

In Fig. 8 is shown a modified form of ripper, the ripper there illustrated being adapted to be operated mechanically and used in tailoring establishments, for instance, where a very large amount of work is to be done. In this modification the cutting blade is in the form of a thin disk 14, which disk is adapted to be mounted on a shaft 15, which can be rotated in any suitable manner (not shown). This disk knife 14 has its cutting edge protected by a guard, the guard in this instance being made in two parts, 16, 17, one of these parts being secured on each side of the knife. The parts 16, 17 are made of any suitable material as sheet metal, and are each provided with a plurality of projections 18 extending around the edge. The form and function of these projections 18 is similar to the projections 4 already described and will therefore not be described again.

The ripping device herein described is very simple, economical to make and performs its work very efficiently. The guard formed as described with a plurality of projections each having a wedge surface facing in opposite directions permits the ripper to be reciprocated its full length across a seam, and a large number of stitches accurately cut, the projections acting at all times to keep the material out of the path of the cutting edge.

What is claimed is:—

1. A seam ripper comprising a blade having a cutting edge, a guard provided with a plurality of projecting portions on each side of the blade, the ends of said projections being substantially flush with the cutting edge of the blade, each projection having wedge shaped surfaces and each projection forming a spreading device, and means for securing the guard on the blade.

2. A seam ripper comprising a blade having a cutting edge, a guard provided with a plurality of projecting portions each projection having wedge shaped surfaces and each projection forming a spreading device, said guard being bent over the blade so that the extremities of the projections are substantially flush with the cutting edge of the blade on each side thereof, and means for securing the guard on the blade.

3. A seam ripper comprising a blade, a guard provided with a plurality of projecting portions on each side of the blade, each projection having wedge shaped surfaces and each projection forming a spreading device, said guard being bent over the blade and formed with a bead at the point where it is so bent, and means for securing the guard on the blade.

4. A seam ripper comprising a blade having a continuous cutting edge and a safety device for the blade comprising a guard provided with a plurality of projecting portions on each side of the blade each of said projections having wedge shaped surfaces facing in opposite directions and each of said projections forming a spreading device so located relative to the cutting edge that when said edge is advanced across a seam in either direction the spreading device acts to spread the abutting edges of the material apart as the cutting edge is so advanced.

5. A seam ripper comprising a blade having a continuous cutting edge, a guard 3 of sheet metal bent over the blade and notched

to form projections 4 on each edge which come opposite each other when the guard is bent over the blade and the ends of which are flush with the cutting edge, each of the projections 4 having wedge-shaped surfaces 6, 7, and rounded ends, and forming a spreading device.

In testimony whereof, I have hereunto set my hand, in the presence of two subscribing witnesses.

WESLEY TRAFFORD.

Witnesses:
J. A. GRAVES,
GEO. H. BOTTS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."