No. 721,411. PATENTED FEB. 24, 1903.

C. B. ALEXANDER.

DEVICE FOR REPAIRING METALLIC MEASURING TAPES.

APPLICATION FILED APR. 7, 1902.

NO MODEL.

Fig. 1.

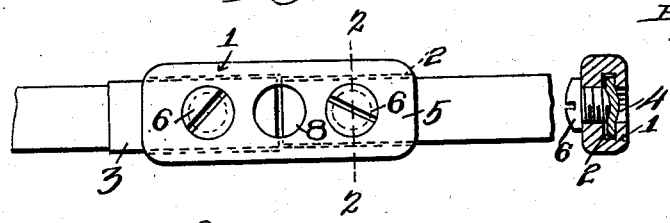


Fig. 2.

Fig. 3.

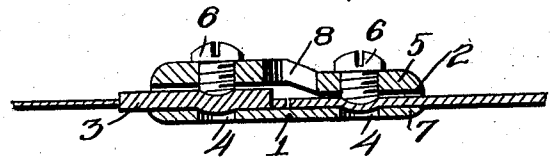


Fig. 4.

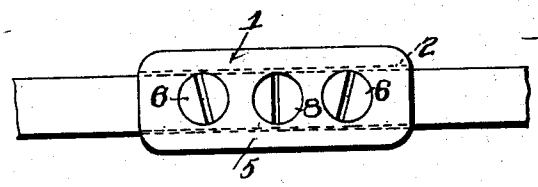
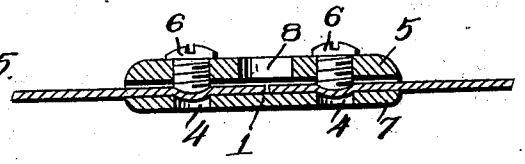


Fig. 5.



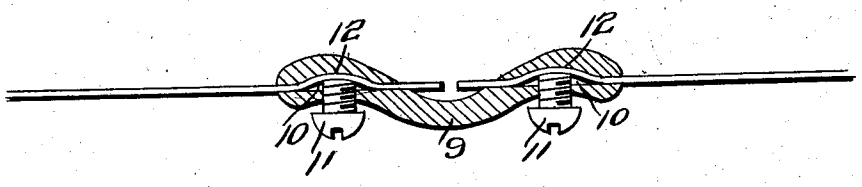


Fig. 6.

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

UNITED STATES PATENT OFFICE.

CLINTON BROWN ALEXANDER, OF CLEARFIELD, PENNSYLVANIA.

DEVICE FOR REPAIRING METALLIC MEASURING-TAPES.

SPECIFICATION forming part of Letters Patent No. 721,411, dated February 24, 1903.

Application filed April 7, 1902. Serial No. 101,800. (No model.)

To all whom it may concern:

Be it known that I, CLINTON BROWN ALEXANDER, a citizen of the United States, residing at Clearfield, in the county of Clearfield and State of Pennsylvania, have invented a new and useful Device for Repairing Metallic Measuring-Tapes, of which the following is a specification.

This invention relates to a device for repairing metallic measuring-tapes, such as those employed by engineers and surveyors.

As is well known, tapes of the character above referred to are made of extremely thin rolled metal and if kinked or sharply bent will break almost like glass. When a rupture occurs, the practice heretofore has been to associate the ends of the tape by a sleeve or a plate, within which or upon which the ends of the tape are secured. While this procedure is thoroughly effective for the purpose designed, it requires the employment of tools and other instrumentalities not generally carried in the field and with the use of which surveyors and engineers are not ordinarily familiar.

The object of the present invention is in a ready, simple, feasible, and thoroughly practical manner to assemble the separated ends of a broken measuring-tape without the employment of solder or the application of heat.

A further object is to enable the person repairing the tape to effect accurate adjustment within the device of the tape ends, thereby to obviate liability of overlapping, and thus unnecessarily shortening of the tape.

With these and other objects in view, as will appear as the nature of the invention is better understood, the same consists in the novel construction and combination of parts of a device for repairing metallic measuring-tapes, as will be hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which like numerals of reference indicate corresponding parts, there are illustrated three forms of embodiment of the invention, each capable of carrying the same into practical operation, it being understood that the elements therein exhibited may be varied or changed as to shape, proportion, and exact manner of assemblage without departing from the spirit thereof, and in the drawings—

Figure 1 is a view in plan of one form of embodiment of the invention. Fig. 2 is a view in transverse section, taken on the line 2 2, Fig. 1. Fig. 3 is a view in longitudinal vertical section through the form of device shown in Fig. 1. Fig. 4 is a view in plan, showing a slightly-modified form of the invention. Fig. 5 is a view in vertical longitudinal section of the device shown in Fig. 4. Fig. 6 is a view in vertical longitudinal section through another modified form of the device.

The generic and underlying feature common to each of the forms herein shown is the provision of a clamp adapted to receive the opposing ends of the ruptured sections, means for securing the said ends within the clamp, and means to permit inspection of the opposing ends of the tape-sections, thereby to permit of the fractured tape ends being properly juxtaposed with relation to each other within the clamp.

Referring to the drawings and to Figs. 1, 2, and 3 thereof, 1 designates the clamp or sleeve to be associated with the ruptured sections of a tape and having a longitudinal channel therethrough of a width to receive the tape. As will be noted by reference to Fig. 3, a length of the channel at the left-hand end of the sleeve is of greater receiving capacity than the corresponding length at the right-hand end thereof, this arrangement being provided in order that should a part of the tape previously ruptured and repaired by an ordinary sleeve 3, or having any extra thickness, as the end connections with the tape-handles, or marking-sleeves, or solder-spots for numbers, or other characters used in marking measuring-tapes, constitute one of the ruptured tape-terminals, this may readily be inserted within the clamp 1 and be held there in the same manner as the plain tape at the opposite end of the clamp. At a point near each end of the clamp is a transverse orifice 4, which extends entirely through the clamp, and in the upper plate or member 5 are clamps or set-screws 6, having either oval or conical contact-points, which screws are threaded into the member 5, the lower ends of the said screws being disposed over the orifices in the

lower member 7 of the clamp, the latter orifices constituting seats to receive the deflected lengths of the tape-sections. The screws 6 are of less width than the channel 2, so that when turned down against the tape both longitudinal and transverse bends will be imparted thereto, as shown in Figs. 2 and 3, thus operating in a positive manner to prevent accidental separation of the tape from the clamp, the same also being true of the sleeve 3. In order to permit proper disposition of the tape ends with relation to each other when inserted in the clamp, thereby to avoid overlapping and consequent unnecessary shortening of the tape, a sight-opening 8 is provided intermediate of the ends of the clamp by which the opposed ends of the tape-section may be readily inspected, as will be understood by reference to Figs. 1 and 4.

In the form of embodiment of the invention shown in Figs. 4 and 5 the only difference in the structural arrangement over that shown in Figs. 1 to 3 is that the enlarged chamber at the left-hand side of the clamp is dispensed with and the channel is of the same size throughout its entire length.

In the form of embodiment of the invention shown in Fig. 6 the clamp 9 is a plate formed on a compound curve when viewed in elevation and provided in its terminals with channels 10, that aline and in which the terminals of the tape-sections are clamped by screws 11 in the same manner as that already described, the walls of the upper sides of the channels being bowed or curved upward at 12 to present seats in which the bends of the tape-sections are housed when the clamping-screws are seated. The opposing terminals of the tape-sections will be disposed over the downward bowed portion of the clamp and will thus be easy of inspection for the purposes above set forth.

It is proposed to manufacture these clamps in sizes to fit tapes of standard widths, and being cheap and easily applied to position they will form a desirable if not a necessary part of an engineer or surveyor's outfit. Aside from the positiveness of operation and the certainty with which the tape-sections will be assembled the readiness with which repairs can be effected will recommend this device to persons having need of such an implement.

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

1. A device of the character specified, comprising a sleeve channeled longitudinally to receive the ends of the tape to be united and adapted to expose them to view, said sleeve provided near each end with a transverse threaded orifice of less width than the channel and juxtaposed by a seat, and screws engaging the threaded orifices.

2. A device of the character specified, comprising a sleeve provided with a longitudinal channel and having near each end a transverse threaded orifice juxtaposed by a seat, and intermediate of its ends a sight-opening, and screws engaging the threaded orifices and being of less width than the channel.

3. A device of the character specified, comprising a sleeve having a longitudinal channel therethrough, one terminal of the channel being enlarged for the purpose specified, the sleeve being provided intermediate of its ends with a sight-opening and near each terminal with a transverse threaded orifice juxtaposed by a seat, and screws engaging the threaded orifices and of less width than the channel.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CLINTON BROWN ALEXANDER.

Witnesses:
B. E. LEIPOLD,
LENO WM. EDWARDS.