J. H. THOMAS.

SURGICAL BANDAGE FASTENER.

APPLICATION FILED JULY 22, 1918.

1,291,256.

Patented Jan. 14, 1919.

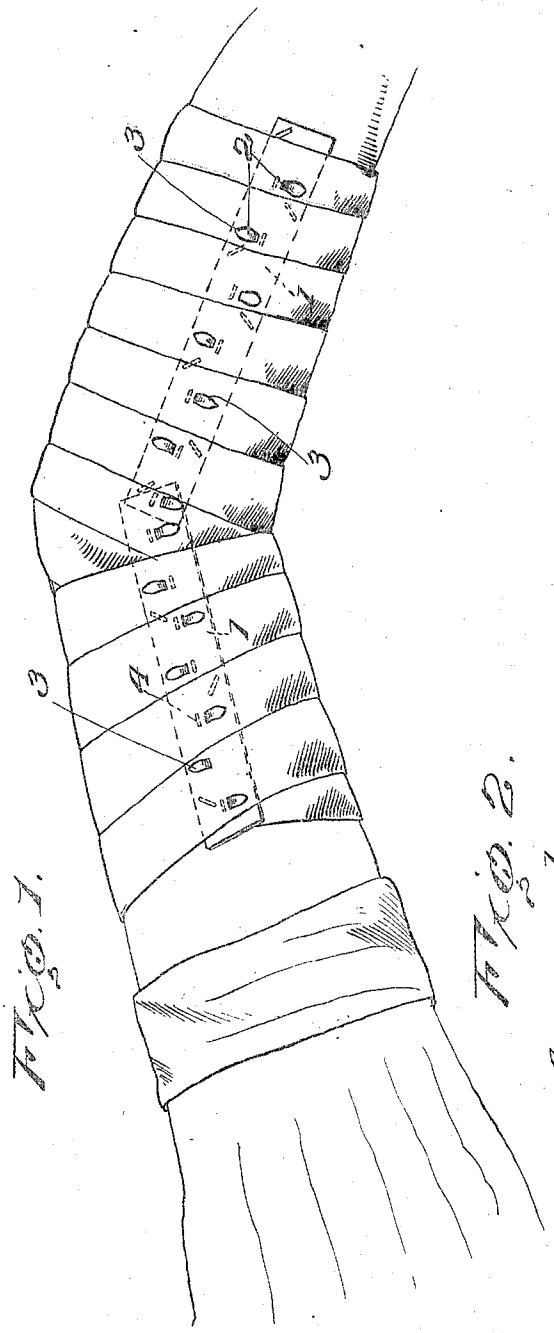


Fig. 1.

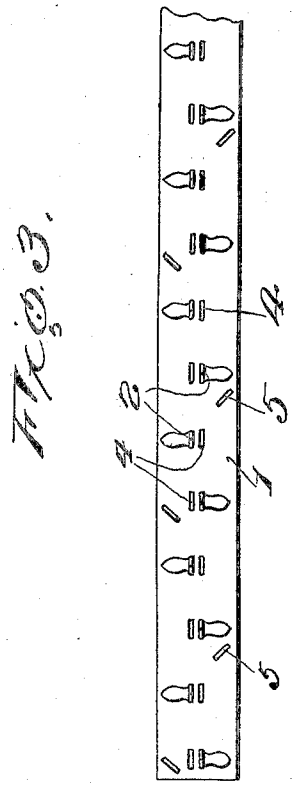


Fig. 3.

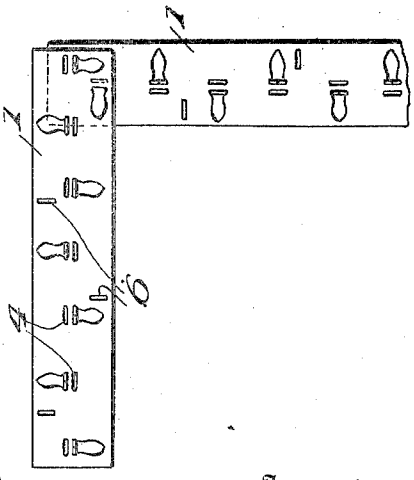


Fig. 2.

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UNITED STATES PATENT OFFICE.

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SURGICAL-BANDAGE FASTENER.

1,291,256. Specification of Letters Patent. Patented Jan. 14, 1919.

Application filed July 22, 1918. Serial No. 246,253.

To all whom it may concern:

Be it known that I, JOHN H. THOMAS, a citizen of the United States, residing at Mount Vernon, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Surgical-Bandage Fasteners, of which the following is a specification.

This invention relates to surgical bandage fasteners and is designed more particularly as an improvement upon the bandage fastener shown and described in my copending application filed January 22, 1917, Serial No. 143,763.

As in my said copending application, one object of the present invention is to provide means whereby a gauze bandage may be more conveniently, securely and expeditiously applied than by the ordinary methods. In applying bandages by the ordinary methods the exercise of considerable skill is required in reversing the bandage and in over-folding the same in carrying it about the part to be bandaged in the various directions found necessary in each particular case, and unless this operation is skilfully performed there is likelihood that the bandage will work loose or become otherwise displaced. Therefore the invention has as its object to provide an appliance in the use of which a gauze bandage may be quickly and conveniently applied and reversed, overturned and carried at different angles to suit the particular case without any particular attention being paid to the temporary holding in place of the bandage at the folds or points of reversal, and the improved bandage fastener of the present invention is designed especially to provide for the application of bandages to broken limbs or to other parts of the body where it is desirable or necessary to employ bandage fastening strips, such as are embodied in the invention, extending at right angles, acute angles, or obtuse angles with relation to each other, and in this particular the invention is an improvement over the fastener shown in the said copending application as in that instance, with the exception of a modification, it was possible only to employ two or more strips by arranging them parallel or in alinement with one another.

In the modification referred to as embraced by the copending application the strips were pivotally connected together, but the present improvement contemplates so constructing the strips that employment of pivotal connections is entirely obviated, and a long strip may be cut into any desired number of shorter lengths and all of the lengths connected together to assume various angles with respect to each other so that there is a wider range of adjustment provided for than would be possible in the use of a positive pivotal connection between such strips, as when a true pivotal connection is provided it is necessary that the strips or sections be initially connected together thus giving little choice in the selection of desired lengths of strips, unless indeed there is a waste of strips occasioned by cutting off surplus lengths at the opposite sides of the pivotal connection.

In the accompanying drawings:

Figure 1 is a perspective view illustrating one form of the bandage fastener employed in securing a bandage applied to an arm at and adjacent the elbow joint;

Fig. 2 is a plan view illustrating a modification of the invention in which the strips comprising the fastener are connected at right angles to each other;

Fig. 3 is a plan view of the form of strip shown in Fig. 1.

As in the original structure, the bandage fastener of the present invention is in the nature of a strip 1 of thin sheet metal, this strip being pliable whereby it may be readily constructed to conform to the contour of any part of the body against which it is disposed and over which a bandage is to be laid, the strip being furthermore sufficiently thin to permit of its being severed at any desired point in its length so that from a long length of the fastening device, shorter lengths may be cut and suitably joined together for disposal against the part to be bandaged. At intervals the strip is formed close to its longitudinal middle with pliable bandage piercing fingers 2 having pointed ends 3, the said ends or terminals of the fingers being hardened so as to adapt the fingers to readily pierce a gauze bandage laid over the strip in the act of bandaging the injured part. Inwardly of their hardened terminals, however, the fingers are pliable so that after they have pierced the bandage, they

may be turned down to extend over the outer fold of the bandage and thus secure the same in place. The fingers may be of any desired marginal contour, but are preferably of lanceolate form and by reference to the several figures of the drawings it will be observed that in both forms of the invention the fingers are located throughout the series alternately at opposite sides of the longitudinal middle of the strip but close to the median line as before pointed out. The strip is further formed opposite the base of each finger 2, with a slot 4 and any one of these slots in a length of the device may receive a finger of another length of the device, as in the original invention, whereby when the finger is bent down, the two lengths will be connected together but in alinement. However, the present invention contemplates, as before pointed out, the provision of means whereby the strips or lengths may be connected together to extend at right angles, at acute angles, or at obtuse angles to each other so as to properly conform to the bend in the limb to be bandaged or to the contour of any other part of the body to be bandaged.

In order to accomplish the result above mentioned, the strip in that form of the invention shown in Figs. 1 and 3 of the drawings, is provided at intervals near its longitudinal edges with slots 5 which are disposed at angles of inclination to the said edges and consequently also to the longitudinal median line of the strip, and the slots at the opposite sides of the middle of the strip are preferably alternately inclined in opposite directions; that is to say, the slots near one edge of the strip will be correspondingly inclined in one direction and the slots adjacent the other edge of the strip will be correspondingly inclined in the opposite direction. In Fig. 1 two of the strips of the form shown in Fig. 3 have been assembled with their ends overlapping, and the finger at one end of one strip has been inserted through one of the slots 5 and bent down so as to connect the two strips, the strips in this particular instance extending at an obtuse angle with relation to each other. However, had the said finger been engaged in one of the slots 5 at the opposite side or edge of the other strip, the strips would have been connected to extend at an acute angle with relation to each other.

In that form of the invention shown in Fig. 2 of the drawings, slots 6 are formed in the strip near the lateral edges thereof but these slots, unlike the slots 5, extend at right angles to the respective edges of the strips and consequently at right angles to the longitudinal median line of the strip. Consequently when the strips are assembled with their ends overlapping as shown in Fig. 2 and one of the fingers is inserted through one of the slots 6 and bent down, the strips will be connected in position extending relatively at right angles to each other. Instead of overlapping the ends of both strips, the end of one strip may be disposed to overlap an intermediate portion of the other strip and the strips then be secured together in the manner stated so as to provide a fastener of substantially T-form. Furthermore, returning to a consideration of the form shown in Figs. 1 and 3, a third strip could be connected with the strips shown in Figs. 1 and 3 the fastener would then assume a Y-form. In fact the strips illustrated in the drawings may be variously arranged as will be understood from an inspection of the said drawings and from the foregoing description so that a fastener of substantially any shape may be quickly and readily built up from a plurality of the selected lengths of the strip or strips and without the employment of any direct pivotal connection.

In the original structure, the slots corresponding to the slots 5 and 6 were all arranged to extend parallel to the lateral edges of the strip and consequently to the longitudinal median line of the strip and it will be understood from the foregoing that the improvement in the present invention lies in the arrangement of the slots so that they will be non-parallel to the said edges or longitudinal median line of the strip and this is, broadly speaking, true inasmuch as the slots may assume other angles than those shown in Figs. 2 and 3.

It is preferable that the slots 5 and 6 be furthermore equidistantly spaced and in fact spaced at predetermined intervals from each other so that knowing the length of strip desired for use, the same may be readily cut off from a longer length by noting the positions of the slots and therefore without the necessity of employing a rule for this purpose.

Having thus described the invention, what is claimed as new is:

1. A bandage fastener comprising a pliable base strip, and a bandage piercing finger projecting from the strip, the said strip being provided with a slot extending non-parallel to the longitudinal median line of the strip, whereby two of the fasteners may be joined at an angle to each other by engaging the finger of one fastener through the slot of the other fastener.

2. A bandage fastener comprising a pliable base strip, and a finger projecting from one face of the strip and designed to pierce a bandage laid over the strip, the strip being formed with a series of slots extending non-parallel to the longitudinal median line of the strip, whereby two of the fasteners may be joined at an angle to each other by engaging the finger of one

fastener in one of the slots in the other fastener.

3. In a bandage fastener, a pliable base strip, and a series of bandage piercing fingers projecting from the face of said strip, the strip being formed at intervals with slots extending non-parallel to the longitudinal median line of the said strip, whereby two of the fasteners may be joined together at an angle to each other by engaging a selected one of the fingers of one fastener in a selected one of the slots in the other fastener.

4. In a bandage fastener, a pliable base strip, and a finger projecting from one face of the strip and having its base parallel to the longitudinal median line of the strip, the said strip having a slot formed therein and extending non-parallel to the said longitudinal median line of the strip, whereby two of the fasteners may be joined at an angle to each other by engaging the finger of one fastener in the slot in the other fastener.

5. In a bandage fastener, a pliable base strip, and a series of bandage piercing fingers projecting from one face of the strip, the series of fingers extending longitudinally of the strip, and the said strip being formed adjacent each edge with a series of slots non-parallel to the said edge, the slots at one side of the strip being disposed at an angle of inclination in one direction and the slots at the other side of the strip being disposed at an angle of inclination in the opposite direction, whereby two of the strips may be joined at various angles to each other by engaging a selected one of the fingers of one of the strips in a selected one of the slots of the other strip.

In testimony whereof I affix my signature.

JOHN H. THOMAS. [L. S.]

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