

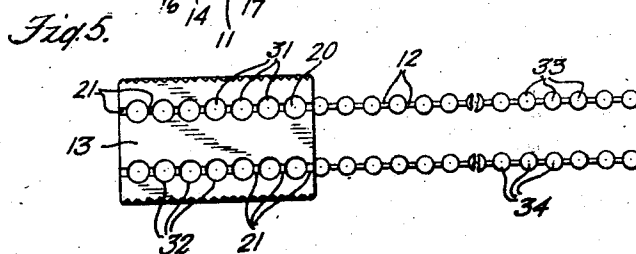
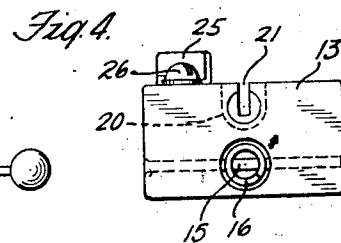
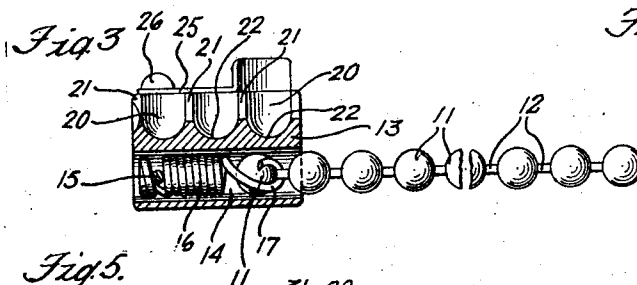
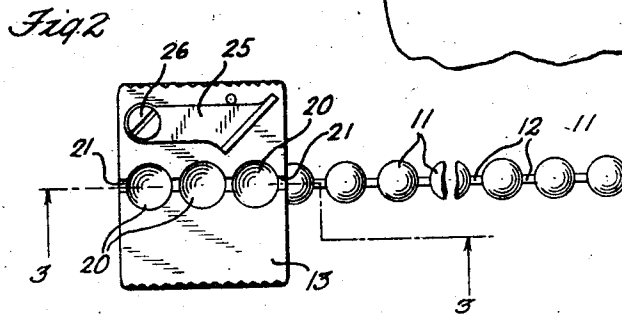
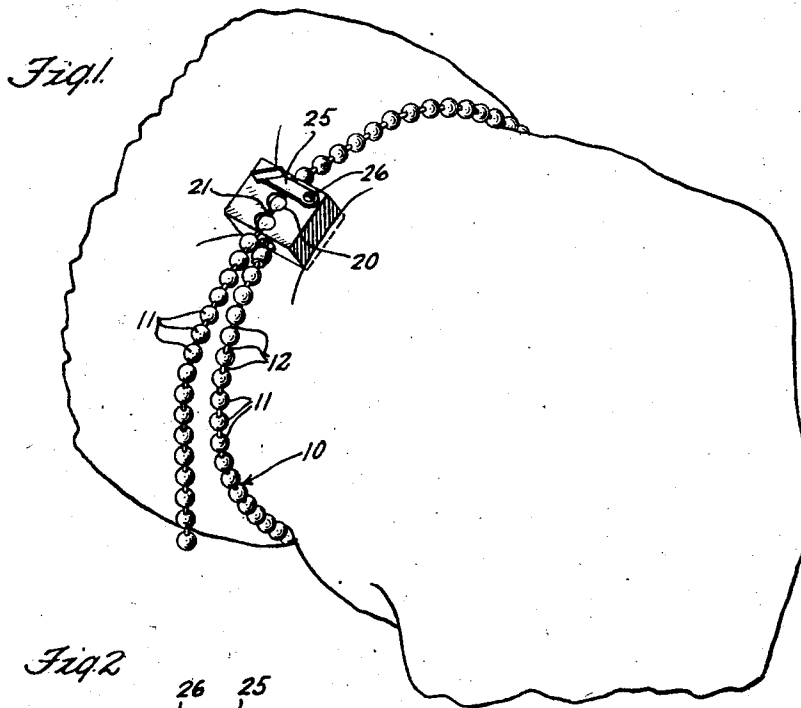
Nov. 23, 1926.

1,607,996

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SURGICAL TOURNIQUET

Filed July 2, 1925



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SURGICAL TOURNIQUET.

Application filed July 2, 1925. Serial No. 41,009.

This invention relates to new and useful improvements in surgical appliances and it pertains more particularly to devices employed for checking the flow of blood and known in the art as "tourniquets."

It is one of the primary objects of the invention to provide a new and improved tourniquet which is readily adjustable, thus adapting it to use in connection with the various portions of the body whether large or small.

It is a further object of the invention to provide a tourniquet which will be retained against accidental displacement when in actual use.

It is a still further object of the invention to provide a new and improved form of tourniquet in which a compression loop of a yielding nature is obtained.

With the above and other objects in view, reference is had to the accompanying drawings, in which—

Figure 1 is a perspective view showing the manner of use of a tourniquet constructed in accordance with the present invention;

Figure 2 is a plan view of the tourniquet with the compression member shown broken away;

Figure 3 is a sectional view taken on the line 3—3 of Figure 2;

Figure 4 is an end view of the connecting member or block of the tourniquet, and

Figure 5 is a plan view of a modified form of the invention.

A tourniquet constructed in accordance with the present invention includes a compression member, and a connecting member by means of which the compression member may be formed into a pressure exerting loop, and retained against accidental displacement in this form.

The compression member comprises an elastic structure, preferably in the form of a chain 10 of the type comprising a plurality of beads 11 pivotally connected together in spaced relation by links or the like 12.

The connecting member consists of a block 13 and this block 13 is formed with a passage 14 extending preferably entirely therethrough, which passage 14 is preferably located near the bottom wall of said block 13. Extending transversely of the passage 14 there is a pin 15. This pin is adapted to occupy a position between two

of the convolutions of a coil spring 16 and serve as the means for retaining said coil spring within the passage 14. The free end 17 of this coil spring 16 is passed around one of the beads 11 of the compression member 10 to form a connection between the compression member and the coil spring 16. By thus connecting the compression member to the coil spring it will be apparent that the connection between the compression member and the connecting members is a yielding one under the influence of the coil spring 16.

One of the faces of the block, preferably that face opposed with respect to the passage 14 is provided with a plurality of spaced recesses 20, and the side walls of these recesses 20 are cut out as at 21 at diametrically opposite points, the cut out portions, however, being in alignment with each other. The bottom wall 22 of these recesses 20 is of such shape that it conforms to the contour of the beads 11 of the compression member in order that said beads may snugly seat therein with their connecting links occupying positions in their respective cut out portions 21.

A swinging latch or locking lever 25 is pivotally mounted as at 26 on the connecting member 13 and this swinging latch or locking lever is adapted to move to a position where it overlies one of the recesses 20 and serves to prevent accidental displacement of the bead from the recess which it overlies. This pivoted latch or locking lever 25 is not however essential to the successful operation of the tourniquet and in general is only employed when it is desired to leave the tourniquet in position for an indefinite period.

In that form of the invention illustrated in Figure 5, a block 30 is provided with two series of connected recesses 31 and 32, and connected to said block in a manner similar to the connection of the compression member 10 in the first mentioned form of the invention there are two compression members 33 and 34. In this form of the invention, the operation of the device is the same as in the first described form, that is when the required pressure is had, the beads necessary to maintain said pressure are inserted in the recesses 20 in the block 13. When the device is applied as shown in Figure 1, it provides a yielding pressure at all times, which yielding pressure is the result of attachment of

one end of the compression member to the connecting member by means of the spring 16.

What is claimed as new is:—

1. In a surgical tourniquet, a block having a plurality of spaced connected recesses and a bead chain secured at one end to said block, the spaced connected recesses being adapted to receive a section of the free portion of the bead chain to provide a loop.

2. A surgical tourniquet comprising a block, one face of which is provided with a plurality of spaced connected recesses, and a compression member connected to said block, said compression member comprising a chain formed of beads connected together in spaced relation, a plurality of adjacent beads of said chain compression member being receivable simultaneously in the spaced recesses of the block and arranged to be retained therein to form a compressing loop.

3. A surgical tourniquet comprising a block, one face of which is provided with a plurality of spaced connected recesses, a compression member connected to said block, said compression member comprising a chain formed of beads connected together in spaced relation, the beads of said chain compression member being receivable in the spaced recesses of the block to form a compression loop, and means for retaining the beads of said compression chain in the recesses in the block.

4. A surgical tourniquet including a compression member in the form of a chain comprising a plurality of beads pivotally connected together in spaced relation, and means for retaining said chain in the form of a pressure exerting loop, said means comprising a block having a plurality of spaced connected recesses for the reception of a plurality of the beads of said compression member, and a resilient member connected to said block and to said compression member.

5. In a tourniquet construction, a flexible member made up of a series of spaced beads, a connecting device attached to one end of

said member, said device having means arranged to receive and hold a portion of said flexible member between the ends thereof by engagement with one of said beads, and maintain the tension placed upon the flexible member in attaching said portion to the connecting device.

6. In a surgical tourniquet, a block, a fixed abutment thereon, a flexible member for applying pressure to the body of a patient and having a series of spaced abutments for engagement respectively with the abutment on the block to hold the flexible member from longitudinal movement with relation to the block, said flexible member being arranged to be applied to the block in position to be held by said fixed abutment by laying said flexible member over the block.

7. A surgical tourniquet comprising a connecting member adapted for engagement with the body of a patient to which the tourniquet is to be applied, said connecting member in its operative position presenting an open channel or groove having a plurality of strain resisting abutments and a flexible compression member for exerting pressure upon the body of the patient, said compression member being adapted to lie in said open channel or groove and having inter-engagement with the strain resisting abutments of the connecting member.

8. A surgical tourniquet comprising a connecting member formed with an open slot presenting a fixed abutment, and a compression member made up of a plurality of spaced beads, said compression member being carried by said connecting member, and having a free portion adapted for reception in the open slot of the connecting member by laying the compression member over the connecting member into the open slot thereof with one of said beads engaged behind the abutment of the connecting member.

Signed at Brooklyn, N. Y., this 29 day of June, 1925.

HERBERT J. W. MORGENTHAUER.