R. MAEDA.

SURGICAL TOURNIQUET.

APPLICATION FILED OCT. 5, 1918.

1,338,578. Patented Apr. 27, 1920.

Fig. 1.

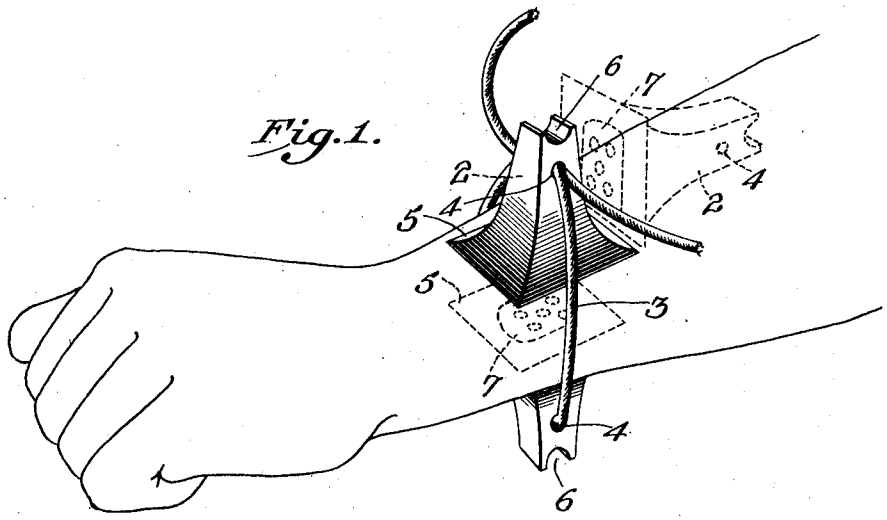


Fig. 2.

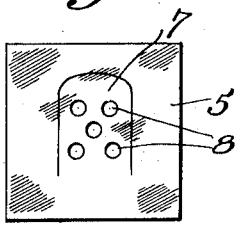


Fig. 3.

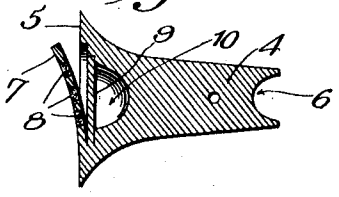
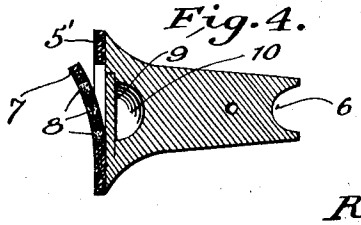


Fig. 4.



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SURGICAL TOURNIQUET.

1,338,578. Specification of Letters Patent. Patented Apr. 27, 1920.

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To all whom it may concern:

Be it known that I, RINSAI MAEDA, a subject of the Emperor of Japan, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Surgical Tourniquets; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to surgical bandages and more particularly to tourniquets.

It is one of the objects of the present invention to provide a simple, practical, inexpensive and readily applied and removable surgical bandage or tourniquet. It is one of the objects of the invention to provide a tourniquet which may be applied and securely held in place without requiring the knotting or twisting of the securing band or element which holds the compression members of the device in place.

It is another object of the present invention to provide means for securely holding the tying or fastening member and yet which will enable the ready removal of the device when necessary and which will also permit the reduction of the pressure of the device upon the injured part if so desired.

Another object of the present invention is to provide in a surgical bandage a compression member having a vacuum cup and again to provide a compression member having means for retaining medical or other substance in juxtaposition to the injured part or portion to which the device may be applied.

With these and other objects in view as will be rendered manifest to those skilled in the art the invention consists of the construction, combination, details and arrangement of parts as will be more fully described hereinafter relative to the embodiment of the invention illustrated in the accompanying drawings, wherein,

Figure 1 is a perspective view of the device shown as applied.

Fig. 2 is a bottom plan view of one of the compression members, and,

Fig. 3 is a longitudinal central sectional view through one of the compression members.

Fig. 4 shows the device having a fabric facing.

This surgical band comprises one or more compression members 2 and a suitable securing or fastening device in the nature of a piece of flexible material of suitable character 3, capable of being looped around the arm or other portion to which it is desirable to apply the tourniquet, the ends of the loop or fastening bands being passed through a hole 4 in one of the compression members 2. That portion of the compression members 2 in which the hole 4 is provided is of elastic and contractile material, the hole 4 being of such dimension transversely as to frictionally bind upon and hold the ends of the fastening member 3 securely in place after the tourniquet has been applied to the injured member. In this way the band can be drawn tightly about the injured arm or portion to be compressed and when the ends of the band are drawn through one of the compression members 2 the band is prevented from slipping by the friction of the walls of the aperture 4 so that the device is held in place without the requirement of knotting or twisting the fastening band.

While the compression member 2 may be made of relatively hard rubber it may be made of other suitable elastic or resilient material and is here shown as provided with a base portion 5 applicable to the injured member and has an upwardly convergent or tapering body portion adjacent the upper end of which the aperture 4 for receiving the fastening band 3 is provided. The upper end of the body portion is shown as recessed as at 6 to provide a seat over which the loose ends of the fastening band 3 may be passed and tied into a bow or other knot simply for the purpose of securing the ends in a neat manner although it is understood that if desired the band may be drawn very tightly and a knot may be formed if desired to prevent the slipping of the ends of the band.

The arrangement of the aperture 4 which receives the tying cord or band 3 allows the compression member 2 to be tipped upon one of its edges upon the base so as to reduce pressure when the tourniquet is in place if it should be so desired and the tilting of the compression member also reduces the pressure and therefore slackens the band 3 so that the latter can be easily removed from the aperture 4 of the compression member if desired.

As clearly shown in Fig. 3 the base portion of the compression member is provided with a part 7 having a series of apertures or recesses 8 designed to receive and contain suitable medical or other substance such as an antiseptic which may be held in juxtaposition to the injured part. This member 7 may be lifted up as shown to uncover a valve or closing portion 9 which overlies a cup 10 formed in the base portion of the compression member 2 for the purpose of relieving pressure on the flesh at that point.

It is desirable that the face of the block be provided with a facing which will not have any untoward effect on the skin and this is shown in Fig. 4 as consisting of a fabric sheet 5′ with apertures 8 to hold a medicament.

I claim:

1. A surgical bandage comprising a compression member made of elastic material, and of pyramidal form, and means for securing the member *in situ* with its base applied, the member being of elastic material so that the base edges are pliant to permit it to be readily tilted without untying the securing means.

2. A surgical bandage comprising a pyramidal block of elastic material the base being countersunk, and a pliant flap or tongue connected at one end to the base and designed to occupy the recess and to contain a medicament.

3. A surgical bandage comprising a pyramidal block of elastic material the base being countersunk, and a pliant flap or tongue connected at one end to the base and designed to occupy the recess and to contain a medicament, the flap being perforated.

4. A surgical bandage comprising a pyramidal block of elastic material the base being countersunk, and a pliant flap or tongue connected at one end to the base and designed to occupy the recess and to contain a medicament, the flap being perforated and consisting of a fabric strip attached to the base.

5. A surgical bandage comprising a compression member of elastic material, one face of the member being applicable to the surface to be compressed, the body of the member being perforated to receive the ends of a fastening band and which are adapted to be firmly held by the friction of the contracting wall of the aperture when the bandage is applied, the aperture located a distance above the base approximately equal to the width of the base to facilitate tilting of the member while applied.

In testimony whereof I affix my signature.

RINSAI MAEDA.