

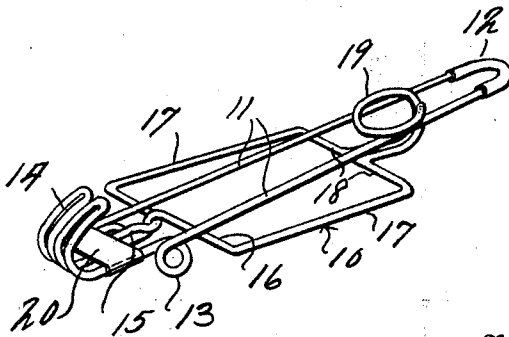
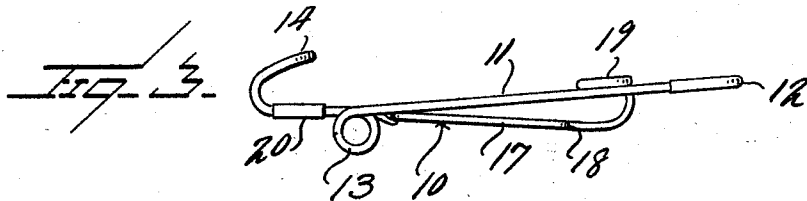
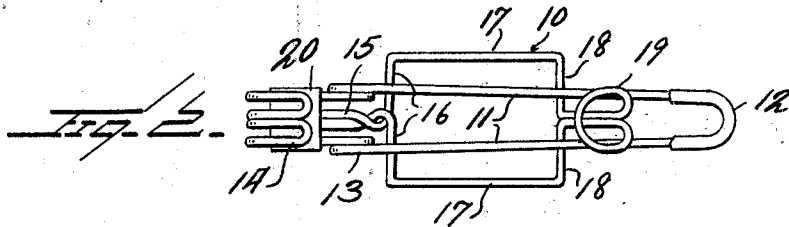
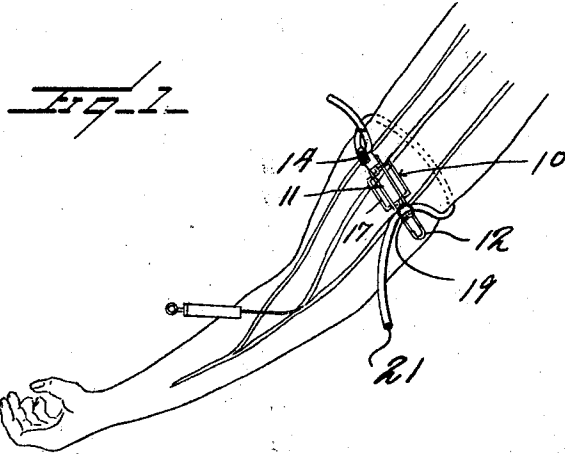
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T. YANAGI

TOURNIQUET

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UNITED STATES PATENT OFFICE.

TOKUJIRO YANAGI, OF HONOLULU, TERRITORY OF HAWAII.

TOURNIQUET.

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To all whom it may concern:

Be it known that I, TOKUJIRO YANAGI, a subject of Japan, residing at Honolulu, Territory of Hawaii, have invented certain new and useful Improvements in Tourniquets, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to tourniquets, and particularly to those tourniquets wherein there is a band of material adapted to extend partially around the arm and to be engaged at its ends by a clamping device.

One of the objects of the invention is to provide a very simple, easily applied and extremely effective tourniquet which is particularly adapted for use when administering injections through a vein and in order to stop the flow of blood.

A further object is to provide a device of this character which consists of a special form of clamp adapted to engage one end portion of a small rubber hose which is passed around the arm and engaged by means of a clamp with another small portion of rubber hose or tube, the clamping arrangement being of such construction that the rubber hose or pipe may be pulled up tight around the arm to thereby constrict the same.

My invention is illustrated in the accompanying drawing, wherein:—

Figure 1 is a perspective view of my tourniquet in applied position;

Figure 2 is a top plan view of the clamp of the tourniquet;

Figure 3 is a side elevation thereof;

Figure 4 is a perspective view thereof;

Referring to this drawing, it will be seen that the clamp 10 is formed of a single length of wire bent to form the two parallel legs 11, which at their free ends are connected by a clip 12. The legs at the opposite end from the clip 12 are bent to form two resilient coils 13 extending at right angles to the plane of the legs 11. From these coils the wire forming each leg is extended upward and inward and then extended reversely so as to form the hook 14, and the two inner wires of the hooks 14 are then carried rearward and twisted, as at 15, and then laterally extended beneath the legs 11, as at 16, then longitudinally extended, as at 17, then again inwardly bent, as at 18, then extended forward and bent to form the heart-shaped loop or jaw 19.

The coils 13 act to force the rectangular member formed by the bends 16, 17 and 18 downward, thus forcing the jaw 19 toward the legs. This jaw 19 constitutes a clamping jaw through which the rubber tube is passed.

Preferably a metallic binding clip 20 is disposed to embrace the bases of the hooks 14 so as to hold the two legs which form these hooks closely together and prevent any lateral movement of these hooks. The rectangular portion formed by the bends 16, 17 and 18 constitute a base which is adapted to lie against the skin and bear flat against the part to which the tourniquet is to be applied.

In the use of this device, the tube 21, which is a medium sized rubber tube, is passed around the hooks 14, then around the arm, and the extremity is passed between the clamping jaw 19 in the manner shown in Figure 1, and then the rubber tube is tightened up upon the arm or other limb, as shown, so that the flat base formed by the bends 16, 17 and 18 will rest flat against the arm as, for instance, against the inner surface of the arm. The rubber tube is pulled up and tightened until this base is forced tightly against the arm and the arm is constricted at this point. A syringe may be then used for the purpose of injecting the proper medicament into a vein and without any danger of a flow of blood.

It will be understood that two or three windings of the rubber tube over an artery would stop the flow of blood in the artery. The rubber tube is particularly effective, though other elastic material might be used, for the reason that the rubber tube is easily obtainable and other materials than the rubber tube are difficult to apply. This is particularly true where the tourniquet is used for the purpose of stopping the flow of blood in a vein. In the case of stopping the flow of blood in an artery, although elastic material is preferable, any other material might be used.

The device is simple, easily applied, and extremely effective and can be manufactured at a low cost. It can be applied easily by one person, whereas other tourniquets now on the market are difficult to apply by one person and perform the necessary injection. In other words, the tourniquet must be applied by one person while another person injects the medicament into the limb.

While in Figure 1, I have illustrated the tube as being adapted to form a loop extending around the hooks 14 and the end being tied to the body of the rubber tube, the longer portion of the tube may simply overlap the shorter end of the tube and a like result be secured.

I claim:—

1. A tourniquet of the character described comprising a member having a relatively wide portion adapted to rest flat against the limb and carrying at one end a hook and at the other end coacting fixed and resilient jaws disposed in a plane parallel to the plane of the relatively wide member, and a tube of flexible material formed to be engaged by the hook at one end and at its other end engaged by said jaws.

2. A tourniquet of the character described formed to provide a longitudinally extending shank having a hook at one end, a base connected to the shank by resilient coils acting to resiliently force the base away from the shank, the extremity of the base distant from said coils being formed with a clamping jaw, and a tube of elastic material adapted to be engaged at one end by the hook and at its opposite end engaged between said shank and the clamping jaw.

3. A tourniquet of the character described comprising a longitudinally extending shank

and a base, resilient coils carried by the shank and base and urging the base away from the shank, the shank being formed at one end with an upwardly extending hook and the base at the end opposite the hook being formed with a clamping jaw extending upward through the shank, and a tube of elastic material engaged at distant portions with the hook and between the clamping jaw and the shank.

4. A tourniquet of the character described comprising a shank and formed of wire, the wire being formed to provide two longitudinally extending parallel legs together constituting a shank, the legs being connected at one end and at the other end formed with coils, then extended upward to form hooks, then extended longitudinally and twisted and then bent to form a rectangular base wider than the shank and below the same, the wire at the extremity of said base being upwardly and inwardly turned between the legs of the shank to constitute a clamping jaw, and a length of flexible material engaged at one end with said hook and at the other end engaged between the clamping jaw and the shank.

In testimony whereof I hereunto affix my signature.

TOKUJIRO YANAGI.