

Sept. 2, 1958

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2,850,342

AMPUTATION SURGERY LIMB SUPPORT

Filed Oct. 2, 1956

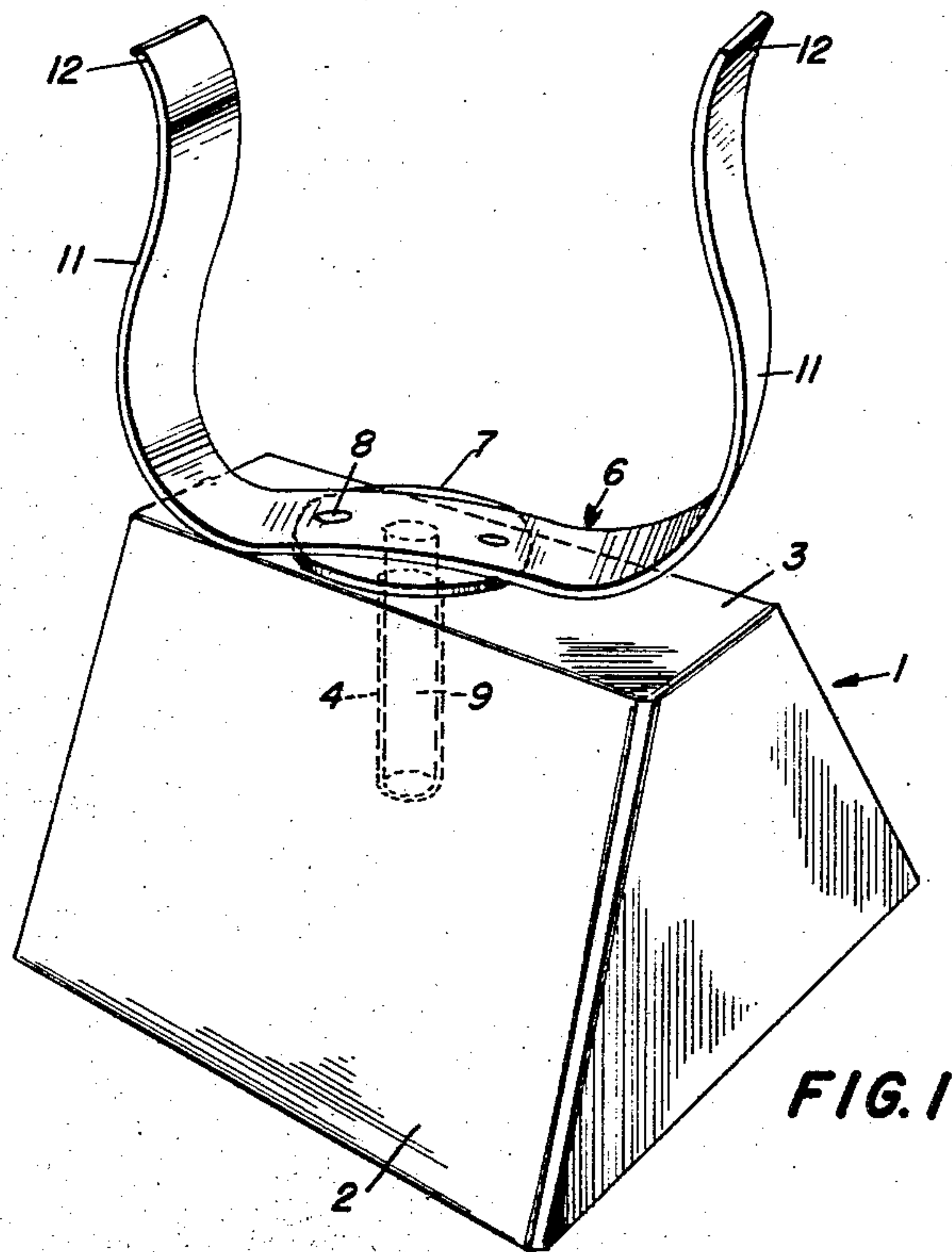


FIG. 1

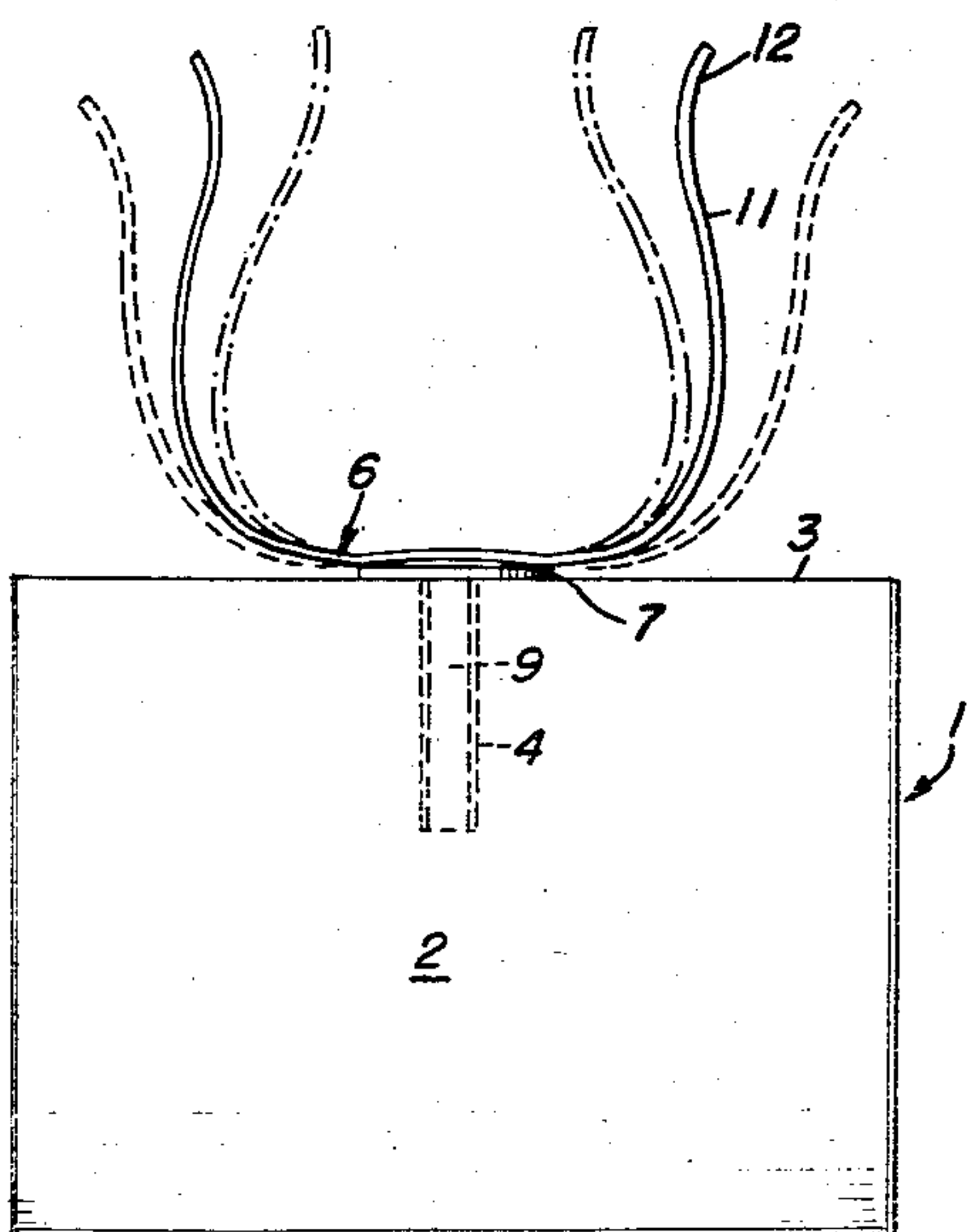


FIG. 2

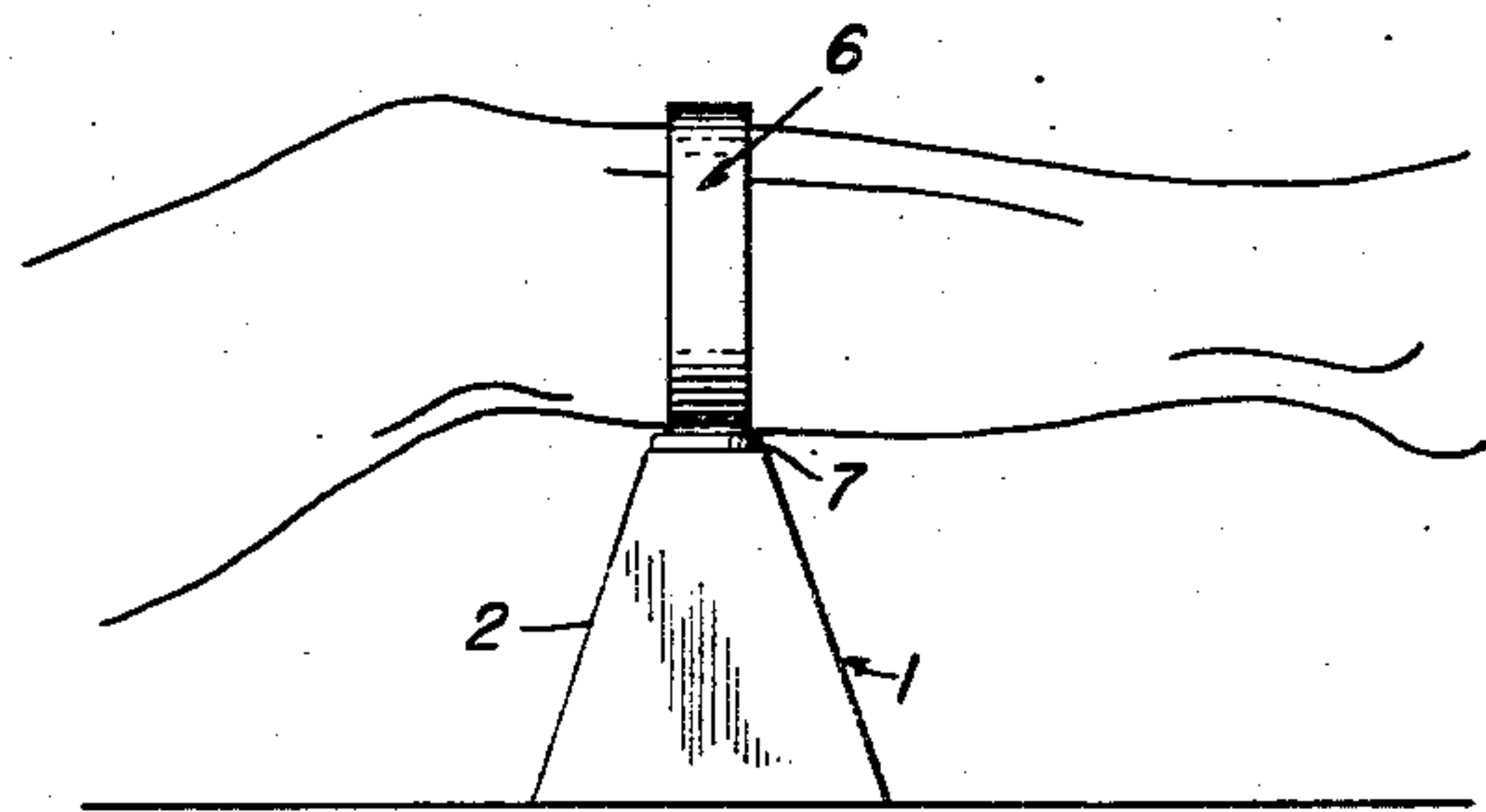


FIG. 3

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AMPUTATION SURGERY LIMB SUPPORT

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Application October 2, 1956, Serial No. 613,495

1 Claim. (Cl. 311—10)

The present invention relates to surgical appliances and more particularly to a portable support adapted to expedite instrumental amputation operations.

Amputational surgery entails considerable limb manipulation and at the same time requires controlled immobilization as desired. The usual post and extension rod arrangement for adjustable placement of limb clamp supports over an operating table presents an obstacle hampering the surgeon's movements and additionally necessitates interruptions for alternation of the limb position enabling access to opposing portions thereof. It is obvious that complicated mechanical contrivances interposed within the operating field do not readily lend themselves to aseptic surgery and the likelihood of accidental introduction of pathogenic microorganisms is considerably enhanced.

The present invention contemplates and has as its principal object the provision of a portable limb support adapted for placement directly upon the operating table adjacent the point of operation and so designed as to enable maintenance of a patient's limb in the correct position for removal thereof.

A further object of my invention is to provide a portable limb support which is immediately adjustable as desired during amputation surgery without its removal from the sterile operating field.

Another object of my invention is to provide a portable limb support including a retention element selectively deformable for clamping placement about said limb for substantially infinite range of applicability without sacrifice of mobility.

A still further object of my invention is to provide a portable limb support serving as an adjunct to amputational surgery including ultimate stump suturing.

Other objects and advantages of the present invention will be readily apparent from the following detailed description of a preferred embodiment thereof when taken in conjunction with the accompanying drawing, wherein:

Figure 1 is a perspective view of an amputational appliance constructed in accordance with the principles of the invention;

Figure 2 is a front elevational view thereof; and

Figure 3 is a side elevational view showing the device in proposed operational position.

Briefly stated, the present invention contemplates a portable pedestal support of a size adapted for placement directly upon the operating table immediately adjacent the point of operation and having mounted thereon a limb engaging element designed to maintain the limb undergoing amputation at a selected angle best adapted for the particular operation.

Referring to the drawing, the amputational appliance 1 comprises a base or supporting element 2 composed of an impervious, sterilizable solid material in the form of a truncated pyramid to insure maximum stability. Although the dimensions of this base may be varied as desired and/or as may be required for particular circumstances, it has been ascertained that a base 8" tall and

12" long with a depth diminishing from 6" at the bottom of the pyramid to 1½" at the top will be best suited for general applications.

The base 2 may be made of cast metal such as aluminum or may be formed of wood laminae which have been surface sealed by suitable impregnation prior to assembly. A wooden core may be covered with a copper, aluminum or stainless steel sheathing.

The planar top surface 3 of the base 2 is provided with a socket 4 disposed centrally thereof in which is mounted, for rotation with respect to said base, a limb engaging element 6 substantially of U-shape. The element 6 is secured at its base to a plate or disc 7 by suitable means as for example rivets 8 arranged in spaced alignment, said disc 7 being attached to one end of a cylindrical pin 9 seated and movable within the socket 4. The element 6 has arcuate arms 11 disposed in spaced parallel relation and including a double curvature with diverging outer terminals 12.

The base socket 4, the plate 7 and pin 9 are preferably formed of stainless steel while the element 6 is composed of a soft, pliable metal, such as copper or a tin alloy, deformable as shown in dotted lines in Figure 2 for clamping placement about the limb undergoing amputation. Although the flexible arms 11 will be adapted to handle limbs of considerable size variation, it is preferred to provide a series of elements 6 of progressively increasing dimensions as for example 4½", 7" and 11" in diameter with depths of 4", 6" and 8" respectively in order that proper placement and immobilization of limbs of different sizes will be possible without excessive strain upon the clamping arms per se.

As shown in Figure 3, the support 1 after complete sterilization will be disposed as desired upon the operating table and the element 6 placed in proper position to elevate the limb to the desired angle for amputation surgery. The device will remain in the sterile field throughout the operation. The element 6 may be rotated to permit facile limb manipulation by the surgeon to suit his convenience while longitudinal movement of the support along the operating table will effect a corresponding elevation or depression of the limb. After the specimen has been removed, my appliance will continue to hold, immobilize and position the stump at the desired height and angle for suturing and ultimate bandaging.

It will at once be obvious that various modifications in the nature of the component elements of my appliance and their arrangement in assembly are possible without departing from the spirit of the invention or the scope of the appended claim.

What I claim is:

An operating table adjunct for amputation surgery comprising a portable support adapted for placement upon the operating table surface, said support being transversely and longitudinally adjustable within the sterile field during surgery, and said support being composed of an impervious, smooth surfaced, readily sterilizable solid material in the form of a truncated pyramid provided with a socket in its planar top surface, and a limb engaging element of strip metal bent back upon itself to substantially U-shape and secured at its central position to the end of a cylindrical pin fitting within said socket to admit of rotation of said limb engaging element with respect to said support, the limb engaging element having resilient arcuate arms which are selectively deformable for clamping placement about said limb to effect immobilization thereof, said support being self-acting to retain itself upon the operating table by means of its combined weight and that of the patient's limb bearing on said operating table surface and said limb engaging element being self-acting to remain fixed in any position of circular adjustment by means of its com-

bined weight and that of the patient's limb bearing on said truncated pyramoid.

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