

E. D. BRANT.
SURGICAL DEVICE.
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1,144,103.

Patented June 22, 1915.

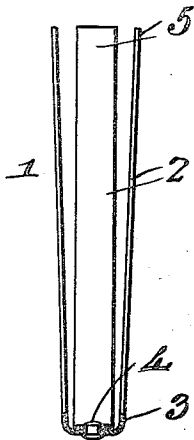
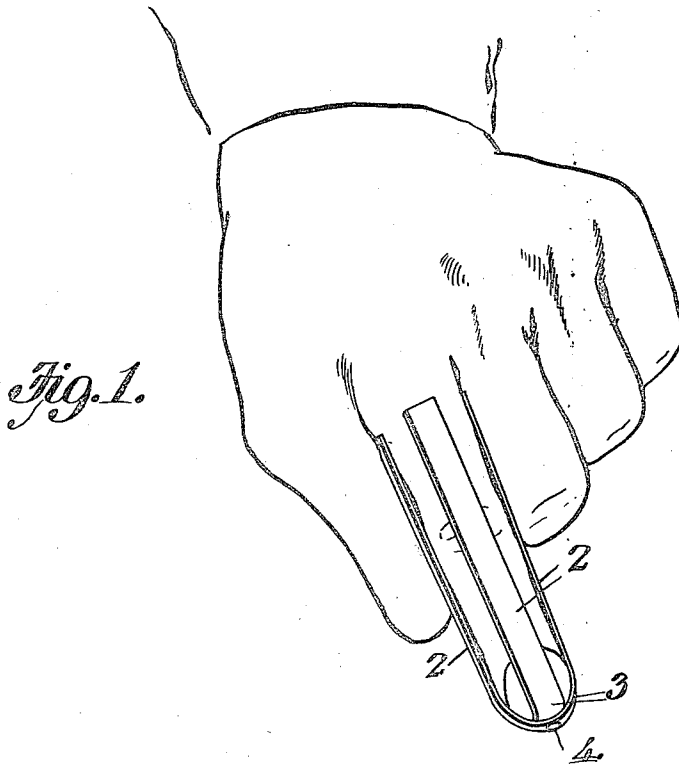


Fig. 2.

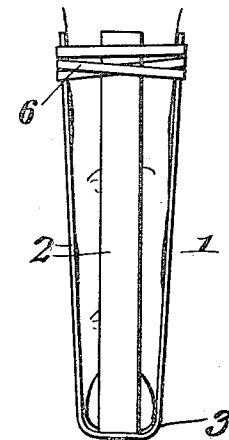


Fig. 3.

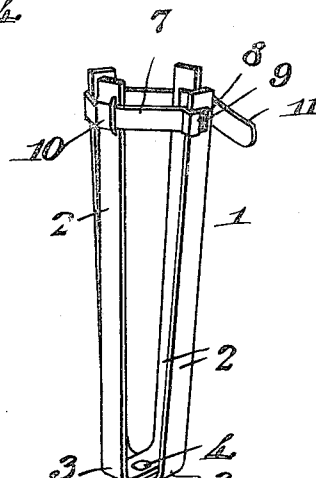


Fig. 4.

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SURGICAL DEVICE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDMUND D. BRANT, a citizen of the United States, residing at Canton, county of Stark, and State of Ohio, have invented certain new and useful Improvements in Surgical Devices, of which the following is a specification.

This invention relates to finger splints or cots, and has for its primary object to provide means whereby a bruised, sprained, or broken finger or toe may be firmly incased to prevent movement of the member after being treated, in a simple, yet thoroughly efficient manner.

A further object of my invention is to provide a cot of such construction that after being adjusted to the injured member, no additional means need be employed to retain the same in correct position, but which from its own unique construction, and inherent qualities, will remain securely in place to prevent movement of the member within the cot and to protect the same against injury from outside sources.

A further object of my invention is to provide a finger cot of such construction that when adjusted to the injured member, air may freely circulate and be admitted to the same, and which will also permit of the escape of any moisture from the finger.

A still further object of my invention is to provide means of the combined nature of surgical splint and finger cot, and when used in the capacity of the former upon a broken member, the splint portions of the device remain relatively spaced even though subjected to twist or strain, thereby affording easy, quick and efficient adjustment of splint members which, by the novel construction, are prevented from working or becoming moved from the correct position.

My invention has still further for an object to provide a finger cot of such construction that the same may be readily applied to different sized and shaped fingers, thereby eliminating the practice of providing cots of different sizes or shapes.

With these objects in view, together with others which will appear as the description proceeds, my invention consists in the arrangement of a plurality of semi-flexible or pliable strips or members in such manner as to form a cot or socket into which the injured member is adapted to be positioned, the resiliency or slight elasticity of the material forming the said strips being adapted

to coöperate with the finger to hold the cot securely thereon.

My invention further consists in the arrangement of a plurality of pliable or semi-flexible strips secured together at, or adjacent their medial portions, and the extremities of each strip bent near said connection to form substantially a finger shaped frame, within which the finger is adapted to be held securely against muscular movement of the member or outside injury by means of the strip portions.

My invention still further consists in the novel arrangement and combinations of parts all as will be more fully described in the following specification, illustrated in the accompanying drawings, and more particularly pointed out in the claims hereunto appended.

In the drawings: Figure 1 is a perspective view of a finger cot constructed in accordance with my invention, the same being illustrated in position upon a finger, Fig. 2 is a view partly in section of the device illustrated in Fig. 1, Fig. 3 is an elevation of the device, the same being illustrated applied to a finger, and additional means being employed to retain the same thereon, and Fig. 4 is a perspective view of a finger cot constructed in accordance with my invention, showing a slightly modified form of the device.

Referring now more particularly to the drawings, 1 represents generally the finger cot, the same being constructed of a plurality of pliable or semi-flexible strips 2 of metal, secured together at their medial portions 3 by a rivet or other securing element 4.

The improved finger cot may be constructed of any desired number of strips, however, in the present instance, but two separate strips are employed in carrying out the invention, and these strips are preferably secured together with their extremities at right angles to each other. After the strips have been secured by the rivet or other means 4, the body portions thereof adjacent the connecting member are bent toward each other to form a substantially finger shaped framework. The metal employed in constructing the strips is sufficiently pliable to adapt itself to be readily conformed to the shape of the finger, and at the same time possesses sufficient resiliency to exert a slight binding or clamping action on the member.

The term "pliable," as used throughout this specification relative to the metal of which the cot or splint is constructed, is to be defined as possessing that inherent quality which lends itself readily to bending or twisting to assume various angles or shapes, and to retain the shapes or to remain in the positions to which they are bent or twisted without tendency to assume original or any other shape or position. By constructing the strips 2 of metal of this character it is obvious that the device may be quickly and readily bent to exert the desired pressure at the necessary points to prevent any muscular motions of the incased finger from bending the same out of shape to allow the member to become deranged or disjointed. To securely hold the cot upon the injured member, the ends 5, or any other portions of the strips may be bent slightly inwardly before adjusting the cot to the finger, so that when correctly positioned thereon the inwardly bent portions will frictionally engage and exert the desired pressure upon the proper portion or portions of the finger, to prevent the same from becoming loosened or deranged.

Should it be found that the resiliency of the material is insufficient to hold the cot securely in the desired position, a tape, cord, or band 6 may be wound about the upper, or lower portion of the cot as desired to more securely hold the same in engagement. In Fig. 3 of the drawings is illustrated this manner of employing additional securing elements for retaining the cot upon the finger, the ordinary rubber band 6 being found most efficient for the purpose.

In Fig. 4 of the drawings is illustrated a slightly modified form of the device in which is illustrated an improved means upon the extremities of the flexible strip 2 for securing the device more firmly upon the finger. This method consists of securing a strip 7 of semi-flexible material, preferably similar to the material employed in the construction of the strip 2, at one end 8 through an opening 9 in one of the members, and extending from one to the other of the remaining strips to be inserted through slots 10 in the upper ends thereof. The free end 11 of this securing strip is adapted to be inserted through the opening 9, and after being tightened to a sufficient degree, may be bent upon itself to securely hold the device in position.

It is obvious that a device constructed in accordance with this invention will be most efficient in practice, and the easy adjustment

of the same to the injured member, together with the simplicity, as well as cheapness of construction, renders the same a most desirable surgical appliance. It may be found necessary in healing a broken bone in the finger to bind the same with the ordinary cotton tape used by physicians, and in such case the use of a device of the character set forth will prove invaluable, as the tape may be removed at any time to enable the member to be bathed without danger of the finger becoming rebroken, as the flexibility of the strips 2 will securely hold the finger in the position originally set. While in the drawings, and in the foregoing description, I have associated the device in connection with fingers, it is to be understood that by minor changes in the construction and proportion of the semi-flexible strips 2, the same may, with equal facility, be applied to the toes.

I claim:

1. A finger cot or splint consisting of a pair of thin pliable strips secured together at their centers to extend at right angles to each other, said strips being bent at a point adjacent the center inwardly toward each other to form an elongated frame work, the free ends of said strips being provided with slots, and a flexible member adapted to be arranged in said slots to encircle said injured member, substantially as described.

2. A finger splint consisting of a pair of resilient pliable strips secured together intermediate their ends and extending at right angles to each other, and said strips being bent inwardly toward and in approximately parallel relation to each other to form a frame work for engagement over a finger and to conform to the shape thereof, substantially as described.

3. A finger splint consisting of a pair of resilient pliable strips secured together intermediate their ends and extending at right angles to each other, said strips being bent inwardly toward and in approximately parallel relation to each other to form a frame work for engagement over a finger and to conform to the shape thereof, and means for securing the free ends of said strips in engagement with the finger, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDMUND DEMPSTER BRANT.

Witnesses:

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W. B. MOORE.