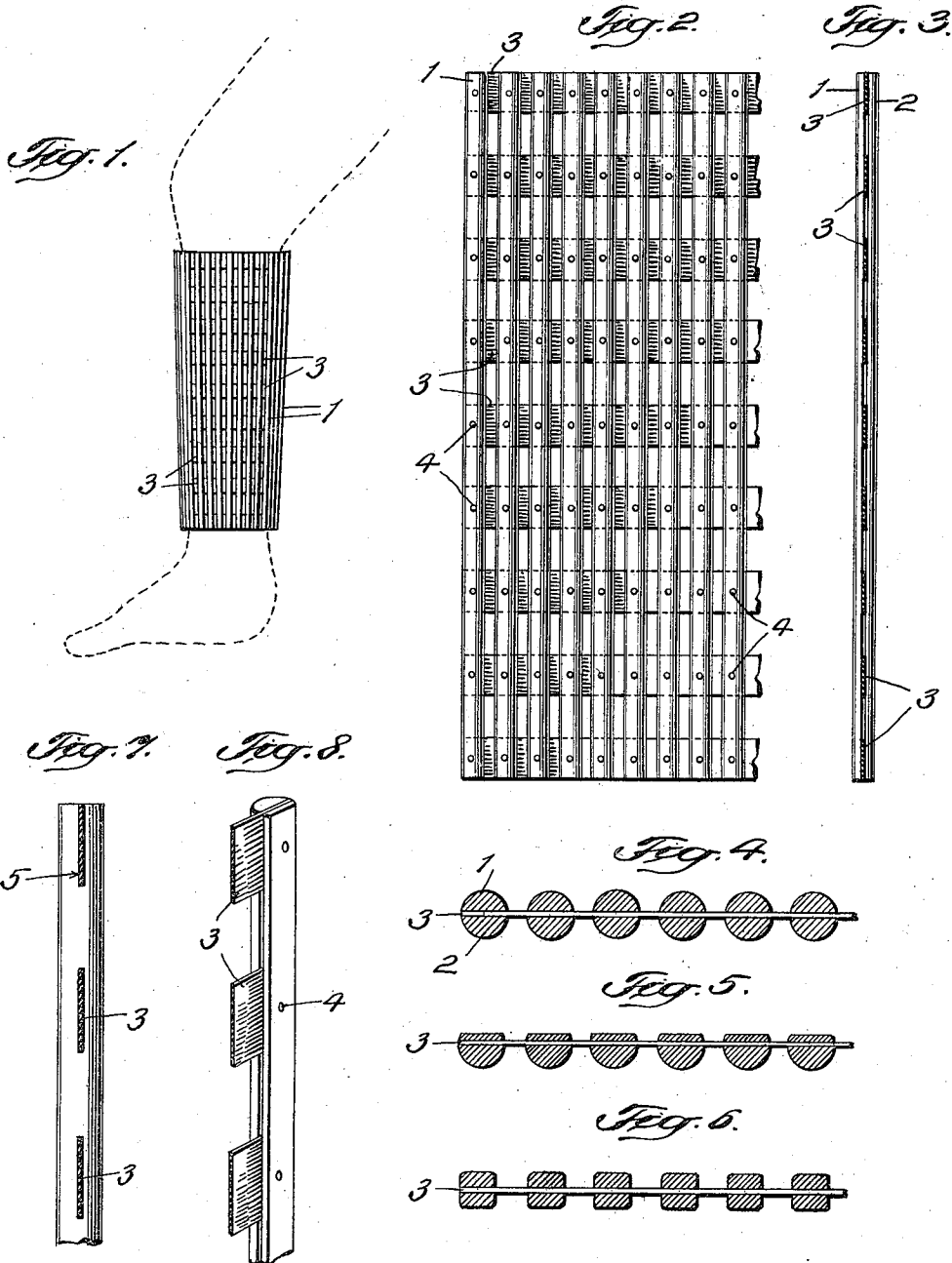


I. R. SMITH.  
FLEXIBLE SPLINT  
APPLICATION FILED MAR. 24, 1916.

1,243,230.

Patented Oct. 16, 1917.



WITNESSES:  
*Julius H. Smith*

INVENTOR  
ISSACHER REUBEN SMITH

BY *Wm. E. Cole*  
ATTORNEY

# UNITED STATES PATENT OFFICE.

ISSACHER R. SMITH, OF TORONTO, CANADA.

## FLEXIBLE SPLINT.

1,243,230.

Specification of Letters Patent.

Patented Oct. 16, 1917.

Application filed March 24, 1916. Serial No. 86,420.

*To all whom it may concern:*

Be it known that I, ISSACHER REUBEN SMITH, a subject of the King of England, and a resident of Toronto, Ontario, Canada, have invented certain new and useful Improvements in Flexible Splints, of which the following is a specification.

The object of the present invention is to provide a splint which is so devised that it will firmly fix fractures of long bones or conditions of joints which are required to be maintained in a set position for rest, but which has the splint rods connected by means of an elastic medium, such as straps of rubber, permitting the splint as a whole to conform snugly to the various contours of the limb or joint to be treated, and whereby the elastic medium upon application of the splint to the fractured limb will exert a certain extent of pressure upon the part to be treated.

The splint of my invention has the further advantage that it is simple in construction, may be readily carried about, may be removed without causing undue disturbance to the parts treated (as for instance in the case of compound fractures), and that any number of splint rods may be connected together, to be carried for convenience in a roll and that any desired number of connected splint rods may be separated from the roll by cutting through the elastic medium, thus giving the required width, then cutting the splint rods the required length, as the nature of the fracture or the part of the limb to be treated may require.

In the accompanying drawing Figure 1 is a side elevation showing my splint applied to a human leg about the calf. Fig. 2 is a plan view showing one form of the embodiment of my invention, the splints being spread out flat whereby the detailed construction may be more readily understood. Fig. 3 represents a side view partly in section of one of the splint rods and the elastic connecting strap shown in Fig. 2. Fig. 4 is an end view of a series of splints such as shown in Fig. 2. Figs. 5 and 6 are similar views showing, however, the individual splint rods of a modified configuration. Fig. 7 illustrates, on an enlarged scale, one of the splint rods similar to the splint rod shown in Fig. 3, but made in one piece with transverse apertures provided therein for the reception of the elastic medium to con-

nect the rods. Fig. 8 is a perspective view of the modified form of my splint shown in Fig. 5.

Like reference numerals indicate like parts in all these drawings.

1 represents a longitudinally extending rounded one-half section of a splint rod which may be made of cane, wood, or other flexible material. 2 represents a similar oppositely located section and 3 represents the elastic medium such as the rubber strap located between sections 1 and 2. The rods forming these sections may be made of any desired length and the elastic medium of any desired width, since it will be found convenient to separate by cutting any desired number or length of splint rods. 4 in the construction shown by way of example in Fig. 2 represents pins or rivets passing through the rod section 1 the elastic medium 3 and the opposite rod section 2, whereby these sections are held together and in proper position relative to the elastic medium 3.

In the drawings the rod sections 1 and 2 are made of cane rods split through the center, cane being desirable for its longitudinal elasticity, whereby they may readily assume the desired contour in applying the splint. It will be understood, of course, that the splint rods may be made of any other longitudinally flexible material and of any diameter, and that I do not limit myself to any specific kind of substance.

In the modification shown in Fig. 7, 5 represents a series of slots which are formed by cutting or mortising through the center of the cane rods, and the elastic bands in this construction are passed through these slots and may be fastened in place by pins or rivets similar to the rivets 4 or if preferable, the parts may be secured in relative position by gluing or cementing the elastic bands within these slots; or if desired the individual splint rods may be mounted slidably on the elastic straps whereby an increased number of rods may be applied to a given area. In the constructions shown in Figs. 1, 2, 3, 4, 5, 6, and 8 the elastic bands or straps may be secured between the cane sections either by gluing or cementing them therebetween or by means of pins.

In applying the splint in my invention, which as before stated, may be conveniently manufactured in great widths, a width

thereof comprising a number of splint rods sufficient for the particular fractured part is separated from the main portion and cut longitudinally of sufficient length for the  
5 limb to be treated and is drawn taut around the injured limb, distending the elastic medium, and while so drawn an adhesive is wound over the splint rods to retain them in their distended positions. The longitudinal  
10 flexibility of the splint rods will, of course, respond to the outline of the particular limb to be treated and the elasticity of the straps 3 permits of the accommodation of the splint rods to the stouter or enlarged portion of the  
15 limb to be treated so that it will throughout its length snugly fit the various contours.

In the modified form of splint rods shown in Figs. 5 and 8 it will be noted that only  
20 one of the rounded sections of a cane rod is used and that the elastic medium is held between its flat face and the face of a flat, thin strip of wood. These three elements may be united by applying cement or glue upon the surfaces engaging the elastic medium or

may be united as shown in Fig. 8 by a pin or 25 rivet 4.

In Fig. 6 I have shown the embodiment of my invention in connection with rods which are square. These variations will be readily understood from the drawings and therefore 30 do not require more detailed description.

What I claim is:

A bandage of the class described comprising a series of longitudinally extending flexible splint rods, spaced apart, a plurality 35 of elastic bands of elastic material, spaced apart, said bands having free ends and intersecting said rods, means for securing said rods to said bands, said rods and bands being adapted to be wound about the limb of 40 the patient to variably space said rods apart and to exert regulable resilient pressure according to the degree of distension of said elastic bands in winding the same upon such limb. 45

In witness whereof I have hereunto set my hand this 26th day of February, 1916.

ISSACHER R. SMITH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents Washington, D. C."