

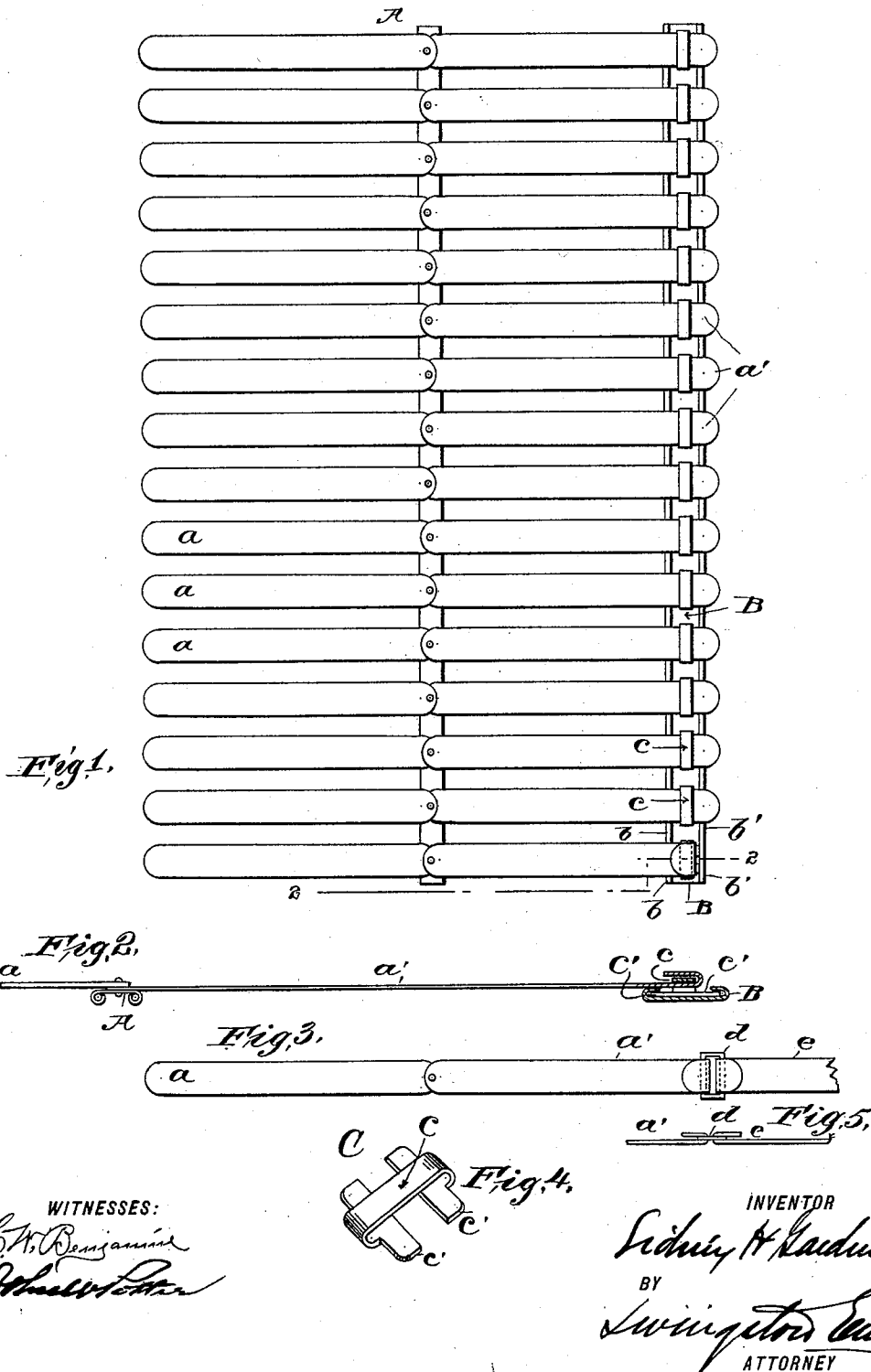
(No Model.)

2 Sheets—Sheet 1.

S. H. GARDINER.
SURGICAL SPLINT.

No. 594,076.

Patented Nov. 23, 1897.



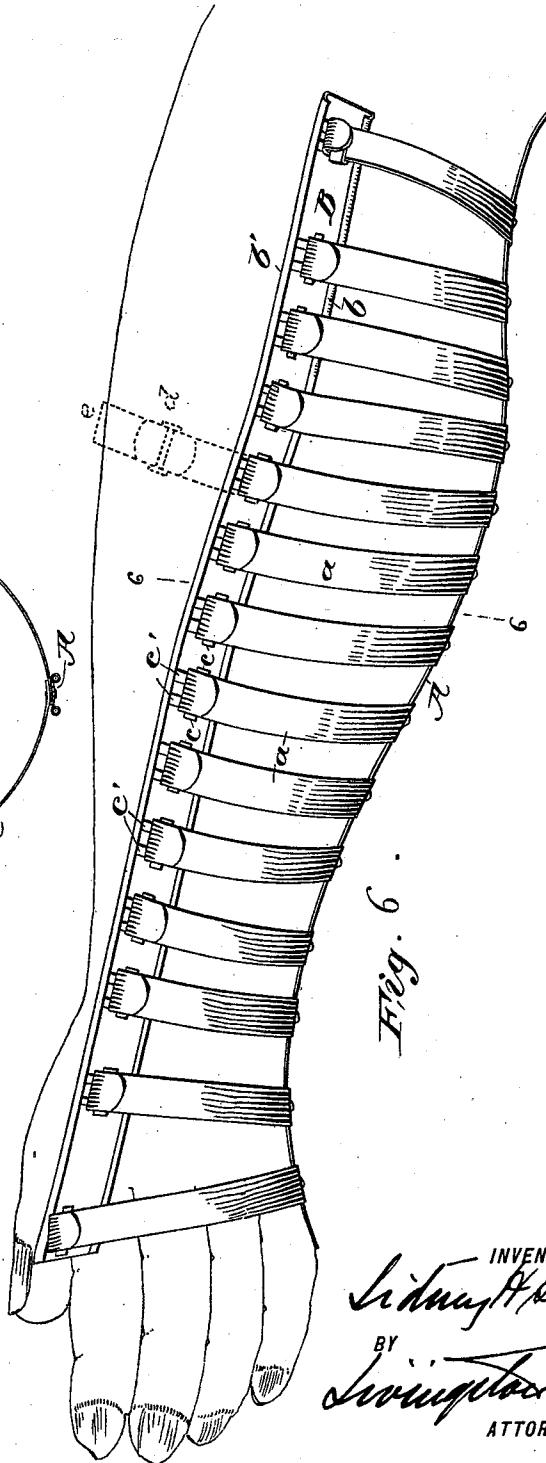
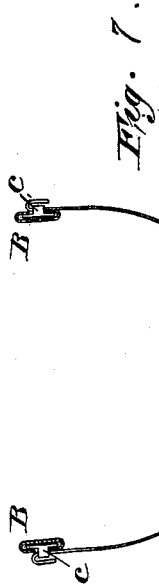
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SURGICAL SPLINT.

SPECIFICATION forming part of Letters Patent No. 594,076, dated November 23, 1897.

Application filed November 2, 1895. Renewed May 8, 1897. Serial No. 635,736. (No model.)

To all whom it may concern:

Be it known that I, SIDNEY H. GARDINER, a citizen of the United States, residing in the city of Brooklyn, county of Kings, and State of New York, have invented a new and useful article of manufacture which I have termed a Universal Splint, reference being had to the accompanying drawings, forming a part of the same, wherein—

Figure 1 represents a plan view illustrating a form of my invention; Fig. 2, a section on the line 2 2, Fig. 1; Fig. 3, a detailed plan showing how the various parts may be lengthened; Fig. 4, a means for movably attaching the various parts to an auxiliary stiffening-strip; Fig. 5, a side view of the same; Fig. 6, a view of my invention in use, but without bandages; Fig. 7, a section of the same on the line 6 6.

Heretofore universal splints have been manufactured from a textile fabric, which necessitated cutting to approximate shape and the use of heat or warm water to soften them that they might be set to the contour of the part or they have consisted of pieces of sheet metal or gauze that must be bent, cut, and formed to the contour of the part. By my device I eliminate all these difficulties by forming a splint of a series of strips or pieces that shall be movably connected in such a manner that they will readily take the contour of the part when so shaped. In certain cases it has been found advisable to strengthen or stiffen the outer edges of the splint, and for this purpose I employ what I term an "auxiliary" stiffening-strip on either or both sides of the splint.

In the drawings, A represents the foundation-piece or what might be termed the "backbone" of the splint and is preferably made of sheet metal, such as tin or aluminium or compounds thereof, or of other metal that has a certain amount of flexibility, but is capable of maintaining its form when permanently set. To further stiffen the backbone, I have turned over certain portions of the metal, forming what might be termed a "bead" along the edges of the backbone. To the flat side of the backbone I have movably connected in a suitable manner strips or pieces *a a'*, and to render the set of these pieces accurate when

shaped to the contour of the part I have employed a strip B, having its edges or certain portions thereof turned over somewhat in the manner of the backbone, at the same time forming a device or track *b b'*, in which operate the movable connections C. The movable connection C is preferably of the following construction: A flat piece of metal is indented or cut out on either side and the projecting portion of the original metal bent toward each other, forming a loop *c* on the upper side and a stop *c c'* on the lower side. Through this loop *c* the strips or pieces *a a'* slide, and when formed to the contour of the part may be turned over on the loop, as shown in Fig. 2, thereby holding the same rigidly in place.

It many cases it becomes necessary to lengthen the various parts, particularly as shown in dotted lines in Fig. 6. For this purpose I may employ a very simple tie *d*, which consists of a piece of strong wire bent in the shape desired and into which the strips or pieces *a a'* are inserted and turned over upon themselves, as shown in Figs. 3 and 5, and the added strip *e* attached to the opposite side in a similar manner. It is obvious that, if necessary, the tie may be circular in form and that several strips may be added. In fact, a "sling" can be formed by this method.

The object of this invention is more particularly to produce what may be termed a "staple" universal splint, and its advantage lies in the fact that a doctor or surgeon has only to slip a splint of this nature in his bag and is ready for any emergency. He can set a fracture, a dislocation, or in fact any form of injury requiring a splint irrespective of the position in which it is desired to hold it, and he needs but one splint for any part of the body.

Another advantage of this invention is its lightness, strength, and cheapness.

Having now described this invention and its advantages, I will describe its operation with reference to Fig. 6. The stiffened portion or backbone is laid parallel or as near so as possible to the normal direction of the part and shaped to fit the contour of the part. The side projections are then bent over the part and assume the contour given them by the formation of the backbone, as well as the contour they assume by being shaped to the parts.

The ends of these strips or pieces are then inserted into the loop of the auxiliary stiffening-strip and the stiffening-strip shaped to the contour of the part. The ends of the projections may then be turned down upon the loops and may be elongated by means of the tie described, so that they extend completely around the part, and afterward the usual bandages applied.

10 Having now described my invention, what I desire to secure by Letters Patent is—

1. A new article of manufacture of the class described, consisting of a stiffened or reinforced strip, lateral strips or pieces connected

thereto by means of a sliding pivotal connection. 15

2. A new article of manufacture of the class described, consisting of a stiffened or reinforced strip, lateral strips or pieces movably attached thereto, and an auxiliary stiffened or reinforced strip connected with said lateral projection by means of a sliding pivotal connection. 20

SIDNEY H. GARDINER.

Witnesses:

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