(Model.) 2 Sheets—Sheet 1.

J. E. LEE.

METALLIC SPLINT.

No. 392,157. Patented Oct. 30, 1888.

Fig. 1.

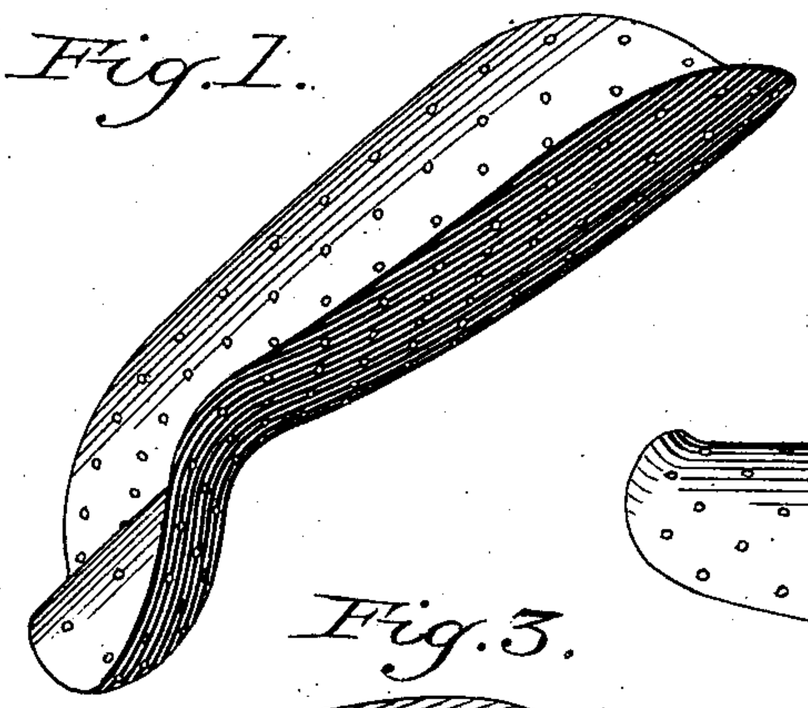

Fig. 4.

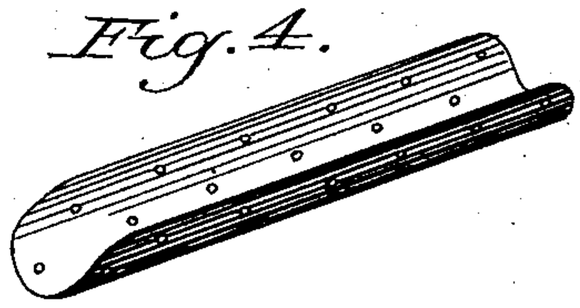

Fig. 2.

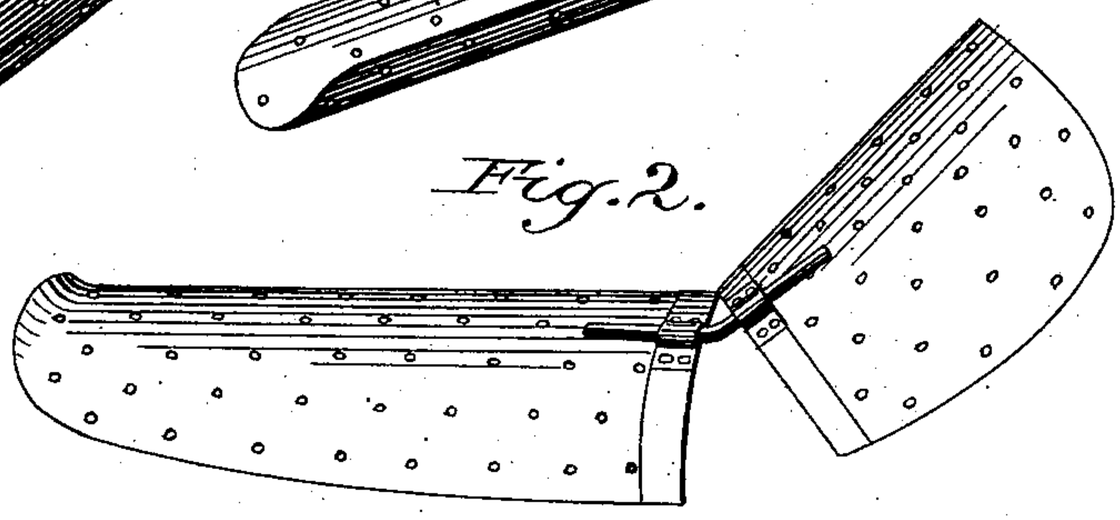

Fig. 3.

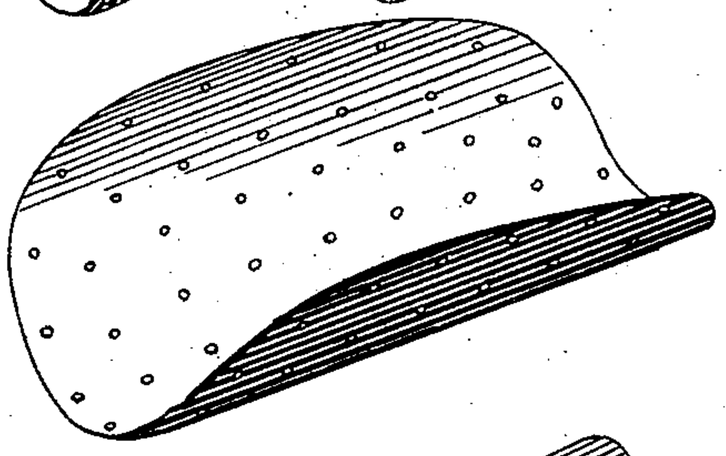

Fig. 5.

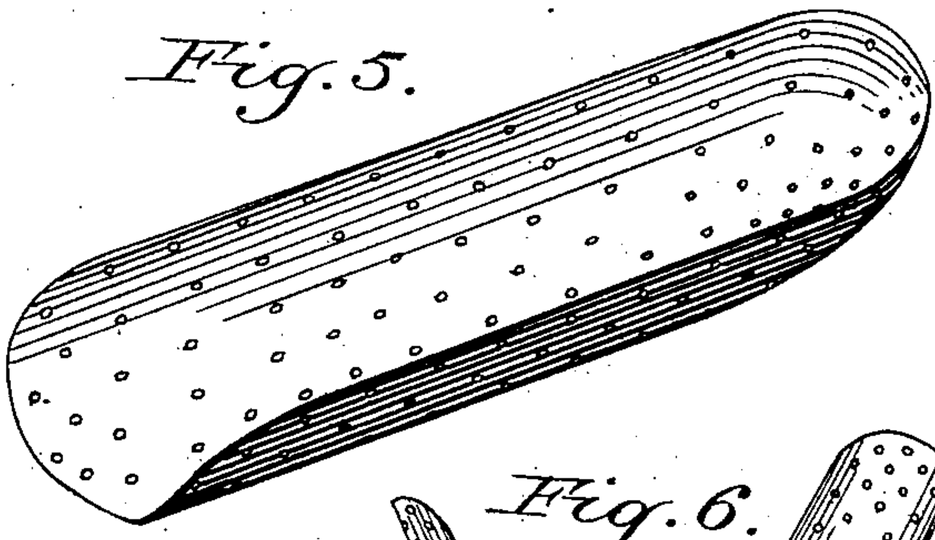

Fig. 7.

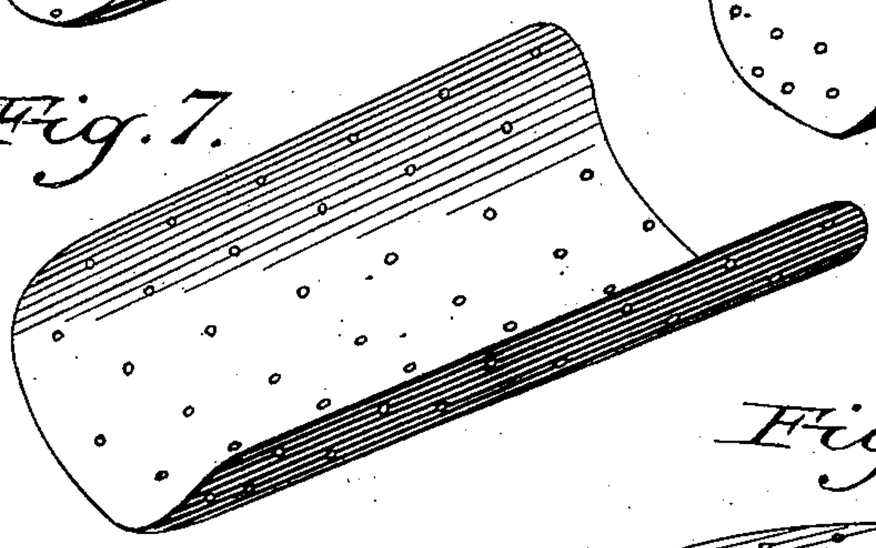

Fig. 6.

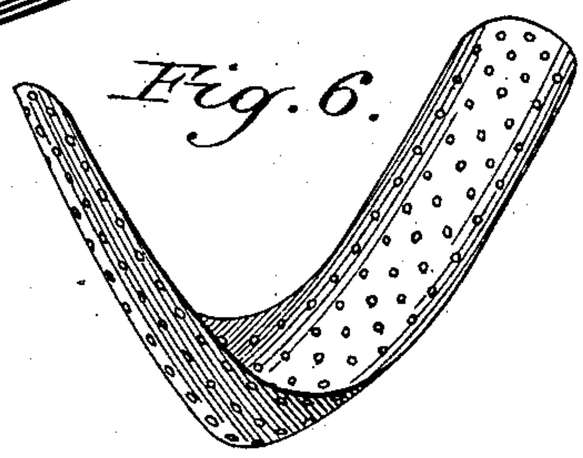

Fig. 8.

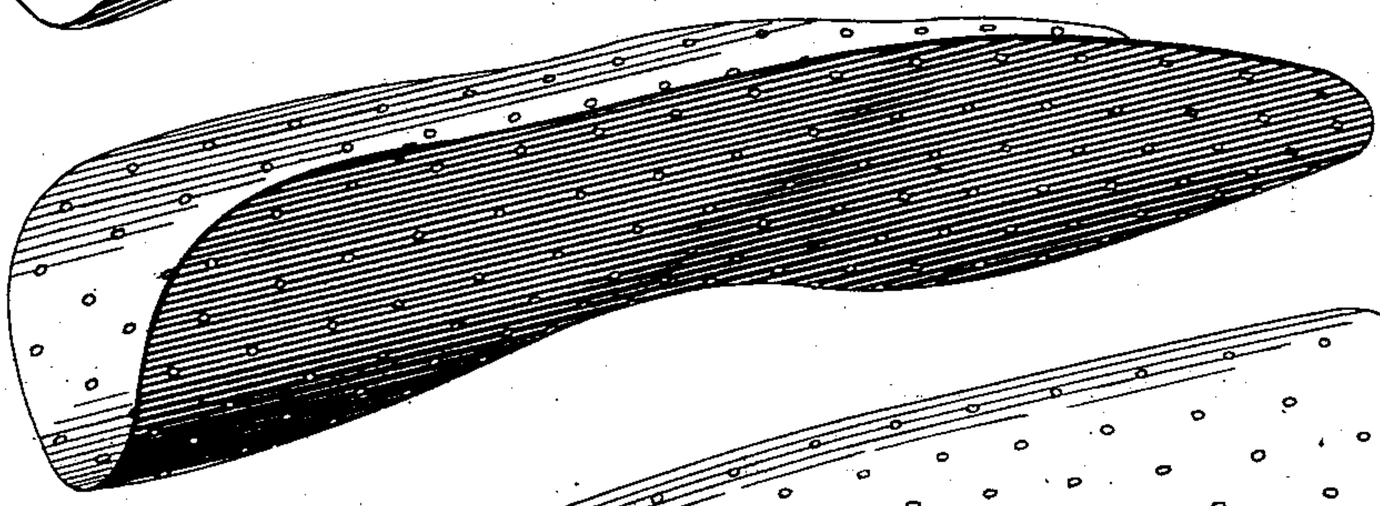

Fig. 9.

Witnesses:

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Inventor:

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(Model.)

2 Sheets—Sheet 2.

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METALLIC SPLINT.

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FIG. 10.

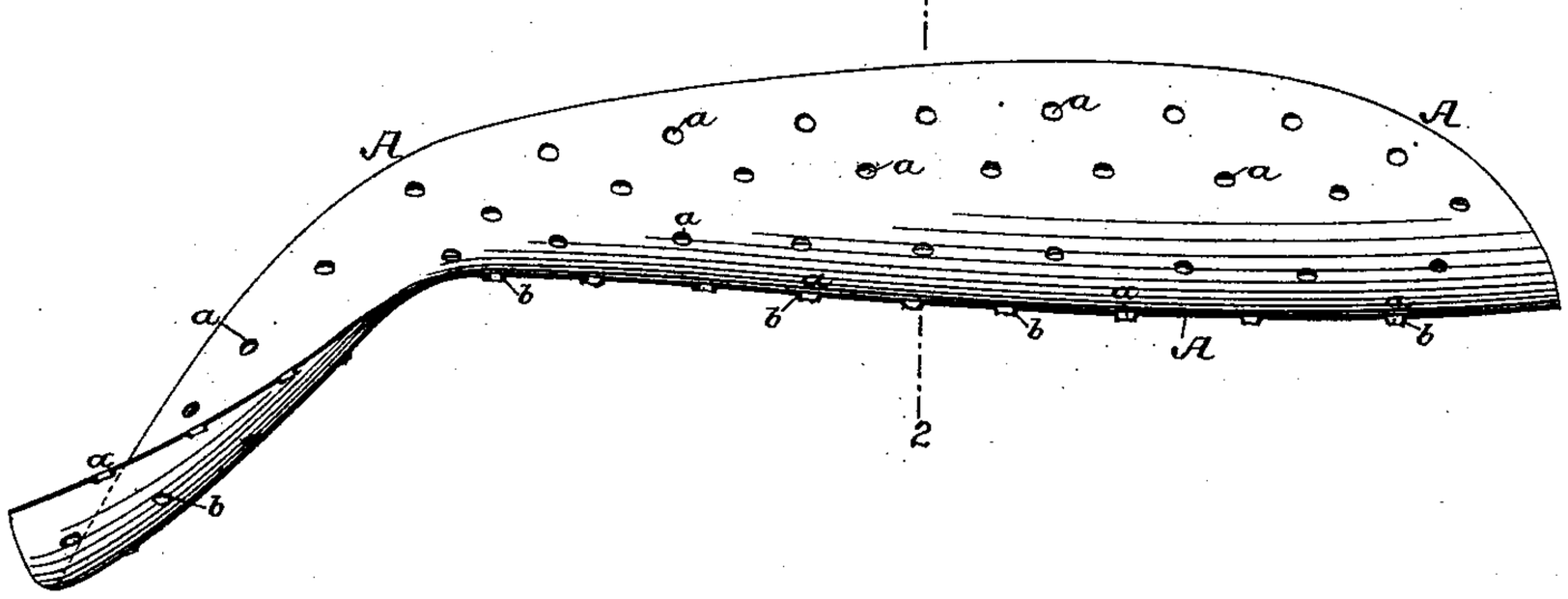


FIG. 11.

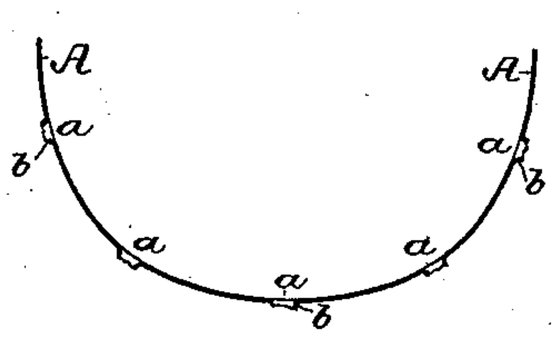
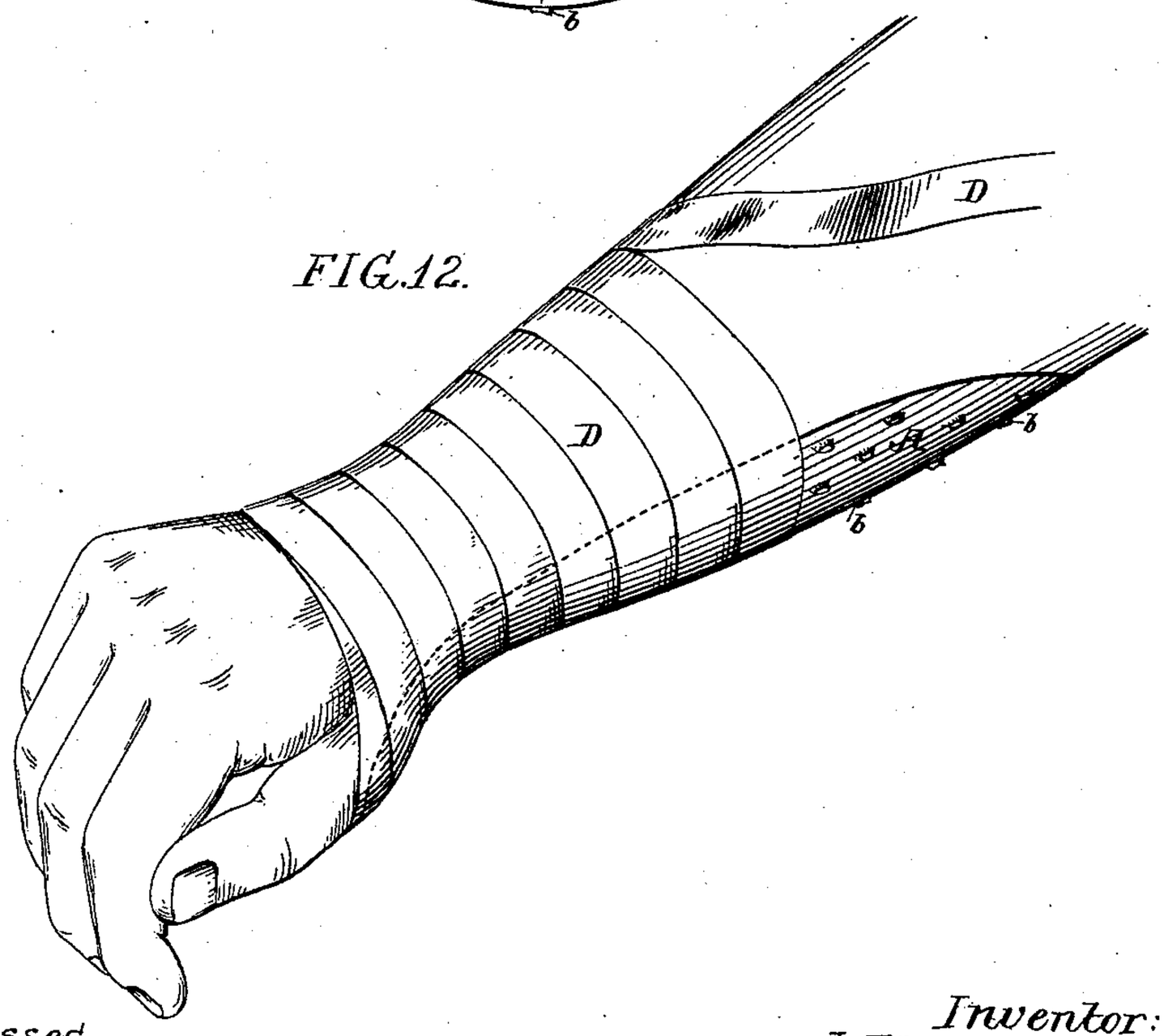


FIG. 12.



Witnesses:
Alex. Barkoff.
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UNITED STATES PATENT OFFICE.

JOHN ELLWOOD LEE, OF CONSHOHOCKEN, PENNSYLVANIA.

METALLIC SPLINT.

SPECIFICATION forming part of Letters Patent No. 392,157, dated October 30, 1888.

Application filed May 8, 1886. Serial No. 201,588. (Model.)

To all whom it may concern:

Be it known that I, JOHN ELLWOOD LEE, a citizen of the United States, residing at Conshohocken, in the county of Montgomery, State of Pennsylvania, have invented certain Improvements in Surgical Splints, of which the following is a specification.

My invention relates to that class of splints which are made of thin flexible metal, and which are shaped to conform closely to the limbs, and are bound thereto by the ordinary surgical bandages, of muslin or other similar textile material, wrapped around the limbs and splints.

The object of my invention is to so construct a light and flexible splint of this character as to allow blood or suppuration from wounds to escape and the moisture to evaporate, and at the same time prevent the bandage from slipping off or becoming loose.

In the accompanying drawings, Figures 1, 2, 3, 4, 5, 6, 7, 8, and 9 are perspective views of different forms of splints illustrating my invention. Fig. 10 is a longitudinal section of the splint illustrated in Fig. 1, drawn to a larger scale. Fig. 11 is a transverse sectional view on the line 1 2, Fig. 10; and Fig. 12 is a view illustrating the splint as applied to a limb with the bandage partially wrapped.

In manufacturing the splints I use very thin metal and form them to about the shape required. The splint A, (shown in Figs. 1, 10, and 11,) for instance, is intended to be used for the fracture of the forearm or wrist, and is formed to the shape of the under side of the forearm and the ball of the hand.

The splints shown in Figs. 2 to 9, inclusive, are of well-known forms, which do not need explanation, and are illustrated only to show some of the different shapes of splints to which my invention may be applied. No matter what the form, outline, or shape of the splint may be, however, I form therein perforations, which are punched out of the body of the metal preferably after the splint has been formed and smoothed. I utilize the perforations to form projections on the outer surface of the splint, and for this purpose the punches and dies used to make the perforations are so formed as to produce around each perforation *a* a rim, *b*, projecting on the outside surface of the splint, Figs. 10, 11, and 12. When the splint thus formed is put into use, and the ordinary bandage of muslin or similar article of textile material is applied around it and the limb, as shown in Fig. 12, for instance, the projecting rims *b* hold the bandage D in place, while the perforations allow moisture or suppuration or blood from wounds to escape.

I am aware of Wittman's patent, of September 22, 1863, No. 40,071, for a fracture apparatus or splint, in which perforated sheet-metal plates are combined with a hinged frame-work; but the plates have no roughnesses on the back, and are not adapted or intended to be held to the limbs by muslin or other bandages, but are provided with buckles for straps.

I am also aware of Bissell's patent, No. 158,894, January 19, 1875, for fracture-boxes for legs, with perforated plates for parts of the leg. It does not appear from the patent that there are any projections on the outsides of these plates, and if any should happen to be there it would no doubt be the result of bad workmanship, for they could be of no use. The plates are not intended or adapted to have bandages wrapped around them, but simply form parts of a jointed frame-work in which the leg is placed and held by bars, screws, and straps.

I am also aware of the patent of Stillman, No. 222,609, December 16, 1879, for a surgical splint composed of a jointed frame-work carrying curved metal plates "embedded in a strong leather band or casing." "In some cases where the limb requires a more firm support the splint may be applied to the limb by means of a plaster bandage." The curved plates are then "punched with a series of protrudent punctures to form jagged points," and are "embedded between two layers of the plaster bandage wound, respectively, both under and over the plates."

My improved splints are not for use with frame-work, but are shaped to conform to the limb, and are bounded thereto by plain muslin or other textile bandages, which are wrapped around the limb and splint. The latter has no "jagged points," but is made quite smooth on the inside, and on the outside has carefully-formed projecting rims around the edges of the perforations.

I claim as my invention—

Perforated metallic splints shaped to conform to the limbs and adapted to be bound thereto by ordinary muslin or similar bandages wrapped around the splints and limbs, the said splints being smooth on the inside and having on the outside projecting rims *b* around the edges of the perforations, as and for the purpose set forth.

J. ELLWOOD LEE.

Witnesses:
JONATHAN CLEAVER,
CONRAD B. LEE.