

Dec. 3, 1935.

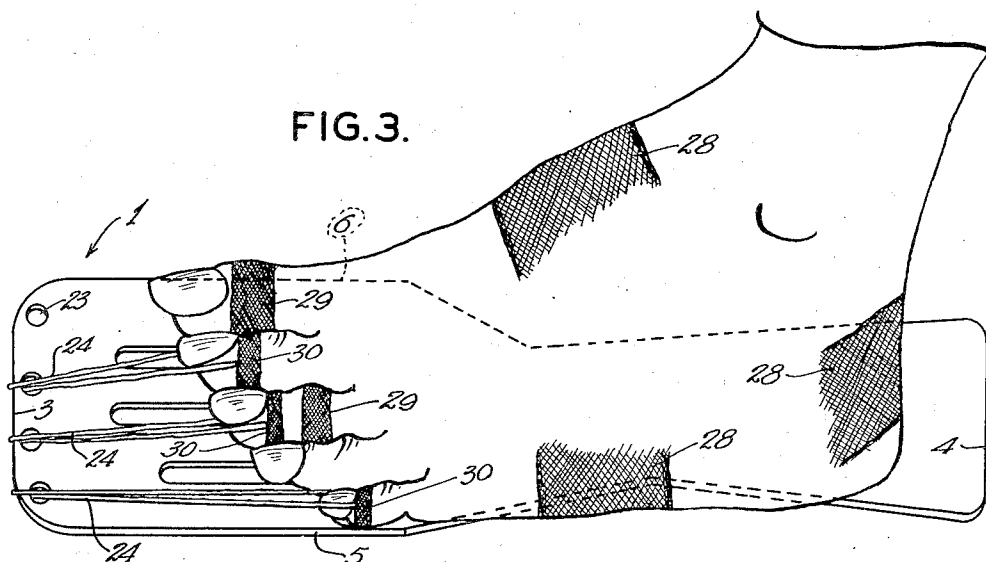
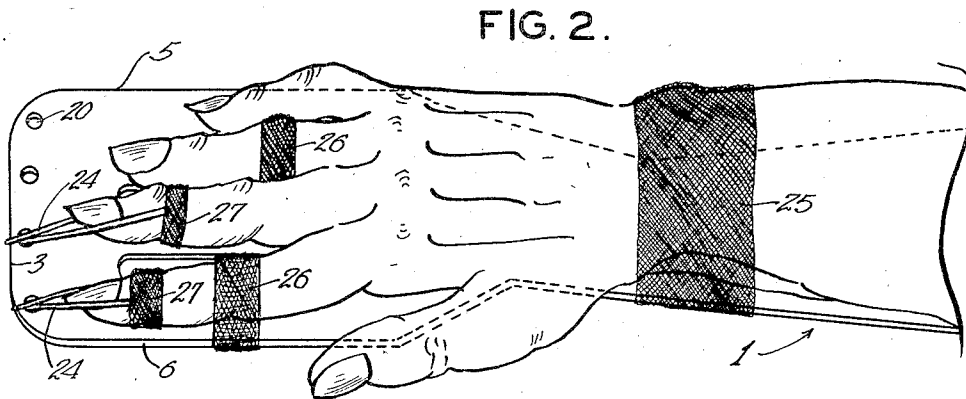
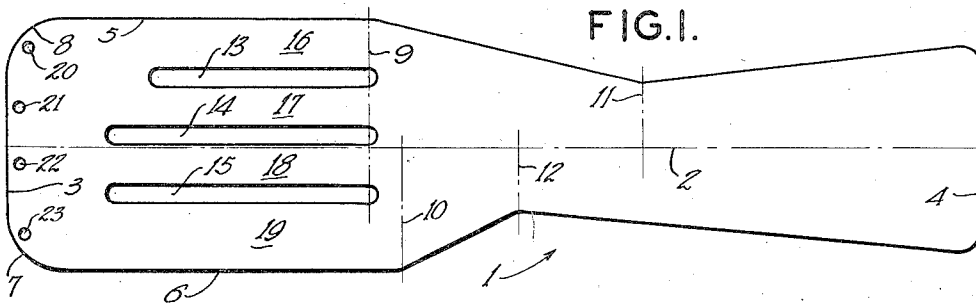
O. J. GEE

2,022,883

COMBINATION ADJUSTABLE SPLINT FOR FINGERS, HANDS, LOWER ARMS AND FEET

Filed July 27, 1931

2 Sheets-Sheet 1



Othel J. Gee INVENTOR
BY Lloyd Miller, ATTORNEY

Dec. 3, 1935.

O. J. GEE

2,022,883

COMBINATION ADJUSTABLE SPLINT FOR FINGERS, HANDS, LOWER ARMS AND FEET

Filed July 27, 1931

2 Sheets-Sheet 2

FIG. 4.

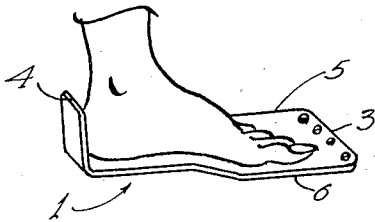


FIG. 5.

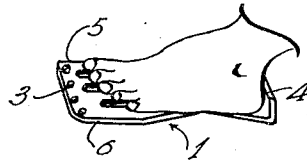


FIG. 11.



FIG. 6.

FIG. 7.

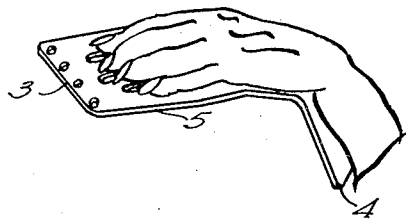


FIG. 8.

FIG. 9.

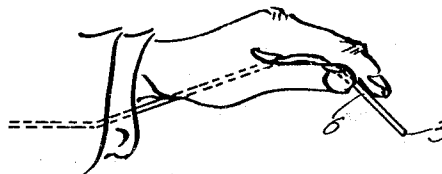
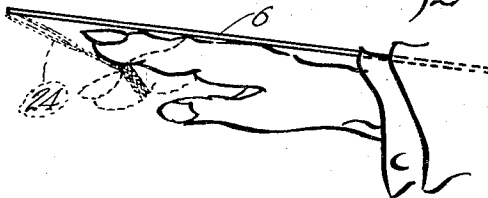


FIG. 10.



INVENTOR
Othel J. Gee
BY Lloyd J. Miller
ATTORNEY

UNITED STATES PATENT OFFICE

2,022,883

COMBINATION ADJUSTABLE SPLINT FOR
FINGERS, HANDS, LOWER ARMS, AND
FEETOthel J. Gee, Oklahoma City, Okla., assignor to
Loyal J. Miller, Oklahoma City, Okla.

Application July 27, 1931, Serial No. 553,315

4 Claims. (Cl. 128—89)

My invention relates to splints, and more particularly to an adjustable combination splint for fingers, hands, lower arm, and feet.

The objects of my invention are to provide a device of this class which is new, novel, practical and of utility; which may be used interchangeably for either the left or right hand fingers, whole hand or lower arm; a single splint which will supplant a number of specially formed splints now used in setting various types of fracture; which can be used on either hand with or without extension of the fingers; which can be used on the anterior or posterior surface of either hand and/or lower arm; which can be used in a similar manner as a splint for either, all or any combination of fingers of either hand, and can simultaneously therewith be used as a splint for the wrist, lower arm and the metacarpals or either of them selectively; which may be used either to prevent or treat contraction of either or all fingers or any combination thereof; which will act as either a cock-up or drop-wrist splint; which can be used to flex any or all fingers of either hand and at the same time will act as a splint for holding the hand in any desired position with relation to the lower arm; which can be used interchangeably for either foot as a splint for any toe or toes with or without extension; which can, in fact, be used on either foot for the corresponding use above described with reference to the anterior surface of the hands; which is comparatively cheap in manufacture; which is strong and durable; and, which will be efficient in accomplishing all the purposes for which it is intended.

Aluminum has become quite extensively used in making splints in recent years due to the fact that it does not show in X-ray photographs. So far as this applicant knows or has been able to ascertain, all aluminum splints now used for the foot, lower arm or hand are constructed of thick unbendable material, which necessitates a particular form for each specific type of fracture or dislocation. These splints are not interchangeable from foot to foot, one hand to the other, or from the front to the back of either hand.

Applicant's splint is constructed of semi-pliable aluminum or other material which will permit the passage therethrough of an X-ray. By using a semi-pliable material applicant's splint can be easily and quickly bent to accommodate many various types of fractures or dislocations. The particular configuration of applicant's splint, which will be more fully described hereinbelow,

is such that the single splint will accommodate the front or back of either hand as well as accommodating the bottom of either foot.

Applicant's splint permits the physician to stock only a few splints in two sizes and these splints will accommodate practically any type of dislocation or fracture to the hand, lower arm, or foot. In many instances this will prevent delay in treatment which is now occasioned by the physician having to send out for the proper type of splint after the patient has reached his office.

With these and other objects in view as will more fully appear, my invention consists in the construction, novel features, and combination of parts hereinafter more fully described, pointed out in the claims hereto appended, and illustrated in the accompanying two-sheet drawing, of which:

Figure 1 is a plan view of the splint;
Fig. 2 is a perspective view of a hand attached to the splint and showing one of its uses;

Fig. 3 is a perspective view of a foot disposed upon the splint;

Figs. 4 and 5 are perspective views showing the use of the splint with a foot; and,

Figs. 6, 7, 8, 9, 10 and 11 are perspective views showing various uses of the splint with reference to a human hand.

Like characters of reference designate like parts in all the figures.

It is understood that various changes in the form, proportion, size, shape, weight and other details of construction, within the scope of my invention may be resorted to without departing from the spirit or broad principle of my invention and without sacrificing any of the advantages thereof; and it is also understood that the drawings are to be interpreted as being illustrative and not restrictive.

One practical embodiment of the invention as illustrated in the drawings comprises:

An elongated sheet 1 of suitable semi-pliable material, preferably aluminum, the longitudinal axis of which is indicated by the dotted line 2 in Fig. 1. Said sheet 1 has opposite ends 3 and 4, and the end portion lying nearest said end 3 is substantially rectangular, having sides 5 and 6 which lie parallel to each other and also parallel to said line 2, and having rounded corners 7 and 8. It will be noted that said side 5 terminates at a line 9 and that said side 6 terminates at a line 10, and that said side 5 is slightly shorter than side 6. As may best be seen in Fig. 1, the upper edge of said sheet 1 in continuing from

said line 9 toward said end 4 angles inwardly toward said line 2 to a longitudinal point indicated by the dotted line 11, from whence it angles outwardly from said line 2 to said end 4. It may also be seen that the lower edge of the sheet 1 in continuing toward said end 4 angles somewhat abruptly inwardly toward said line 2 to a point indicated by the dotted line 12, from whence it angles outwardly from said line 2 to said end 4.

The particular configuration of said sheet 1 is extremely important to this invention because of the fact that by forming the splint as above described, applicant has produced an article which is interchangeable from one hand to the other and from one foot to the other by simply turning it over. The side 5 is used in a position bringing it adjacent little finger side of the hand whether used on the posterior or anterior surface of the hand.

The above described substantially rectangular portion of the sheet 1 is provided with three longitudinal through slots 13, 14 and 15 which divide it into four ribs 16, 17, 18 and 19. The ribs and slots are so located that when a hand is properly placed upon the splint each of the ribs will contact longitudinally one of the fingers of the hand, and each of the slots will fall between two of the fingers. The particular arrangement of the slots and ribs is important because this arrangement makes it possible to selectively tape or bind any of the fingers individually to the respective ribs, the slots permitting the passage therethrough of the tape or binding agent.

Adjacent said end 3, the splint is provided with four spaced through perforations 20, 21, 22 and 23 which are located in axial alinement with the respective ribs 16, 17, 18 and 19. The perforations are provided for receiving an elastic member 24 for exerting tension on the fingers.

The use of the splint on the anterior surface of a hand is best illustrated in Fig. 2 of the drawings in which the reference numeral 25 indicates a bandage around the wrist, 26 a bandage or tape around certain fingers binding them to their respective ribs. The reference numerals 27 indicate a tape around certain fingers but not around the ribs. The tapes 27 are for the purpose of attaching the elastic members 24 to the fingers.

All of the statements herein relative to the fingers of the hands may be considered where applicable as pertaining to the toes of the feet.

In Fig. 3 is illustrated the use of the splint with relation to the sole of a foot. In this figure, the reference numerals 28 indicate a bandage around the ankle and metatarsal for holding the splint properly in place. Numerals 29 indicate binding elements for holding various ones of the toes to their respective ribs. Said elements 29 are passed through the slots and under the respective ribs. Numerals 30 indicate tape around certain toes for attaching the elastic members 24.

In Fig. 4 is illustrated the use of the splint on the sole of a left foot, the end 4 being bent upwardly in position to receive a bandage for preventing movement of the foot longitudinally with relation to the splint. The splint may be used in this manner when it is desired to exert extension upon the toes.

Fig. 5 depicts the manner in which the splint is used for supporting the arch of the foot. The toes may be bandaged or treated in any desired

manner similar to that illustrated in Fig. 3 even though the splint is simultaneously used to support the arch of the foot.

Figs. 6, 7 and 8 illustrate various manners in which the splint may be used upon the anterior surface of the hand. In these positions extension may or may not be exerted upon the fingers as desired.

Fig. 10 illustrates a method of using the splint upon the posterior surface of the hand, the fingers being straight and the wrist being bent forwardly.

In Figs. 9 and 11 is shown a manner of using the splint on the posterior surface of the hand. The dotted lines illustrate a manner of exerting tension upon a finger or fingers.

Obviously, the invention is susceptible of embodiment in forms other than that which is illustrated in the accompanying drawings and described herein, and applicable, for uses and purposes other than as detailed, and I therefore consider as my own all such modifications and adaptations and other uses of the form of the device herein described as fairly fall within the scope of my invention.

Having thus described my invention, what is claimed and desired to be secured by Letters Patent, is:

1. A splint of the class described, embodying a substantially paddle shaped semi-pliable plate of a material having the inherent quality of being easily and quickly bent manually into various forms, and of retaining such forms when so bent, said plate having a substantially rectangular blade portion, and having a portion of said blade continuing from one end thereof and gradually decreasing in width at one side of its axis and somewhat more abruptly decreasing in width at the other side of its axis, and having a handle portion continuing from said last named portion and integral means carried by said blade portion for permitting individual and selective bandaging of said digits thereto.

2. Organization as described in claim 1, in which said blade is formed by a plurality of spaced longitudinal ribs joined at both ends, said ribs for flatly contacting human digits.

3. Organization as described in claim 1, in which said blade is formed by a plurality of spaced longitudinal parallel ribs joined at both ends, said ribs for flatly contacting human digits, and in which a through perforation is provided in the plate adjacent the outer end of each rib for attaching therein a means of exerting extension upon said digits.

4. A splint of the class described, embodying a substantially paddle-shaped plate of semi-pliable material having a substantially rectangular blade portion, and having a portion of said blade continuing from one end thereof and gradually decreasing in width at one side of its axis and somewhat more abruptly decreasing in width at the other side of its axis, and having a portion continuing from said last named portion, said material having an inherent quality of lending itself to being easily and quickly bent manually into various forms, and of retaining such forms when so bent, and integral means carried by said plate for permitting individual and selective bandaging of the digits of a human being thereto.

OTHEL J. GEE.