

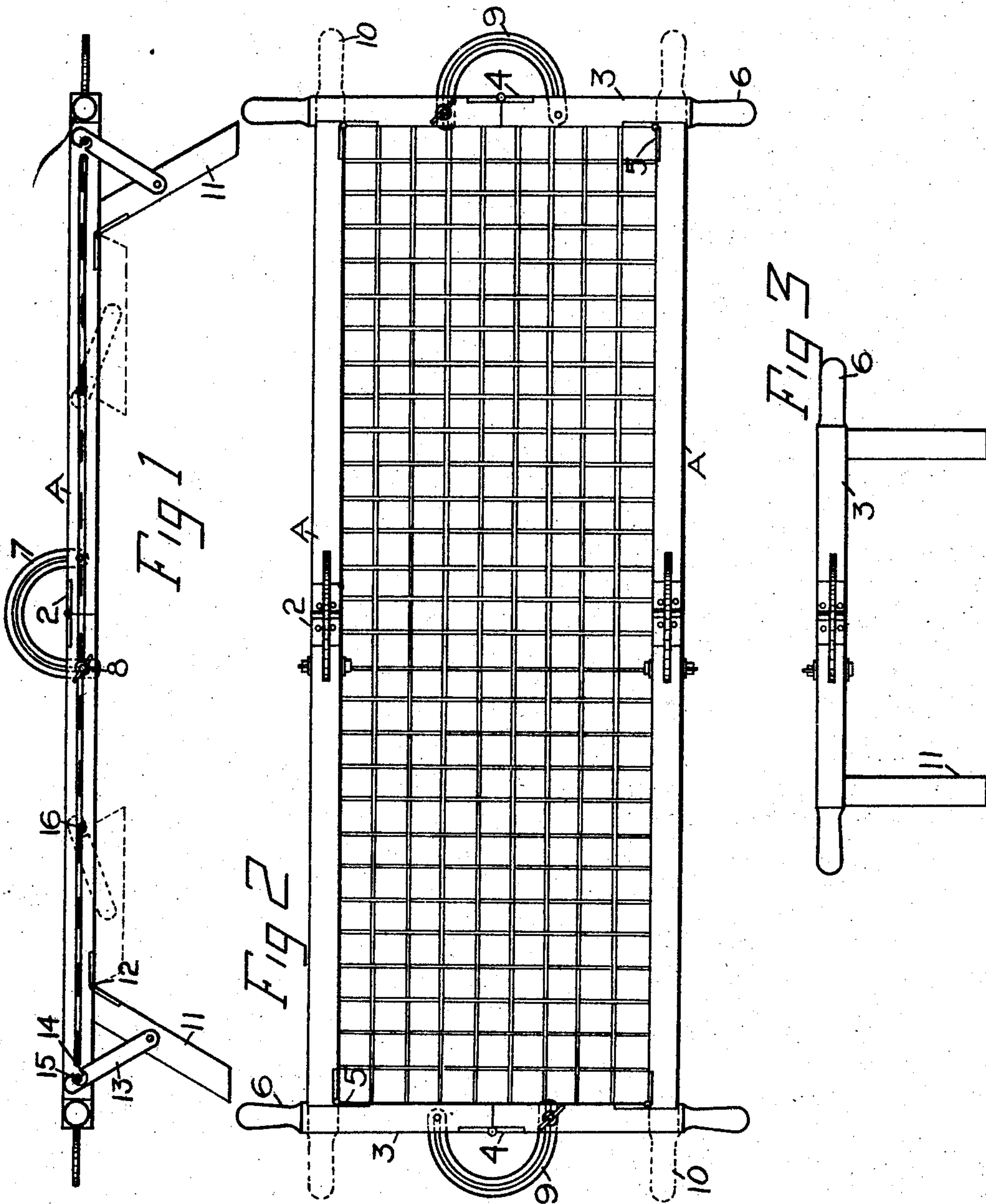
No. 765,369.

PATENTED JULY 19, 1904.

E. M. SMITH & J. FERRIN.
STRETCHER.

APPLICATION FILED FEB. 25, 1904.

NO MODEL.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ELPHINSTONE MERRILL SMITH AND JOHN FERRIN, OF OAKLAND,
CALIFORNIA.

STRETCHER.

SPECIFICATION forming part of Letters Patent No. 765,369, dated July 19, 1904.

Application filed February 25, 1904. Serial No. 195,183. (No model.)

To all whom it may concern:

Be it known that we, ELPHINSTONE MERRILL SMITH and JOHN FERRIN, citizens of the United States, residing at Oakland, in the county of Alameda and State of California, have invented new and useful Improvements in Stretchers, of which the following is a specification.

Our invention relates to an improved stretcher for hospital and ambulance purposes. Its object is to provide stretchers which may be folded and stored in small compass when not in use which are capable of extension and of certain variations in position to increase the comfort of the occupant.

Our invention comprises combinations of parts and details of construction, which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a side elevation. Fig. 2 is a plan view. Fig. 3 is an end view.

It is the object of our invention to provide stretchers for carrying injured persons, for hospital, or other like purposes of such a character that when not in use they may be folded and placed in small compass, as beneath railway or street-car seats, so that such stretchers will be convenient and ready for instant use by simply unfolding and locking them in their extended positions, and thus injured persons can be instantly cared for instead of waiting for the arrival of ambulance or like aids.

As shown in the drawings, A A are the side bars of the stretcher, which are here shown as made of sufficient length for a patient, separated in the middle and hinged together by stout hinges 2, placed upon either top or bottom, so that these side bars may be folded to one-half the ordinary length. Thus if the stretcher be six feet long these bars can be folded so as to occupy a space of only three feet in length. The end bars 3 are in like manner divided in the middle and have hinges upon the outer sides, as shown at 4. These end bars are also hinged to the side bars by hinges in the internal angles of the meeting bars, and these hinges 4 and 5 allow the end bars to be folded inwardly between the side bars. Thus when the two end bars have been

folded there will be four thicknesses comprising the thickness of the two side bars and the thickness of the folded end bars which lie between the side bars. Then by folding the side bars about the hinges 2 the whole structure is folded into a space equal to half the length of the side bars plus the projecting ends or handles, which may be formed either upon the side bars or upon the end bars.

In the present case we have shown the end bars 3 extended beyond the side bars A and having handles, as at 6. These handles are specially convenient for use on such stretchers as may be employed in connection with street-railway cars of that class having open ends, with seats facing outwardly, and a space between the backs of the seats for the motor-man.

In case of accident such stretchers as here described can be laid upon the backs of the seats, these projecting handles 6 resting upon the seat-backs, while the main portion of the stretcher and the occupant will be suspended between the backs of the seats.

The bed portion of the stretcher may be made of canvas or, as shown in the present case, of a netting of interlaced cords extending through holes made in the side and end bars or otherwise secured thereto.

In order to lock the hinged portions of the stretchers and prevent their folding up when not desired, various interlocking bolts or equivalent devices may be employed.

In the present case we have shown a segment or arc, as at 7, fixed to the side bars A and having the hinge-pin as the center of the arc. The segments each have one end pivotally secured in a slot formed in one section of a bar and have the opposite end slidably guided in a slot in the adjacent end of the other section of the same pair of bars. A wing-nut, as at 8, is adapted to screw upon a threaded bolt which passes through an open slot in the curved segment, and when the nut is loose the bolt will easily move within the slot to allow the sides to be folded upon themselves. When these side bars have been extended into the desired position, the wing-nuts may be turned so as to clamp the segment and hold the parts

in the desired position. Similar segments and locking-nuts serve to retain the hinged end bars in position, as shown at 9. Thus if it is desired to extend the stretcher to an absolutely horizontal position the side and end bars are brought into a straight line and locked in that position, when the intermediate bed portion will be sufficiently stretched to support an occupant.

If by reason of the character of the injury it is not possible for the occupant to lie fully extended, the side bars may be bent at an angle with each other and locked in this position, so that when being carried the occupant can be maintained in a partially-recumbent and partially-sitting position.

For use in conjunction with ambulances or where the stretcher must be carried through doorways it is preferable to extend the side bars so that the handles upon said side bars are in line, as shown at 10, and in such a case the end bars 3 will not extend beyond the side bars, but will be hinged thereto in the same manner as shown at 5.

It will be manifest that any suitable disposition of pillow or head-support, such as air pillows or the like, may be attached to the stretcher at one end.

In order to enable the stretcher to be set down, we have shown legs, as at 11, hinged to the side bars A, as shown at 12. These legs have brace-bars 13 pivoted to them. These brace-bars have open notches, as at 14. These notches are adapted to engage with pins 15, fixed upon the stretcher in proper relation with the legs and braces, so that when the legs are extended in the desired position the upper ends of the legs will fit against the bottom of the side bars of the stretcher, and these braces 13 being hooked over the pins 15 will hold them rigidly in place, so that the stretcher may be set down at any point and support the occupant at a height above the floor. When the legs are not in use, they may be folded up against the bottom of the side bars A, and the notches 14 of the braces 13 may then be made to engage with pins 16, which are located at such a distance from the

hinges 12 that the notched brace-bars will just engage with these pins when the legs are laid up parallel with and against the side bars A, thus holding them out of the way. These legs in no way prevent the folding of the apparatus as previously described, and when thus folded several of these stretchers can be placed beneath the seats or in other convenient places within the cars, and are thus readily accessible for use upon the instant when required.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

An improved stretcher consisting of side bars formed of sections and hinges by which said sections are united; end bars of greater length than the space between the side bars whereby they extend beyond the latter and form transverse supports, said end bars formed of sections hinged together in the longitudinal central plane of the stretcher; a fabric bottom extending between the end and side bars; hinges at the angles formed by the side and end bars; segmental slotted plates spanning the joint between the sections of the side bars, having one end secured in one section and the opposite end working through a slot in the opposing section; means for securing said free end of the plate; other segmental slotted plates standing at right angles to the first-named plates and spanning the joints between the sections of the end bars, each of said plates having one end secured to one section and the other end working through a slot in the opposing section; means for securing the free end of said second plates; and folding legs attached to the side bars, and braces pivoted thereto and adapted to engage pins or studs on the side bars.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

ELPHINSTONE MERRILL SMITH,
JOHN FERRIN.

Witnesses:

SAM. J. TAYLOR,
JOHN E. GARUTSON.