(No Model.)

W. E. GOULDING.

INVALID LIFTING APPARATUS.

No. 528,475. Patented Oct. 30, 1894.

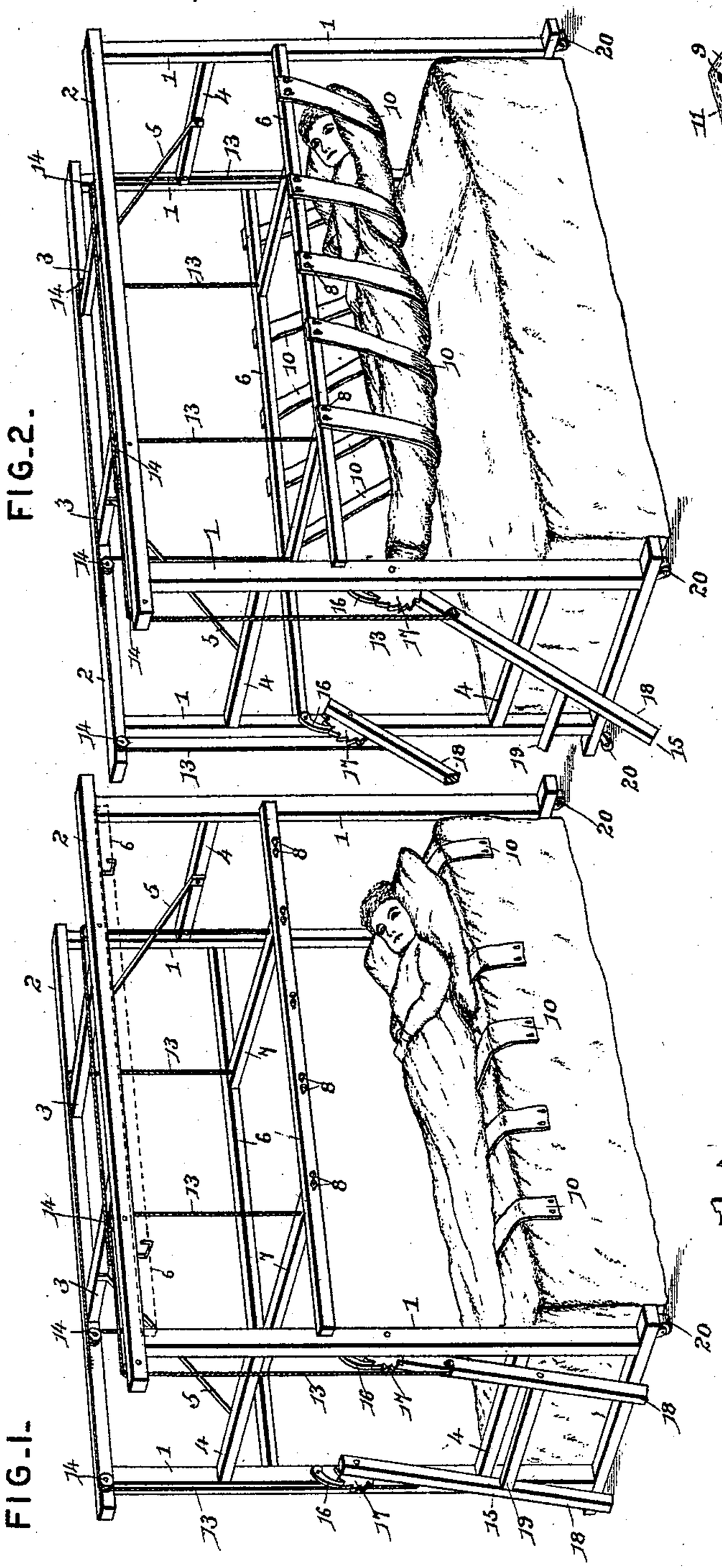

FIG. 1.

FIG. 2.

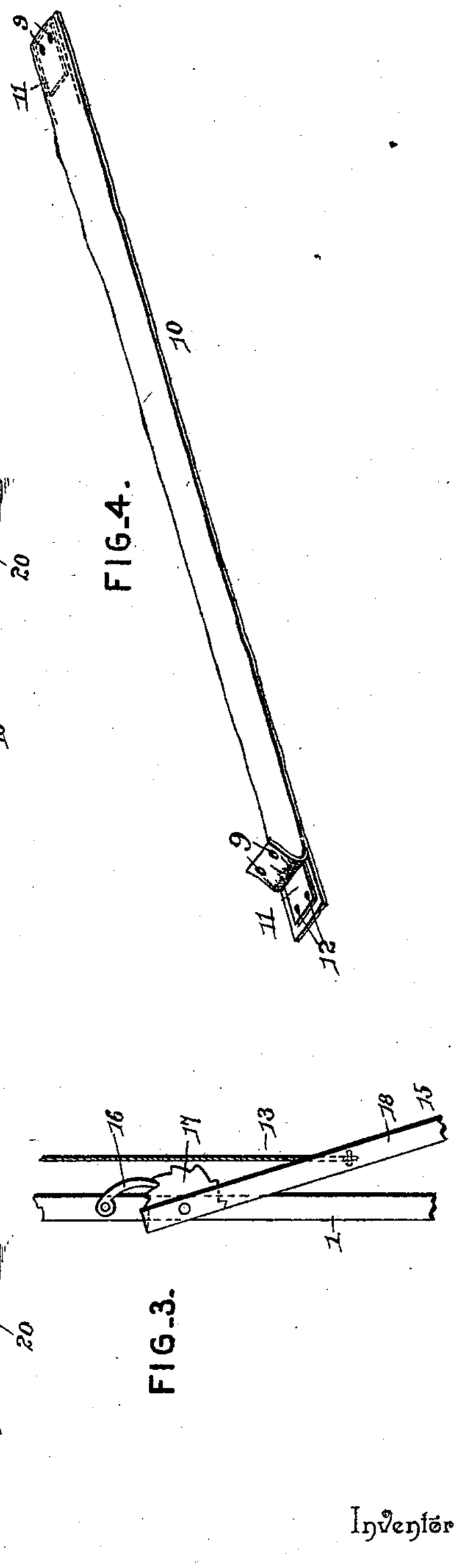

FIG. 4.

FIG. 3.

Witnesses

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WILLIAM EDWIN GOULDING, OF OKLAHOMA, OKLAHOMA TERRITORY.

INVALID-LIFTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 528,475, dated October 30, 1894.

Application filed June 7, 1894. Serial No. 513,815. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM EDWIN GOULDING, a citizen of the United States, residing at Oklahoma, in the county of Oklahoma and Territory of Oklahoma, have invented a new and useful Invalid-Lifting Apparatus, of which the following is a specification.

My invention relates to apparatus for lifting and carrying invalids in the sick room, hospital, &c.; and the objects in view are to provide a simple, inexpensive and readily operated device, which may be arranged to span a bed or couch, whereby the patient may be lifted therefrom and carried to a different bed or couch, and if necessary to a different ward; to provide means whereby the patient may be carried in any position occupied at the time of lifting, as upon either side or the back; and, furthermore, to provide means for holding the patient in either a sitting or reclining position upon the bed or couch.

Further objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claim.

In the drawings: Figure 1 is a perspective view showing the apparatus arranged over a couch with the supporting straps or bands arranged beneath the patient preparatory to attaching their extremities to the buttons on the lifting frame. Fig. 2 is a similar view showing the apparatus in operative position with the patient supported thereby. Fig. 3 is a detail view showing the means for operating and holding the lifting cords or cables. Fig. 4 is a detail view of one of the supporting straps or bands.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

The supporting frame comprises the corner uprights 1, connected at their upper ends by the parallel side bars 2, which are in turn connected at intermediate points by the transverse braces 3, and the corner uprights are connected at intermediate points by transverse end braces 4, the upper of which are connected to the transverse braces 3 by means of inclined brace-rods 5.

The lifting frame consists of parallel side-bars 6, which are arranged outside of the side uprights of the supporting frame and are slightly longer than the interval between said uprights so as to overlap the same, and these side-bars are connected by transverse braces 7, whereby the extremities of the side-bars are held in contact with the outer surfaces of the uprights, which thus form guides for the lifting-frame. The side-bars of the lifting-frame are provided upon their outer sides with spaced buttons 8 for engagement with openings 9 formed in the extremities of the supporting straps or bands 10, which are adapted, as shown in Figs. 1 and 2, to be arranged under the patient preparatory to engaging their extremities with the lifting frame. Stiffening plates 11 are arranged in the ends of the supporting straps or bands, said plates being provided with openings 12 registering with the openings in the straps or bands proper to prevent tearing at the openings in the latter.

Connected to the cross-bars or braces of the lifting-frame are the operating cords or cables 13, which extend over suitable direction-pulleys 14 on the supporting framework, and are connected at their extremities to an intermediate point of the operating lever 15 fulcrumed at one end of the supporting framework. This lever is provided with locking pawls 16, which engage the teeth of segmental racks 17 arranged adjacent to the planes of the sides of the lever, said lever being preferably constructed of parallel spaced arms 18, which are secured together by means of a transverse brace 19.

The operation of the apparatus will be readily understood from the foregoing description, and briefly stated is as follows:—The bands or straps being detached from the lifting-frame are passed under the body of the patient with their extremities free and lying at opposite sides of the bed or couch, and after the supporting frame has been arranged to span the bed or couch, the lifting frame is lowered until the ends of the bands or straps can be engaged with the buttons on the lifting-frame without disturbing the patient.

When this is accomplished the lever is depressed at its outer or free end, and the lifting-frame elevated with the patient in the position occupied previous to elevating. To lower, the above operation is reversed.

The uprights of the supporting-frame are provided at their lower ends with supporting rollers or wheels 20, which are preferably swiveled to enable them to turn and adjust themselves to the direction of movement of the frame.

It will be understood that to lift a patient to a reclining or sitting position, it is not necessary to employ the lifting frame, and therefore said frame is elevated to the position shown in dotted lines in Fig. 1 adjacent to the side-bars of the supporting-framework, and is secured in such position by means of hooks 21. The operating cords or cables may then be attached to the extremities of a supporting strap or band arranged under the shoulders of the patient, and the operating lever may be depressed sufficiently to raise the patient to the position desired.

It will be understood moreover that various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit of the invention or sacrificing any of the advantages thereof.

Having described my invention, what I claim is—

In a device of the class described, the combination of a supporting-framework having parallel corner uprights, a lifting-frame having parallel side-bars which overlap at their extremities the side uprights of the supporting-frame, transverse braces connecting the side-bars of the lifting-frame and holding the extremities thereof in contact with the outer surfaces of the uprights, an operating-lever fulcrumed at one end of the supporting framework, locking devices for said operating lever, operating cords or cables connected to the lifting-frame and to the operating lever, and supporting bands or straps connected to the lifting-frame, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM EDWIN GOULDING.

Witnesses:
W. H. MYERS,
W. C. LOVE.