

979,260.

H. S. COLLIER.
INVALID AND LIKE BED.
APPLICATION FILED FEB. 7, 1910.

Patented Dec. 20, 1910.
2 SHEETS—SHEET 1.

Fig. 1.

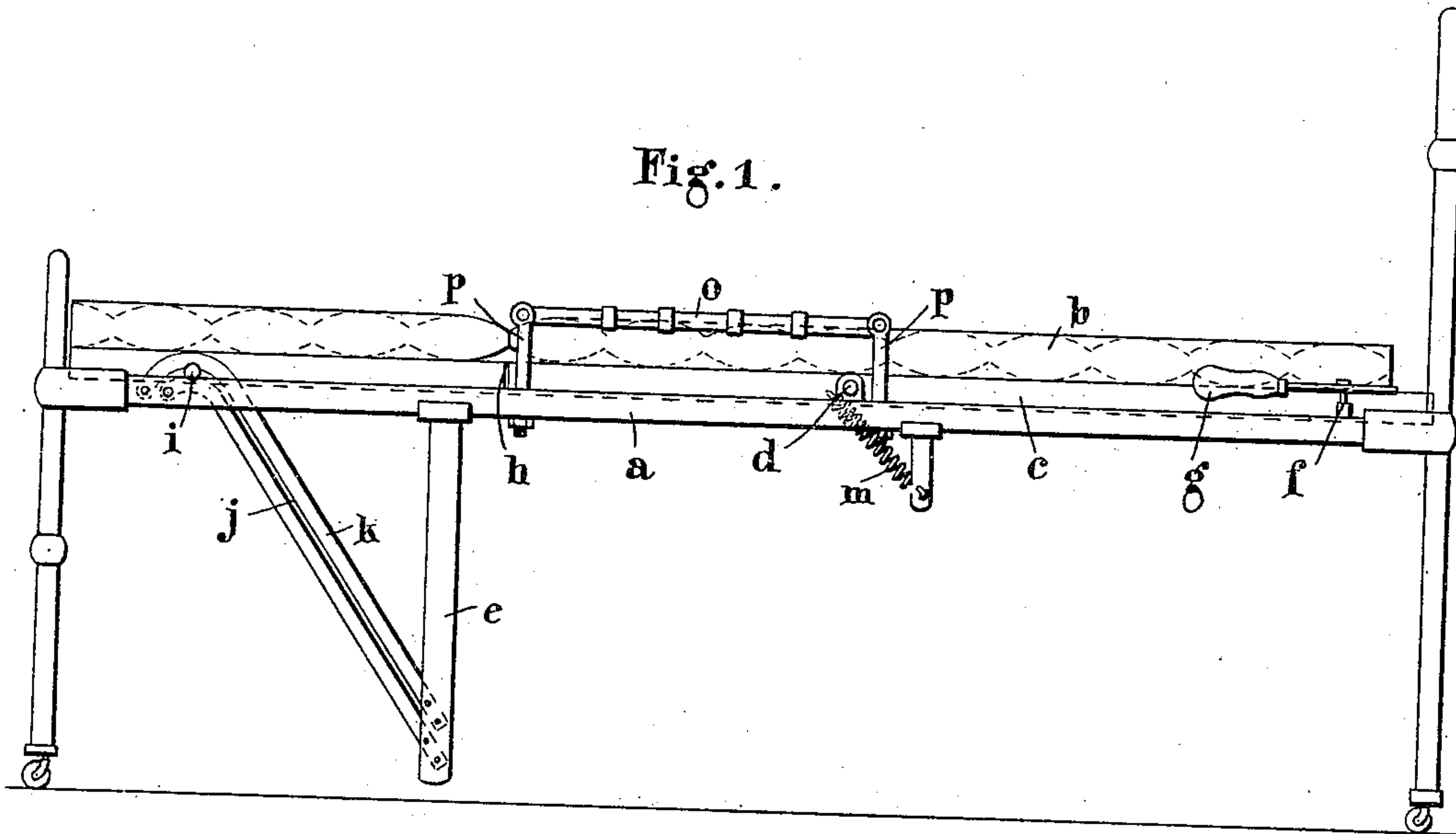
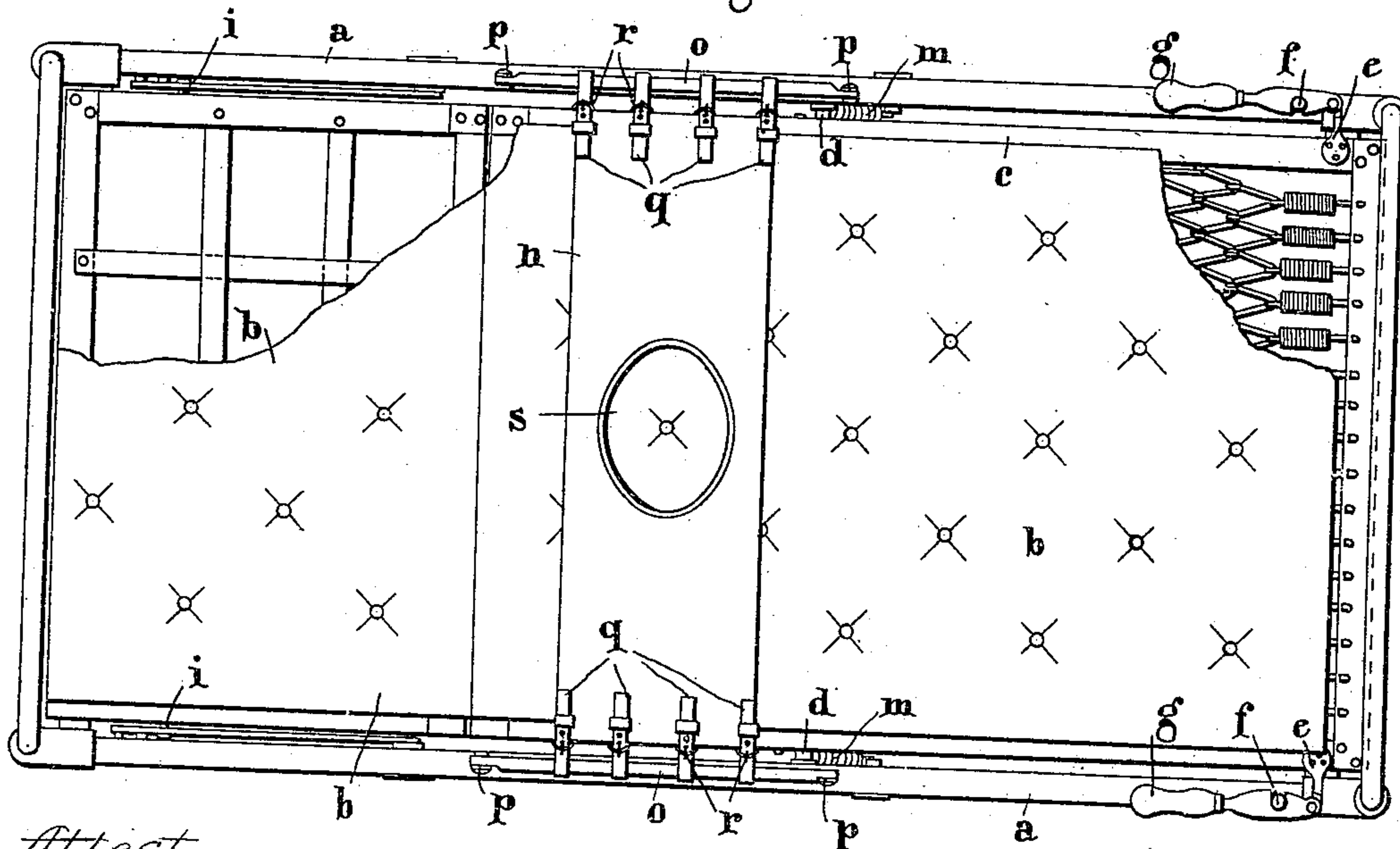


Fig. 2.



Attest.

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2 SHEETS—SHEET 2.

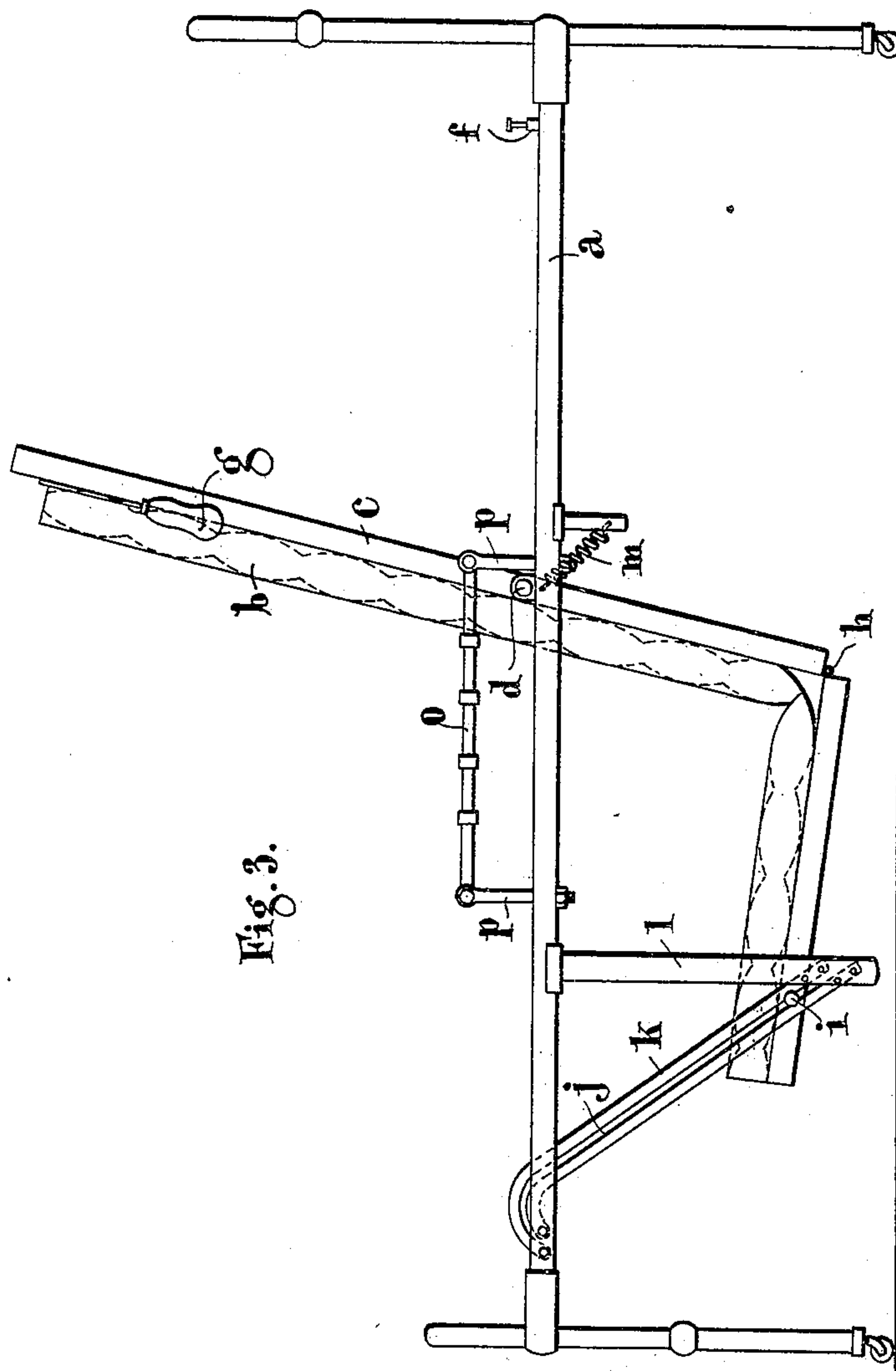


Fig. 3.

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UNITED STATES PATENT OFFICE.

HORACE STANSFIELD COLLIER, OF LONDON, ENGLAND.

INVALID AND LIKE BED.

979,260.

Specification of Letters Patent.

Patented Dec. 20, 1910.

Application filed February 7, 1910. Serial No. 542,533.

To all whom it may concern:

Be it known that I, HORACE STANSFIELD COLLIER, F. R. C. S., a subject of the King of Great Britain and Ireland, and residing at 57^a Wimpole street, London, W., England, have invented certain Invalid and Like Beds, of which the following is a specification.

This invention relates to appliances for medical and other purposes, and more specifically to the type of appliances described in my patent application in Great Britain numbered 2078 of 1909.

The object of my invention is to provide means whereby a person lying in bed can easily be caused to assume a supine or sitting position, as described, with the minimum of discomfort and disturbance.

My invention consists in a seat adapted to be introduced in a flat or nearly flat condition under the patient, the seat being adapted to be fastened securely to the bed frame or the like, so that it may properly act as a support for the person when the weight of the body is thrown upon it by the gradual removal of the mattress, together with means for supporting the back of the patient at any suitable angle.

The invention also consists in the improved invalid and like bed hereinafter described.

Referring to the accompanying drawings, which form part of the specification:—Figure 1 is an elevation of one form of the improved bedstead; Fig. 2 is a plan of Fig. 1; Fig. 3 is an elevation of the same bedstead arranged to allow of the patient sitting up.

In carrying the invention into effect according to one form as shown in Fig. 1, a bed frame *a* of ordinary construction is used, together with a mattress *b* of any type having a carrier or frame *c*. The mattress carrier *c* is pivotally supported on the frame *a*, at the points *d*, so that the mattress and carrier may rotate about an axis at right angles to the length of the bedstead, and when rotated or tilted upward it will form a support for the back of the patient. In order to prevent any tilting of the mattress when the same is being used for supine positions of the patient, the mattress carrier *c* is provided with a projecting part *e*, fixed in any manner to the frame *c*, at each side thereof, near the head of the bed. The pro-

jecting parts *e* extend above the outer frame *a* of the bedstead, and thus prevent the tilting downward of the head end of the mattress and carrier. The mattress carrier is further fixed to the bedstead frame *a* in this position by means of a pin *f*, on each side of the frame *a*, this pin *f* engaging with a handled lever *g* pivoted to the projecting part *e*. It is evident that any other suitable locking device may be used for this purpose.

It will be seen that in a case where the mattress carrier is long, or the height of the bed above the floor level small, the front of the mattress would touch the floor when the former was tilted upward, and thus only allow a small angle of tilting. In order to provide for a greater angle of tilting, the mattress, *b*, and its carrier, *c*, are divided into two parts hinged together at *h*; while a peg *i* is attached to each side of the carrier *c*, between the hinge *h* and the foot of the bed, this peg *i* being guided in a suitably formed slot *j* in a frame *k*, carried by the bed frame *a*, and a support *l*, as shown. When the head of the mattress is tilted upward, the lower end of the mattress carrier *c* is guided by the frame *k* till it assumes the position shown in Fig. 3. Springs may be used as shown at *m*, to assist the beginning of the swinging of the frame *c* from the flat. The lower end of the mattress carrier *c* may be secured in any position by fixing the peg *i* to the guide *k* by screws or other suitable means, thus forming a rest for the patient's feet.

The seat, adapted to be introduced in a flat condition under the patient, consists of a sheet *n* of some thin and preferably flexible material, such as canvas or sheet steel covered with flannel or other cloth, which can be inserted between the mattress and the hips of the patient when he is in a supine position.

Suitable means are provided for securing the sheet *n* in place. Such means, according to one form, consists in rails *o*, supported at the same level as the top of the mattress *c*, by the two pillars *p*, fixed rigidly to the side frames *a* of the bedstead, and straps and buckles *q*.

It will be seen that when the mattress is tilted upward, the weight of the patient is gradually transferred to the sheet *n* which thus forms a seat. This seat *n* is preferably

provided with an opening *s*, so that by attachment of a suitable vessel, the patient can conveniently micturate or defecate; a cover being provided for this opening when
5 the same is not required.

In a modification of the invention, instead of dividing the mattress into two parts to allow a greater angle of tilting therefor, a light canvas or like covered frame may be
10 provided to give support to the patient's back. This frame is of a rectangular shape, and is pivoted to the frame *a* at both sides near the head of the bed, and is made so that it can be supported at any angle. With
15 this arrangement the sheet *n* still forms a seat, and this frame *f* gives support to the patient's back when he is raised into a sitting position by the rotation of the mattress carrier. Further, this device permits of the
20 withdrawal of the mattress when the patient is in a sitting position.

It is evident that the principle underlying my invention is to enable an ordinary mattress to be used for the bed, while the
25 patient is supine, yet to enable a patient to attain a sitting position for any required purpose, without substantial disturbance; also that in carrying the invention into effect, many minor alterations can be made

therein, without in any way departing from 30 the spirit of the same.

Having now described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In combination, a bedstead frame, a 35 mattress frame comprising a main section pivotally connected to said bedstead frame and a supplemental section hinged to the main section, inclined guides carried by the bedstead frame, and sliding connections between the supplemental section and said inclined guides, substantially as described. 40

2. In combination a bedstead frame, a 45 mattress frame comprising a main section pivotally connected to said bedstead frame and a supplemental section hinged to the main section, inclined guides carried by the bedstead frame and having downwardly extending portions at their upper ends, and sliding connections between said supplemental section and said guides, substantially 50 as described.

In testimony whereof, I affix my signature in presence of two witnesses.

HORACE STANSFIELD COLLIER.

Witnesses:

H. A. JONES,

EUSTACE H. BARKER.