

L. E. FRY.

WALL BED.

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966,898.

Patented Aug. 9, 1910.

2 SHEETS—SHEET 1.

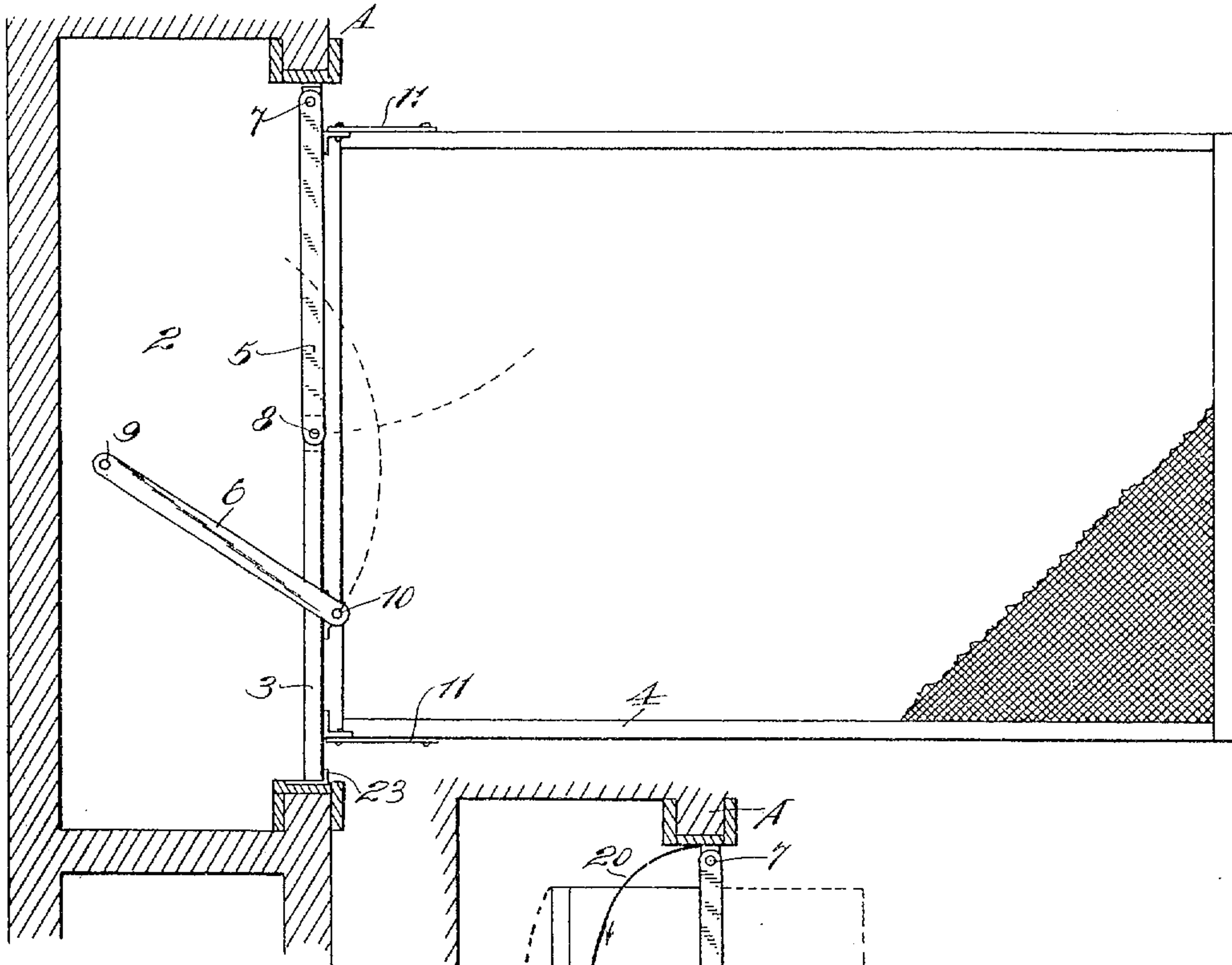


Fig. 1.

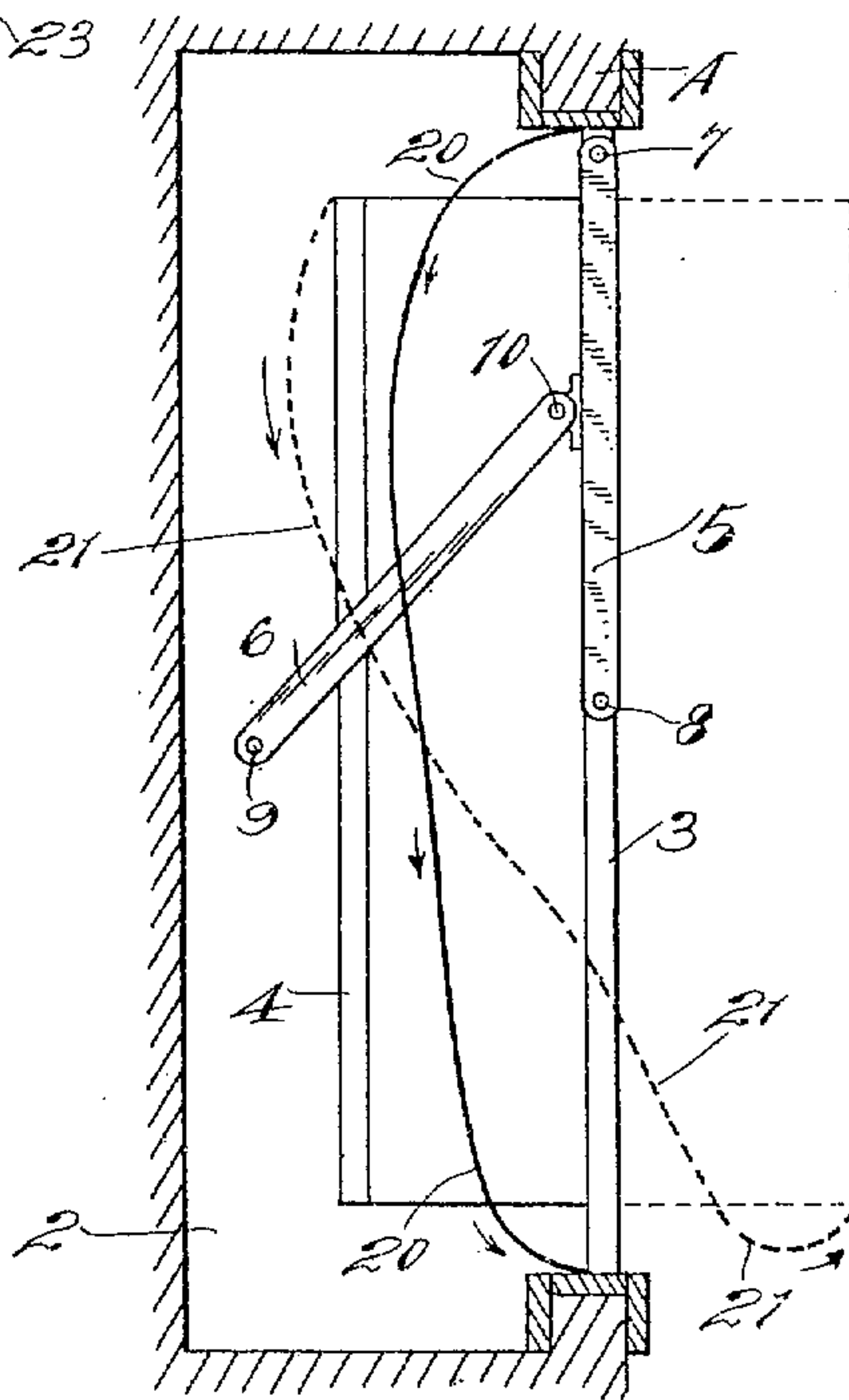


Fig. 2.

WITNESSES

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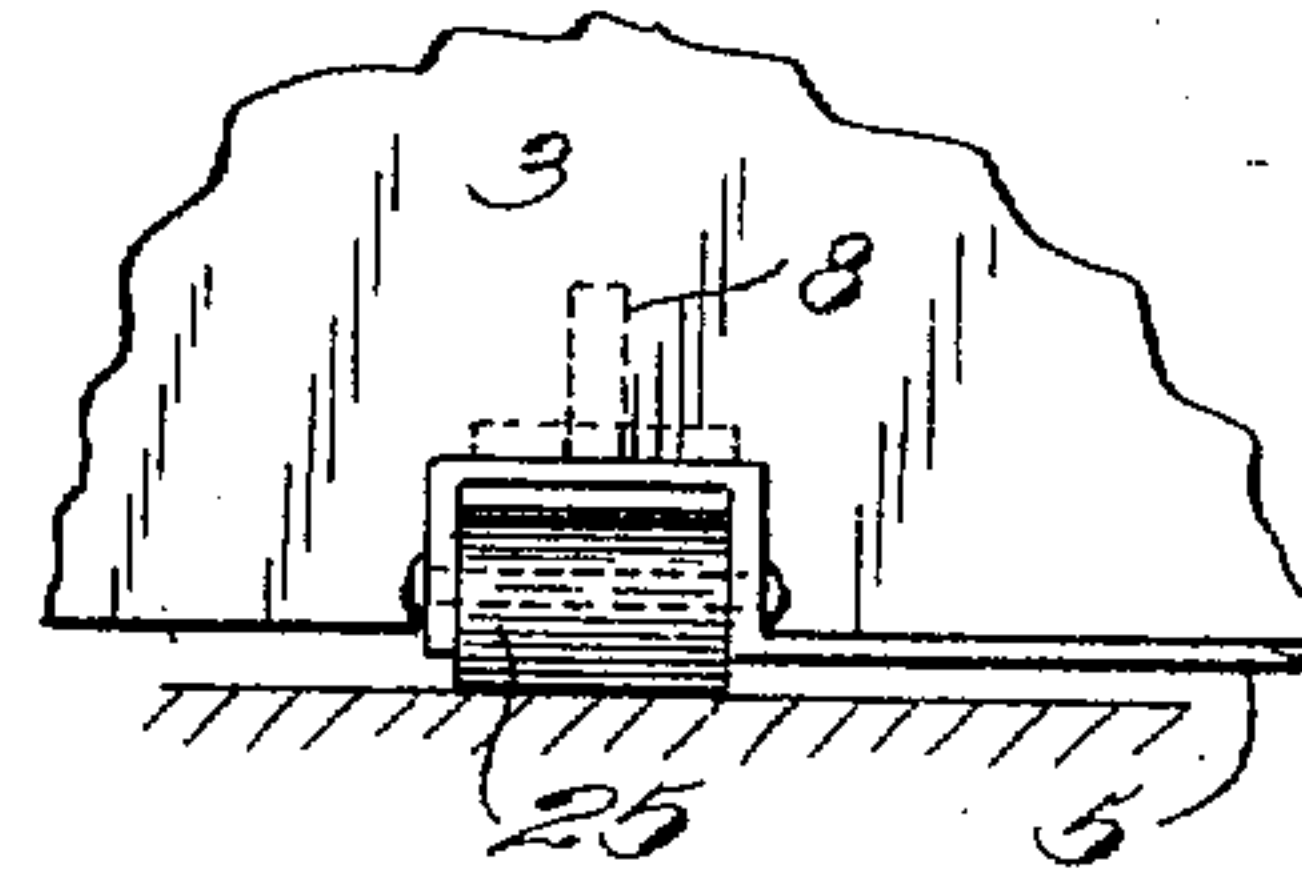
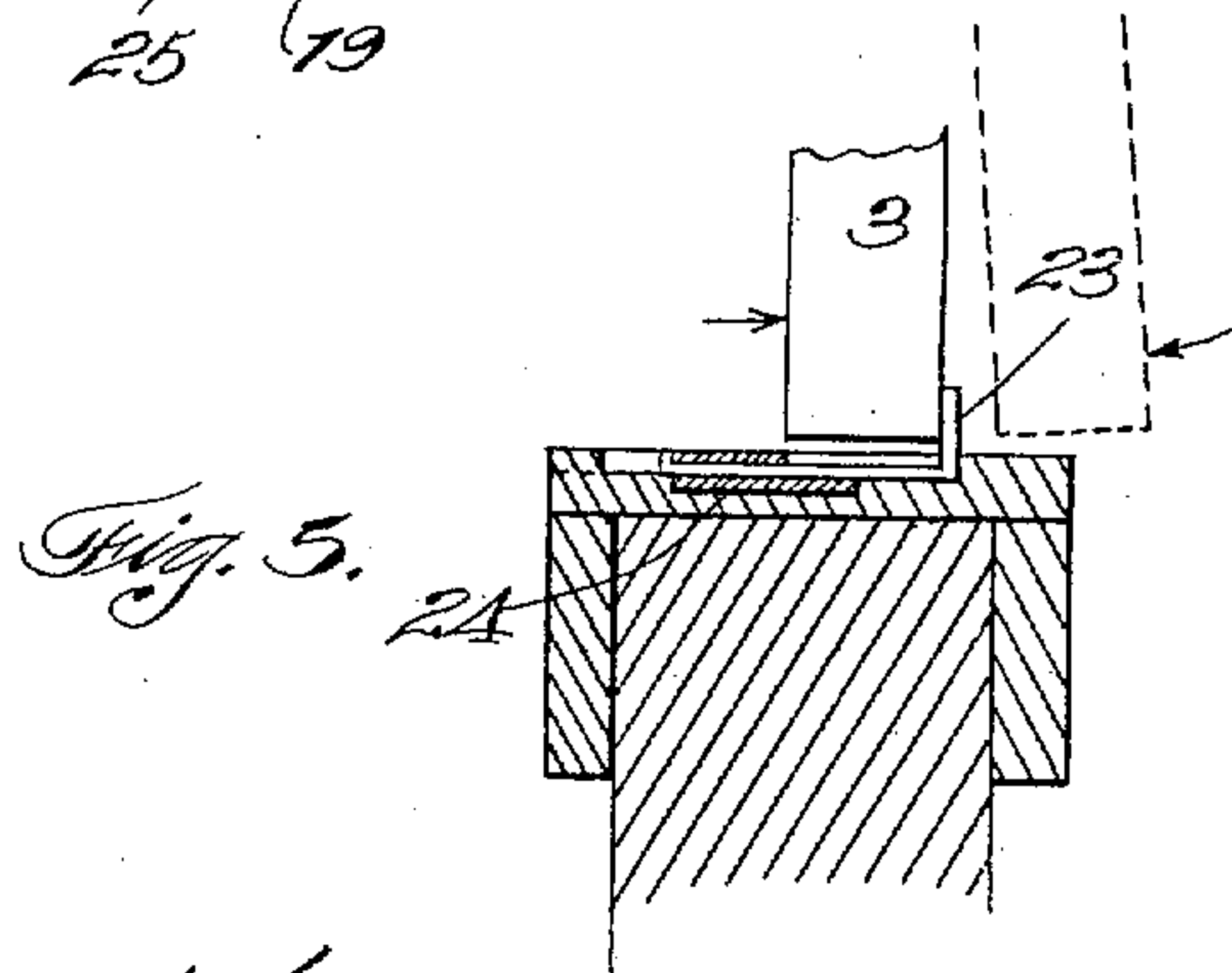
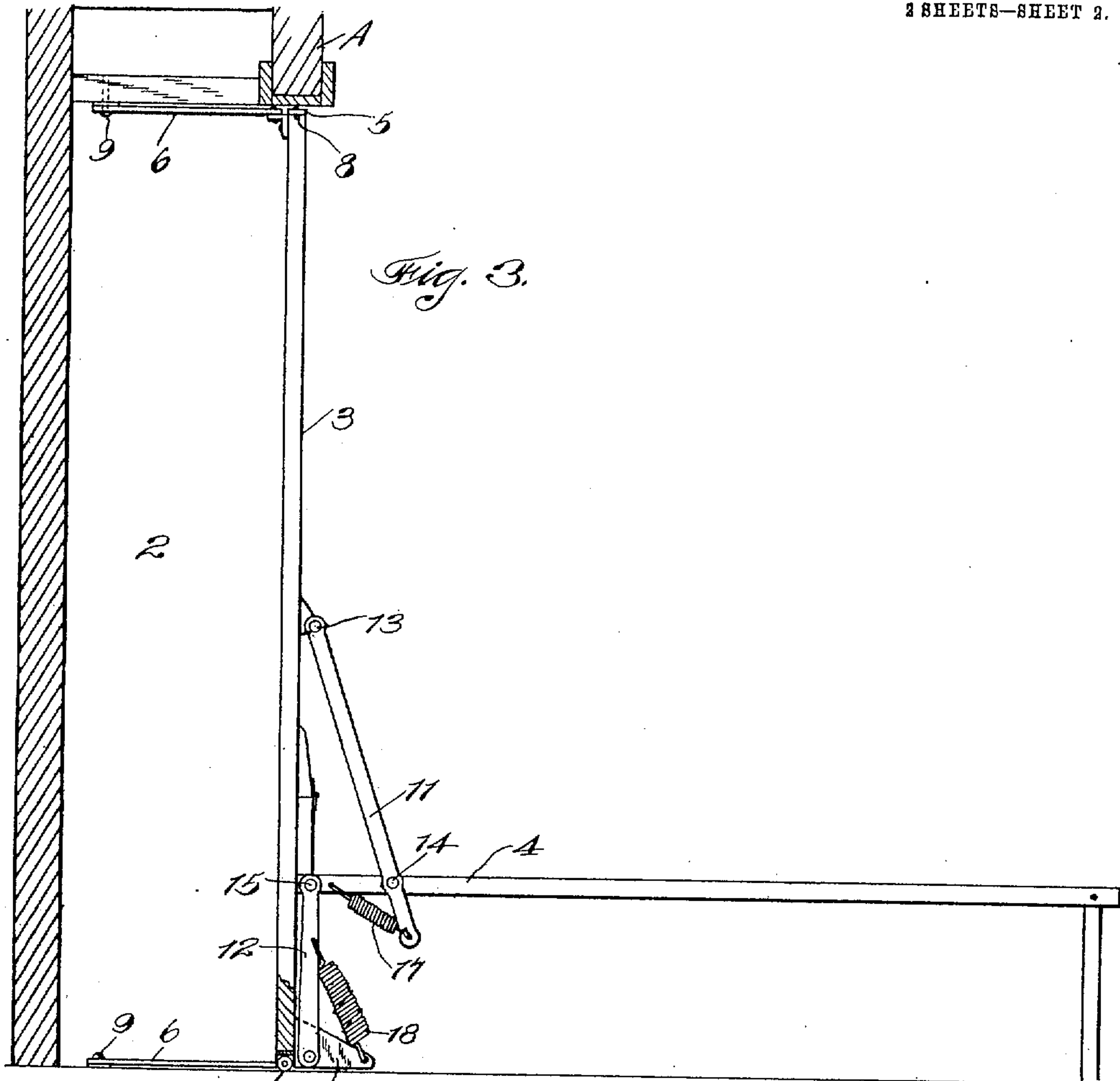
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2 SHEETS—SHEET 2.



WITNESSES

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WALL-BED.

966,898.

Specification of Letters Patent.

Patented Aug. 9, 1910.

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To all whom it may concern:

Be it known that I, LEE E. FRY, citizen of the United States, residing at the city and county of San Francisco and State of California, have invented new and useful Improvements in Wall-Beds, of which the following is a specification.

My invention relates to articles of furniture for apartment houses and the like, and pertains especially to a wall bed which may be concealed in an opening in the wall when the bed is not in use, and which can be turned into operative position in the room when needed.

The particular object of the invention is to provide a simple, cheap, practical adjunct to apartments, where space is to be economized, whereby a closet in a wall is provided with a door or hinged panel turnable so as to carry a bed or other article of furniture into or out of the closet; the door or panel being so hinged as to turn about a constantly varying pivot in such fashion that a very shallow closet will accommodate a comparatively wide bed.

There are other objects which will be manifest hereinafter.

The invention consists of the parts and the construction and combination of parts as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a plan of the device, partly in section. Fig. 2 is a diagrammatic plan. Fig. 3 is a side elevation, partly in section. Fig. 4 is a detail of the bearing roller. Fig. 5 is a detail of the stop.

A represents the wall of the room or building to which the invention is applied. This wall has a suitable opening or closet made in it which is ordinarily closed by a door or panel 3, which latter carries on one side a folding-bed 4 or other article of furniture.

In apartment houses or other buildings where a wall bed is desired, it is essential to economize space, and, therefore, the closet must be as shallow as possible; and if there is any room unoccupied by the bed when the latter is swung into place, or space which is not necessary to accommodate the parts in the reversing of the door or panel in swinging the bed into operative position within the room, it would be available as closet room proper wherein to hang clothes, etc. It is therefor that I hinge my door or panel 3 at

top and bottom by means of sets of double links 5 and 6. These links at top and bottom are alike, so the description of one set at the top or bottom will serve as a description of the other set.

The link 5 is pivoted on a vertical pivot 7 at one end within the closet and near one side of the closet, and the other end of the link is pivoted to an end of the panel 3 and about centrally thereof, as represented at 8. The other corresponding link 6 is pivoted on a vertical pivot 9 a little to one side of the center of the top of the closet, and the other end of the link 6 is pivoted to the end of the door, as at 10, intermediate of the pivot 8 and the edge of the door which is adjacent to pivot 7 when the door is closed and the bed folded within the closet.

The length of the arms or pivot-rods 5 and 6 and the disposition of the pivots 7—8—9—10 are carefully arranged, so that when the bed is within the closet the door will be flush with the wall and act as a closure for the closet; and when the door or panel is turned half around to swing the bed into the room, the door or panel will occupy substantially the same plane as it did when the bed was in the closet. That is to say, whether the bed is in use or not, the panel will be always substantially flush with the wall. At the same time, the width of the panel may considerably exceed the depth of the closet. As a matter of fact, by mounting a panel on a double pair of arms as 5 and 6 at top and bottom, I am able to successfully operate a double bed in a closet which is not over fifteen inches deep, and at the same time leave three or four inches of vertical space back of the bed when the same is folded into the closet, which can be utilized for hooks and narrow shelves.

The bed 4 may be of any suitable type, but preferably it is hinged to the inside of the panel 3 so as to fold up into vertical inoperative position parallel with the door, so that it can be swung into the closet when not in use, and opened out into horizontal operative position when swung into the room.

As here shown, the bed is supported at each side on an upper pair of links 11 and a lower pair of links 12; the links 11 being pivoted, as at 13, to the door, and at 14 to the bed at a point intermediate of the ends of the links and forward of the pivots 15

for the links 12. When the bed is opened out the links 12 stand nearly vertical, so as to provide a stop or brace to the accidental folding up of the bed when the same is in use. The ends of the upper links 11 which extend below the pivots 14 have springs 17 connected to them and to the bed adjacent to pivots 15, and other springs 18 are secured to the links 12 and to brackets 19, so that the double pair of springs 17—18 will act to counterbalance the bed and enable it to be folded up easily, and also maintain the bed in vertical position parallel with the door 3 without the need of any other securing means.

In operation, the bed when not in use is folded up against the door or panel 3 and the latter turned to carry the bed into the closet. When the bed is needed for use, the door is turned on its double set of pivots provided by the links 5—6, and in turning the door these links or arms operate to allow the door and the bed to turn so that the inner edge of the door, or the edge nearest to the pivots 7—9, moves in an irregular curve, represented by the line 20, Fig. 2; and the inner edge of the bed which approaches closest to the back wall of the closet moves in an irregular curve, represented by the dotted line 21, Fig. 2.

In the turning of the door or panel about its variable pivot in either direction, a part of the panel moves into the closet, but the major portion of it is thrust outward into the room by means of the arms 5 and 6. It is in consequence of this peculiar eccentric movement of the door and the bed about its double set of pivots, that allows the use of a bed in a closet where the width of the bed is more than twice the depth of the closet.

The space represented between the line 21 and the back wall of the closet may be utilized for hooks, shelves and the like.

When the bed is swung fully into the room so that the door is reversed and flush with the wall, the door strikes a sliding stop 23 that prevents the door turning any further. This stop 23 simply comprises a bar or plate bent at the ends and sliding in suitable guides 24 in the closet. When the bed is folded up and turned into the closet again, the opposite edge of the door strikes the stop 23 and pushes the same back into the closet and limits the further closing movement of the door.

In order to assist the door hinges in supporting the door and the weight carried by it, the door pivot of the undermost link 5 may be provided with a roller 25 which runs on the floor.

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

1. The combination of a closet and a door therefor, an article of furniture carried by one side of the door, a double set of links at the top and bottom of the door, each of said sets of links comprising a member pivoted at one end within the closet and near one side thereof and having its opposite end pivoted to an end of the door and about centrally thereof; the other member of the same set of links being pivoted to one side of the center of the closet having its other end pivoted to the end of the door intermediate of the inner pivot of the first-named member and the edge of said door, when said door is closed; and a roller adapted to operate over the floor to assist in supporting the door and the weight carried by it, said roller being carried by one of the links of the lower set.

2. In a reversible wall attachment, the combination of a wall having a closet and a door for said closet, an article of furniture upon one side of the door, a pair of arms and a corresponding pair of arms at the bottom of the door adapted to support the same, the arms of each pair having one end pivoted inside the closet and their other ends pivoted to a corresponding end of the top, said arms and their pivots being arranged so that the door is flush with the wall whichever side of the panel is turned into the room, and a roller carried by one of the links of the lower pair adapted to operate over the floor and assist in supporting the door and the weight carried by it.

3. In a reversible wall attachment, the combination of a wall having an opening, and a panel hinged to swing in said opening, said panel having a bed hinged at the lower end of said panel, said bed folded upward in a position parallel with said panel, the hinge connections for said bed with said panel comprising a pair of upper links pivoted to the panel and to the bed between the ends of the latter, said links having their lower ends projecting below the bed when the latter is opened out, springs connected to the lower ends of these projecting links and to the head of the bed, and a lower pair of links pivoted to the lower end of the panel and also pivoted to the head end of the bed, said last named pair of links being arranged to stand nearly vertical, when the bed is opened out so as to provide a stop or brace to the accidental folding up of the bed when the same is used.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

LEE E. FRY.

Witnesses:

HENRY B. LISTER,
C. W. EASTIN.