(No Model.)

F. A. DECKER.

SOFA BED.

No. 373,445. Patented Nov. 22, 1887.

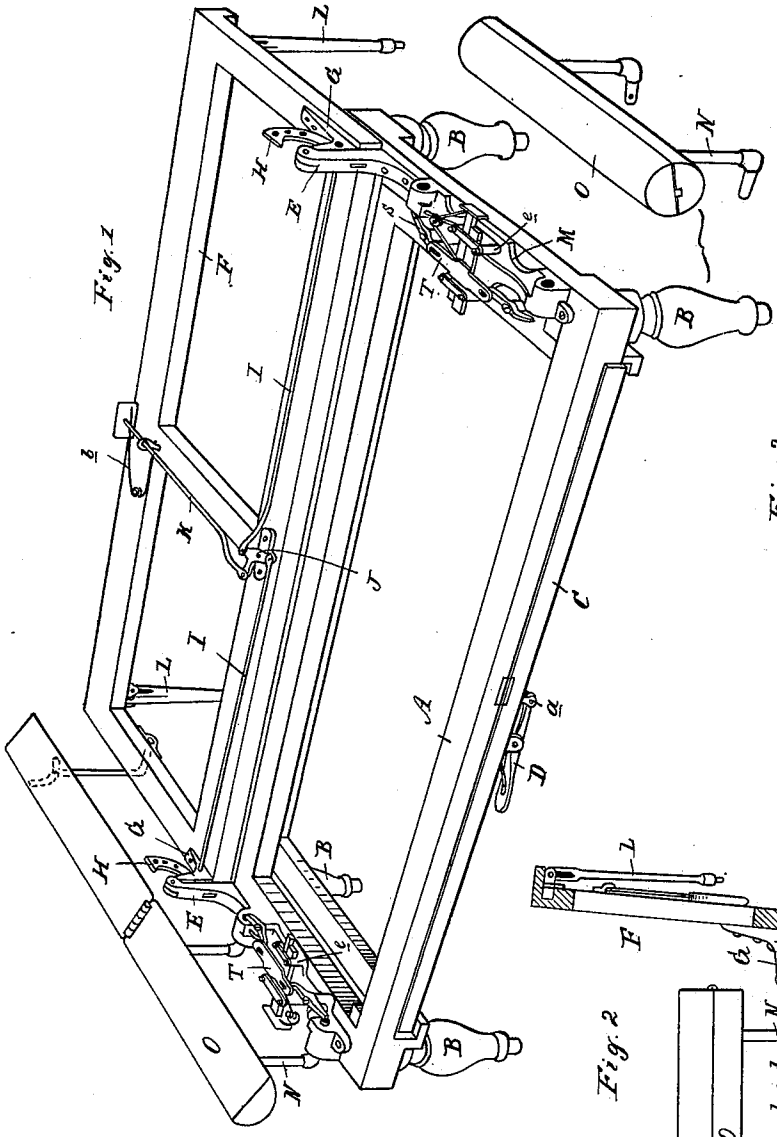


Fig. 1

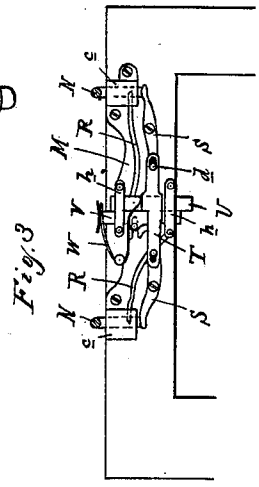


Fig. 3

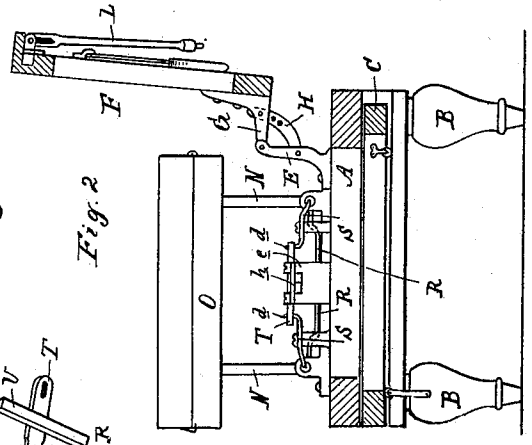


Fig. 2

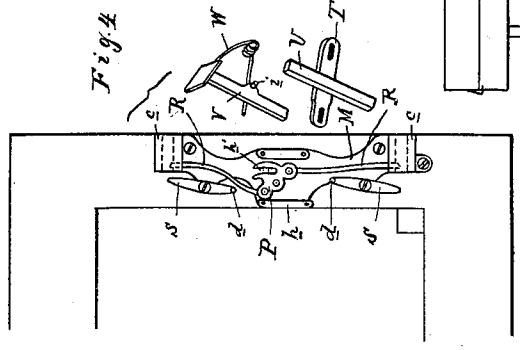


Fig. 4

Attest:
John Schuman.
Charles J. Hunt.

Inventor:
Frank A. Decker.
by his Atty
Thos. S. Sprague

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

FRANK A. DECKER, OF DETROIT, MICHIGAN.

SOFA-BED.

SPECIFICATION forming part of Letters Patent No. 373,445, dated November 22, 1887.

Application filed April 21, 1887. Serial No. 235,589. (No model.)

To all whom it may concern:

Be it known that I, FRANK A. DECKER, of Detroit, in the county of Wayne and State of Michigan, have invented new and useful Improvements in Sofa-Beds; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to certain new and useful improvements in sofa-beds.

The invention consists in the peculiar construction and operation of locking mechanism for securing the head-rests, in the peculiar mechanism for securing the back, and in the peculiar construction, arrangement, and combinations of the various parts, all as more fully hereinafter set forth.

Figure 1 is a perspective view of my improved device opened or arranged as a bed. Fig. 2 is a vertical cross-section of the same closed as a sofa. Fig. 3 is a plan of one of the head-rest-locking devices. Fig. 4 is a detail view of the same.

In the accompanying drawings, which form a part of this specification, A represents the bottom frame of the sofa, mounted upon suitable legs, B.

C is a drawer, sliding in suitable guides beneath the frame A, and should preferably be provided with anti-friction rollers to permit of its being easily opened.

D is a spring-lever, properly fulcrumed to the drawer-frame, and is provided with a locking-pin, *a*, which engages with a suitable latch-plate on the under side of the front rail of the frame A, to prevent the drawer from being accidentally opened.

E are standards rising from the frame A, near the rear corners thereof, and to the upper ends of these standards the back-frame F, is pivotally hinged by means of the arms G. To the standards E are secured the segments H, the free ends of which extend up through slots in the arms G, and each is provided with a series of holes, with which the locking-rods I engage. The inner ends of these rods I are connected to an actuating-lever, J, fulcrumed to the back-frame, said lever J in turn being operated by a push-rod, K, which extends to the outer edge of the back-frame, and is provided with any suitable spring, as at *b*, to retain the rods I in their normal or projected position. Suitable legs, L, are pivotally secured to the back-frame in such manner that as said frame is lowered the legs will assume a vertical position, so as to support the free edge of the frame.

M is a suitable bed plate or plates, one being secured to each of the end rails of the frame A, and they are provided with suitable sockets, *c*, near each end, for the reception of the ends of the standards N, which support the arm-rests O. Properly fulcrumed upon the plate M is a double-armed lever, P, the arms of which are pivotally connected to the inner ends of the lock-bolts R, the outer ends of which project through the walls of the sockets *c*, to engage with suitable holes in the arms of the arm-rest standards when they are inserted.

S is a lever pivotally secured to the bed-plate, the outer ends of such levers projecting in front of sockets *c*, while their inner ends are provided with upwardly-projecting lugs *d*, which engage with the slotted ends of the cross-bar T, secured upon the top of the slide-bar U.

V is an actuating-bar, which, with the bar U, has a sliding movement between the guide-posts *e*, rising from the bed-plate, and are held in their proper positions against accidental displacement by the girts *h*, which connect the tops of guide-posts in pairs, as shown.

W is a suitable spring, one end of which is secured to the cross-bar T, while the opposite end is secured to the head of the actuating-bar V.

One or both of the arm-rests O, I would preferably make circular in cross-section and divide them in their longitudinal center, as shown, hinging the two parts together at one end and providing any suitable locking device at the other. By this construction, when the device is to be used as a bed, the arm-rest could be opened and supported by a proper support on the back-frame, thus forming a head-rest for both bottom and back frame.

It will readily be seen that the back can be adjusted vertically or upon a rearward incline or opened, as in Fig. 1, by the mechanism described.

The operation of the locking-device for the arm-rest is as follows: As the ends of the stand-

ards are inserted in sockets, they pass the ends of the lock-bolts R and strike against the ends of the levers S, forcing them inward and causing the cross-bar T, with its slide, to move in an opposite direction or toward the outer ends of the frame. As soon as the holes in the standards N come coincident with the ends of the lock-bolts R, the spring W causes the actuating-bar V to slide outward, and by the engagement of a lug, *i*, in the under side of such bar with a slot, *h'*, in the body of the lever P compels the bolts R to shoot outward and lock the arm-rests in position. To remove the head-rests push in upon the head of the bar V. This first withdraws the locking-bolts from their engagement with the standards of the arm-rests. The spring W then exerts its force upon the cross-bar T, and, by the construction shown, causes the ends of the levers S to come in contact with the projecting ends of the standards and force them outwardly, preventing a re-engagement of the parts after the actuating-bar is released, thus leaving the operator with both hands free to remove the arm-rest.

The segments H, passing through the standards E G, serve as guides for the parts in their adjustment and also to strengthen the same.

What I claim as my invention is—

1. The combination, with the frame A, the arm-rest O, standards N, and bed-plate M, of the levers S, pivotally secured to said bed-plate, the sliding bar U, actuating-bar V, and cross-bar T, secured upon the top of the bar U, all substantially as and for the purpose specified.

2. The combination, with the frame A and bed-plate M, secured to one of the end rails thereof, of the levers S, pivoted to said bed-plate and having at their inner ends upwardly-projecting lugs *d*, the slotted cross-bar T, the slots of which engage said lugs, the sliding bar U, carrying said bar T and arranged at right angles thereto, the actuating-bar V, and the spring W, substantially as and for the purpose specified.

3. The combination, with the plate M, double-armed lever P, fulcrumed on said plate, lock-bolts R, pivotally connected to the arms of said lever, and arm-rest standards, of the standards N, provided with holes, and the spring W, substantially as and for the purpose specified.

FRANK A. DECKER.

Witnesses:
H. S. SPRAGUE,
JOHN O'CONNOR.