No. 753,173. PATENTED FEB. 23, 1904.

H. D. SMITH.

SWINGING BED SPRING DEVICE.

APPLICATION FILED NOV. 4, 1903.

NO MODEL.

Fig. 1.

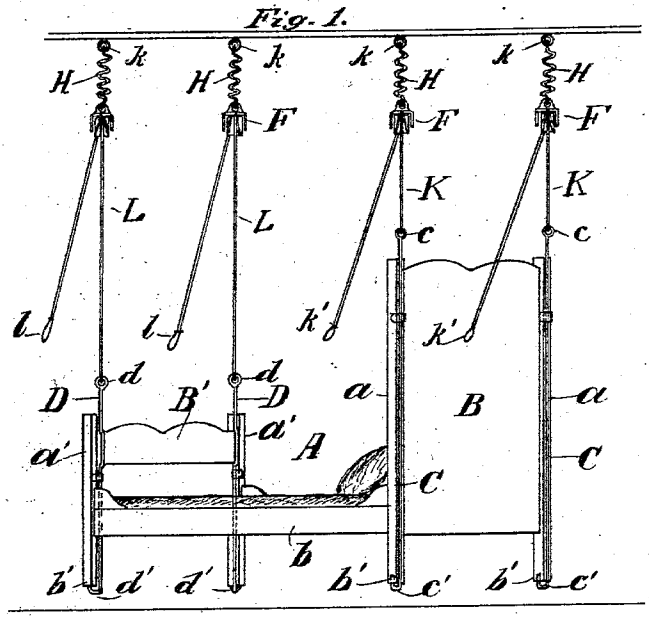


Fig. 2.

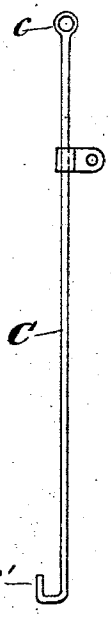


Fig. 3.

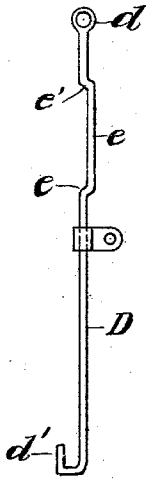


Fig. 4.

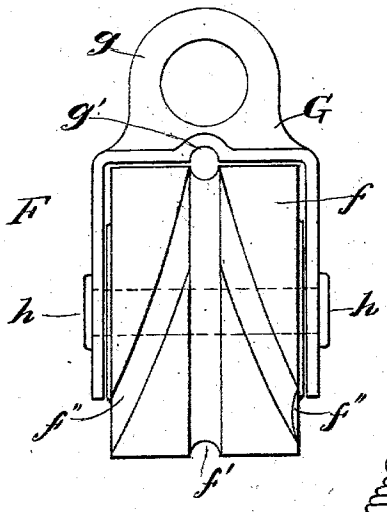


Fig. 5.

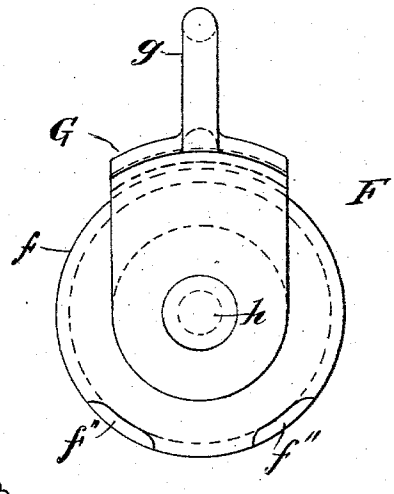
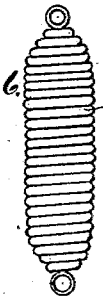


Fig. 6.



Witnesses
Margaret M. Kerr.
E. B. Clark

Inventor
Harry D. Smith
By Treat & Parlow
Attorneys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 753,173. Patented February 23, 1904.

UNITED STATES PATENT OFFICE.

HOSEA D. SMITH, OF CECIL, GEORGIA, ASSIGNOR OF ONE-HALF TO JOHN B. ROBINSON, OF CECIL, GEORGIA.

SWINGING BED SPRING DEVICE.

SPECIFICATION forming part of Letters Patent No. 753,173, dated February 23, 1904.

Application filed November 4, 1903. Serial No. 179,816. (No model.)

To all whom it may concern:

Be it known that I, HOSEA D. SMITH, a citizen of the United States, residing at Cecil, in the county of Berrien and State of Georgia, have invented new and useful Improvements in Swinging Bed Spring Devices, of which the following is a specification.

This invention relates to swinging or suspension spring bed-supporting devices.

The object of my invention is to provide simple and conveniently adjusted devices for suspending and supporting an ordinary bed by coiled spring connections clear of the floor, whereby it may be kept free from insects and will be more agreeable and comfortable for invalids.

My devices are of simple and inexpensive construction and can be readily applied to bed-frames now in use and are particularly adapted for use in hospitals and in homes where invalids are under treatment.

The matter constituting my invention herein will be set forth in the claims.

I will now describe the details of construction and use of my devices by reference to the accompanying drawings, in which—

Figure 1 represents a perspective view of a bed-frame with my spring-suspending devices attached thereto. Figs. 2 and 3 represent views, on an enlarged scale, of the holding-rods. Figs. 4 and 5 represent, respectively, a face and a side view, on an enlarged scale, of one of the catch rollers or pulleys. Fig. 6 represents an enlarged detail view of a coiled spring.

My suspending and swinging spring-supporting devices are applied to a bed A of the usual construction and to the ceiling for swinging the bed clear of the floor, as shown in Fig. 1. The bed-frame A is constructed with the usual head and foot boards B and B′, the two head-posts *a* and the two foot-posts *a′* and side rails *b*. The lower ends of the corner-posts *a* and *a′* are provided with the usual sockets *b′* for receiving the hooked or upwardly-bent ends of my supporting-rods. The longer supporting-rods C, preferably made of iron, are provided at their upper ends with eyes *c* and at their lower ends with the upwardly-turned engaging pins or projections *c′*. These rods are preferably applied at the back of the head-posts *a* with the upwardly-bent lower ends *c′* in the sockets *b′* at the lower ends of the posts and with their upper ends *c* rising a short distance above the posts for conveniently attaching the ropes K. The shorter supporting-rods D are preferably made each with an offset *e* and shoulders *e′* for fitting over the foot-board B′, and such rods are preferably applied inside of the foot-board, as shown in Fig. 1, with their bent lower ends *d′* in the socket *b′* of the posts *a′*. To the upper eyes *d* are connected the ropes L, which may be provided at their other ends with handles *l*.

To the ceiling above the place where the swinging bed is to be located are secured four screw eyes or hooks *k* in proper position to be above the four posts of the bed. Four coiled or spiral springs H are engaged with said hooks or eyes and also with the four rollers or pulleys F. The two head-ropes K and the two foot-ropes L are passed over the pulleys F, resting in the central circular grooves *f′* thereof. The sheave *f* of the pulley is mounted on a pivot-pin *h* in the block G and is provided with a central circular groove *f′*. The block G is provided with an eye *g* and at its interior face with a groove *g′*, which registers with the groove *f′* of the sheave for the free passage of the rope when raising or lowering the bed. The sheave *f* is also provided with two short diverging or diagonal grooves *f″*, which may be about one-third the circumference of the sheave. The diverging grooves *f″* are for receiving the rope when it is pulled to one side in order to catch and hold it or lock it against the face of the pulley-block after the bed-frame has been raised to the desired height. The coiled springs H are hooked at their lower ends into the eyes *g* of the catch-pulleys F and at their upper ends are engaged with the screw eyes or hooks *k* in the ceiling.

A set of devices for suspending and swinging a bed comprises four screw eyes or hooks, four springs, four rollers or pulleys, four ropes, and four iron rods. These devices may

be quickly and conveniently placed in position and applied to any ordinary bed-frame, so that it may be raised from the floor and suspended from the coiled springs H.

The parts having been applied and connected as above described, the bed-frame can be conveniently raised by a single person pulling first upon the free ends of the ropes K until the bed is raised at that end a sufficient height. Then each rope is pulled to one side, so that it will enter one of the diverging grooves *f''* in the sheave and is slackened, permitting the sheave to turn backward, thereby pinching the rope in said groove against the face of the pulley-block. It will be understood that the weight of the bed will turn the sheave backward a short distance as soon as the rope is slackened. The head of the bed having been raised, the foot may be raised and held in place in the same manner as above described. Of course two attendants may raise the head and foot at the same time, if desired. The operation is very simple and can be quickly performed at any time.

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

1. In a bed-frame, the corner-posts having sockets in their lower ends, in combination with rods having at their lower ends upwardly-bent pins or projections adapted to engage with said sockets, springs and attached pulleys connecting with the ceiling in position above and corresponding to the bed-posts and ropes connected with said rods and passing over the pulleys, substantially as described.

2. In a bed-frame, the corner-posts having sockets in their lower ends, supporting-rods having upwardly-bent or hooked lower ends for engaging with the sockets, and eyes at their upper ends, coiled springs connecting to an overhead support in position corresponding with said corner-posts, pulleys having each a rope-locking device attached to said springs, and ropes connecting with the rods and passing over the pulleys, substantially as described.

3. In a set of devices for suspending and swinging a bed clear of the floor, a rod having an upwardly-bent hook at one end and an eye at the other end, a catch-pulley having a rope-locking device, a coiled spring connecting with the pulley, a rope connecting with the eye of the rod and adapted to pass over the sheave of the pulley, substantially as described.

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

HOSEA D. SMITH.

Witnesses:
W. D. RATLEY,
B. A. LAVOOM.