

(No Model.)

2 Sheets—Sheet 1.

J. GOODWIN.
SELF LEVELING SHIP'S BERTH.

No. 567,708.

Patented Sept. 15, 1896.

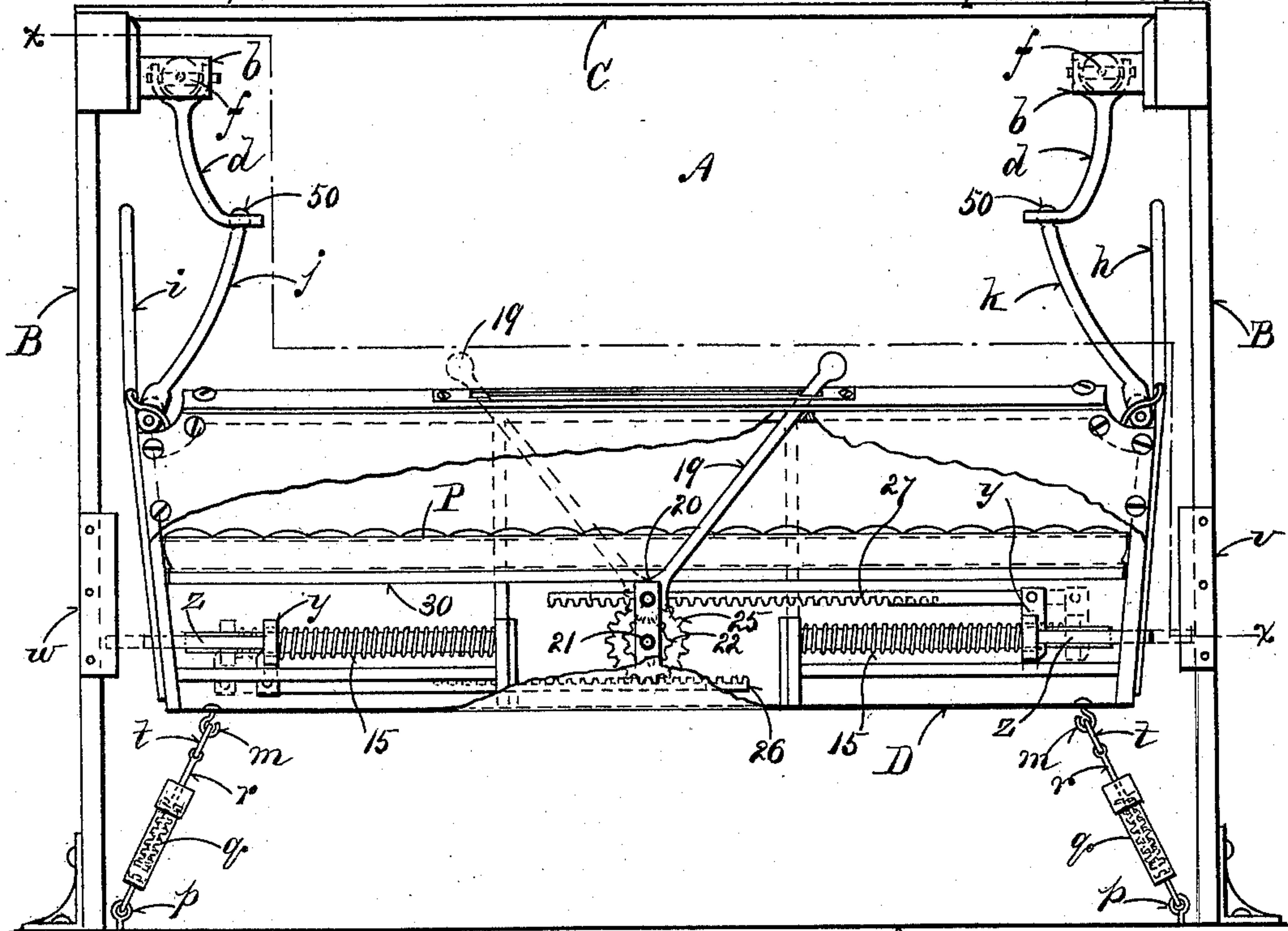


Fig. 1.

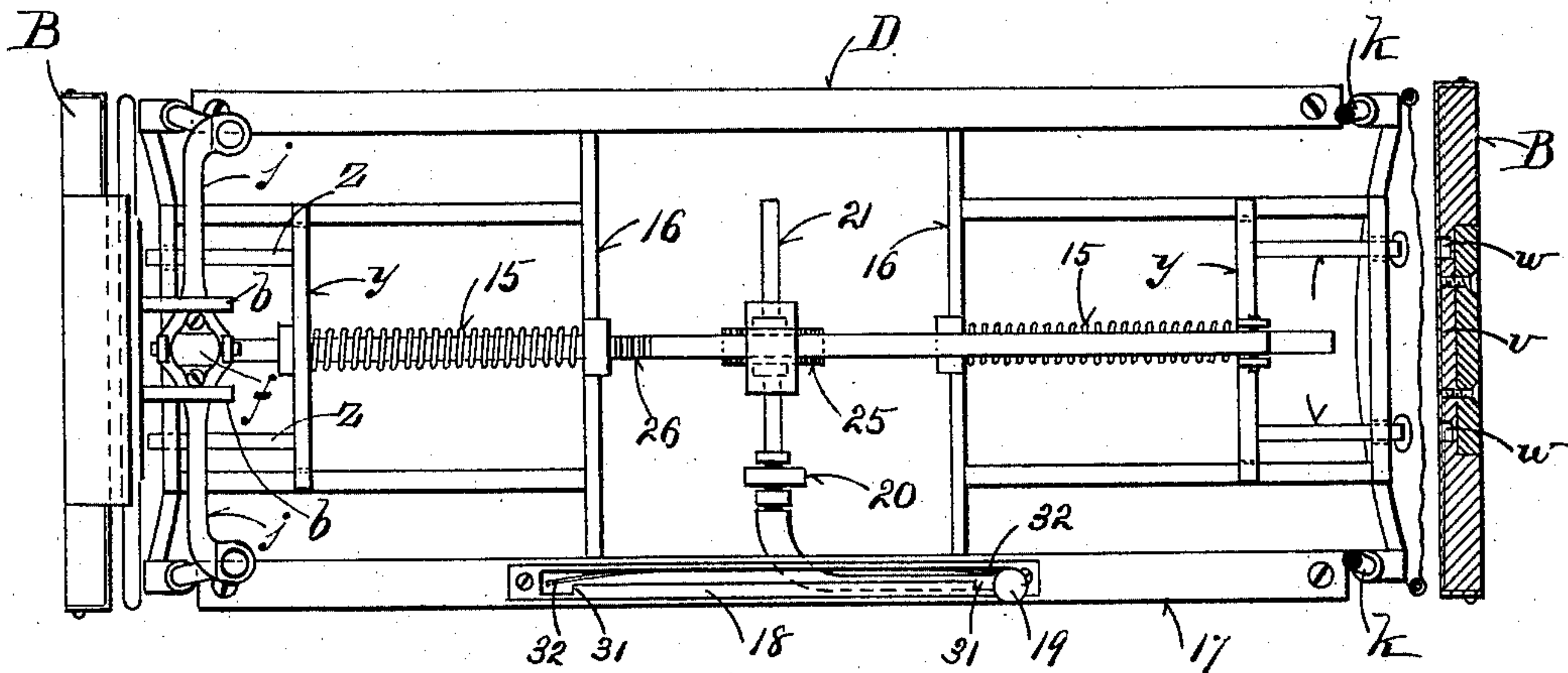


Fig. 2.

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John H. Hoff.

INVENTOR=
James Goodwin
by Edwin Blanta

ATTY

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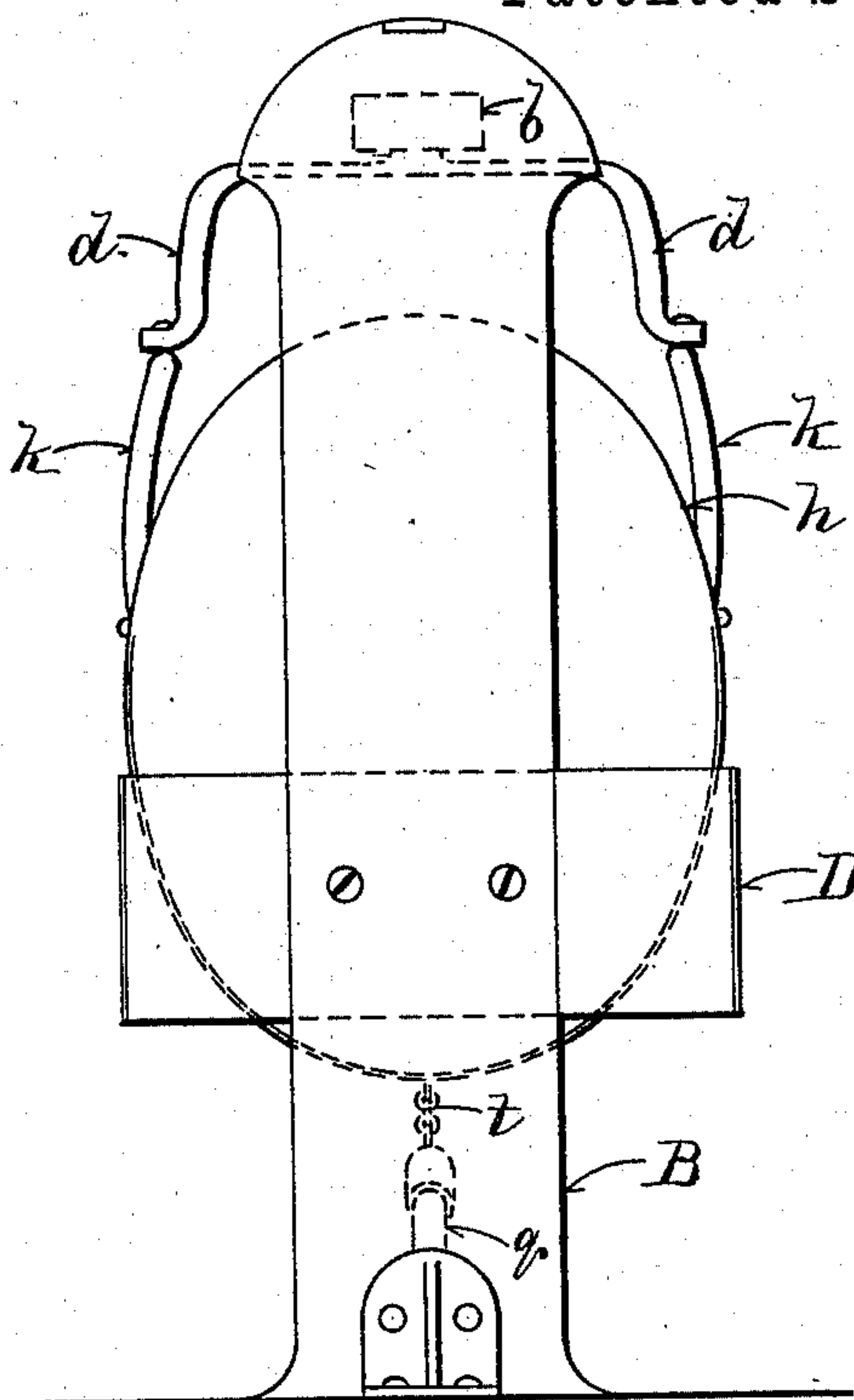


Fig. 3.

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UNITED STATES PATENT OFFICE.

JAMES GOODWIN, OF LYNN, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO
WALTER E. GOODWIN, OF SAME PLACE.

SELF-LEVELING SHIP'S BERTH.

SPECIFICATION forming part of Letters Patent No. 567,708, dated September 15, 1896.

Application filed October 31, 1895. Serial No. 567,471. (No model.)

To all whom it may concern:

Be it known that I, JAMES GOODWIN, a subject of the Queen of Great Britain, residing at Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Self-Leveling Ships' Berths, of which the following, taken in connection with the accompanying drawings is a specification.

My invention relates to certain improvements in self-leveling berths, of which the following is a description sufficiently full, clear, and exact, to enable any person skilled in the art or science to which said invention appertains to make and use the same.

Referring to the accompanying drawings, Figure 1 is a side elevation of my improved self-leveling ship's berth, the side of the berth being broken away; Fig. 2, a top plan view, partly in section, taken on line *x x* in Fig. 1; and Fig. 3, an end elevation of the berth.

Like letters and figures of reference indicate corresponding parts in the different figures of the drawings.

My invention relates especially to mechanism for supporting a ship's berth so that it will maintain a level position, compensating for the roll or pitch of the vessel, the object being to produce a cheap, simple, and effective device of this character.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation:

In the drawings, A represents the side of the ship, B the standard from which the berth is suspended or the cabin partition, and C the ceiling.

Centrally at the top of the standards adjacent the ceiling there are small partitions *b*, in which laterally-curved arms *d* are swiveled at *f*.

The berth D may be of any suitable form, its head-board *h* and foot-board *i* being disposed within a very short distance of the standards B or partition-wall. Pivoted to swing vertically from each corner of the berth there is an arm *j k*. These arms are respectively pivoted to rotate in the lower ends of the adjacent curved arms *d*. In the bottom of the berth at each end there is a hook *m*,

and an eye *p* is secured to the cabin-floor E. A cylinder *q*, containing the coiled spring (indicated by dotted lines) is detachably secured to the eye *p*, and a plunger *r*, therein tensioned by said spring, has an eye *t* for attaching it to the hook *m* on the berth. On each standard adjacent the head and foot of the berth there is a metallic plate *v*, in which are formed two sockets *w*. (Shown at the right in Fig. 2.)

Within the bottom of the berth two sliding blocks *y* are arranged. These blocks carry pins *z*, which project through the head and foot, respectively, of the berth, and are adapted to enter the openings *w* in the plate *v* and lock the berth against movement. These blocks are pushed by springs 15, interposed between them and a brace-bar 16 within the berth. One side 17 of the berth is slotted, at 18, longitudinally, (see Fig. 2,) and a curved hand-lever 19, pivoted at 20 in a support, works in said slot. Running transversely of the berth a shaft 21 is pivoted, bearing a pinion 22 at the end. The lower end of the lever 19 is toothed to engage said pinion.

On the shaft 21 there is a gear 25. Rack-bars 26 and 27, horizontally arranged and respectively connected with sliding blocks *y* at the head and foot of the berth, mesh with said gear.

The mattress P is supported by any suitable frame 30 above this mechanism.

As shown, the hand-lever is in the position assumed when the pins *z* are housed. A shoulder 31, formed in the slot, holds the lever against the tension of the springs 15, said lever being thrown behind said shoulder by springs 32. When the lever is moved in the slot in the position shown in dotted lines the springs 15 project the sliding blocks and throw the pins *z* into the sockets *w* in the wall.

When the berth is in use the pins are housed therein, as described.

The rocking of the vessel sidewise is compensated for by the supporting-arms *d k*, swiveled and pivotally connected, as described. By moving the arms, as shown, in side elevation and throwing the center forward toward the center of the berth the pitch is also compensated for. Moreover, the spring connections *q* serve to relieve the motion in a

manner which will be understood without a more explicit description.

The locking device is employed when the device is not required for use.

5 A ball-and-socket joint may be used for swiveling the arms *d*, or any other suitable means employed to impart a universal movement thereto.

10 Having thus described my invention, what I claim is—

1. The combination with the standards of the berth; the curved arms at each end swiveled in bearings attached to said standards; and the curved arms pivoted to swing vertically on said berth and pivoted to rotate in the lower ends of said swiveling arms.

2. The combination with the berth and standards of the curved supporting-arms *d*, swiveled to said standards; the curved arms 20 *j*, hinged to the berth and pivotally connected to the arms *d*, substantially as described.

3. The berth and its supports, in combination with the spring-pushed pins *z* therein; the hand-lever pivoted on said berth, and gears connecting said hand-lever and pins 20 whereby the pins may be housed.

4. The combination with the berth and its supports provided with sockets *w*, of the spring-pushed blocks *y*, arranged within the bottom of the berth and carrying pins *z*; the 30 racks connected with said blocks; a gear meshing with said racks; a hand-lever and connected mechanism for actuating said gear.

In testimony whereof I have signed my name to this specification, in the presence of 30 two subscribing witnesses, on this 28th day of October, A. D. 1895.

JAMES GOODWIN.

Witnesses:

JONATHAN CILLEY,
EDWIN PLANTA.