

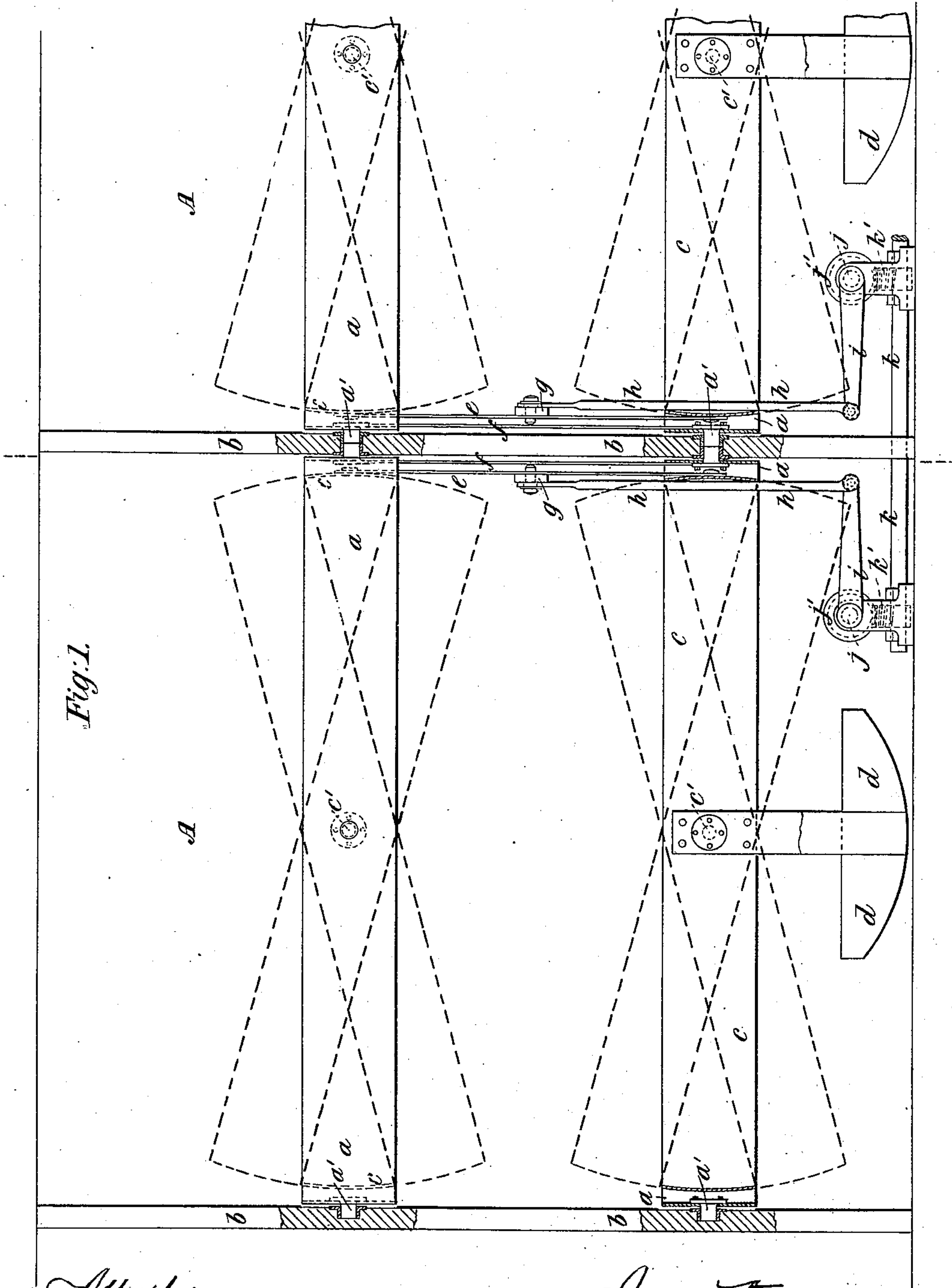
(No Model.)

3 Sheets—Sheet 1.

J. C. THOMPSON.
SELF LEVELING BERTH.

No. 260,911.

Patented July 11, 1882.



Attest:
L. M. Hopkins.
Harry E. Knight

Inventor:
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By Knight Bros
Attys

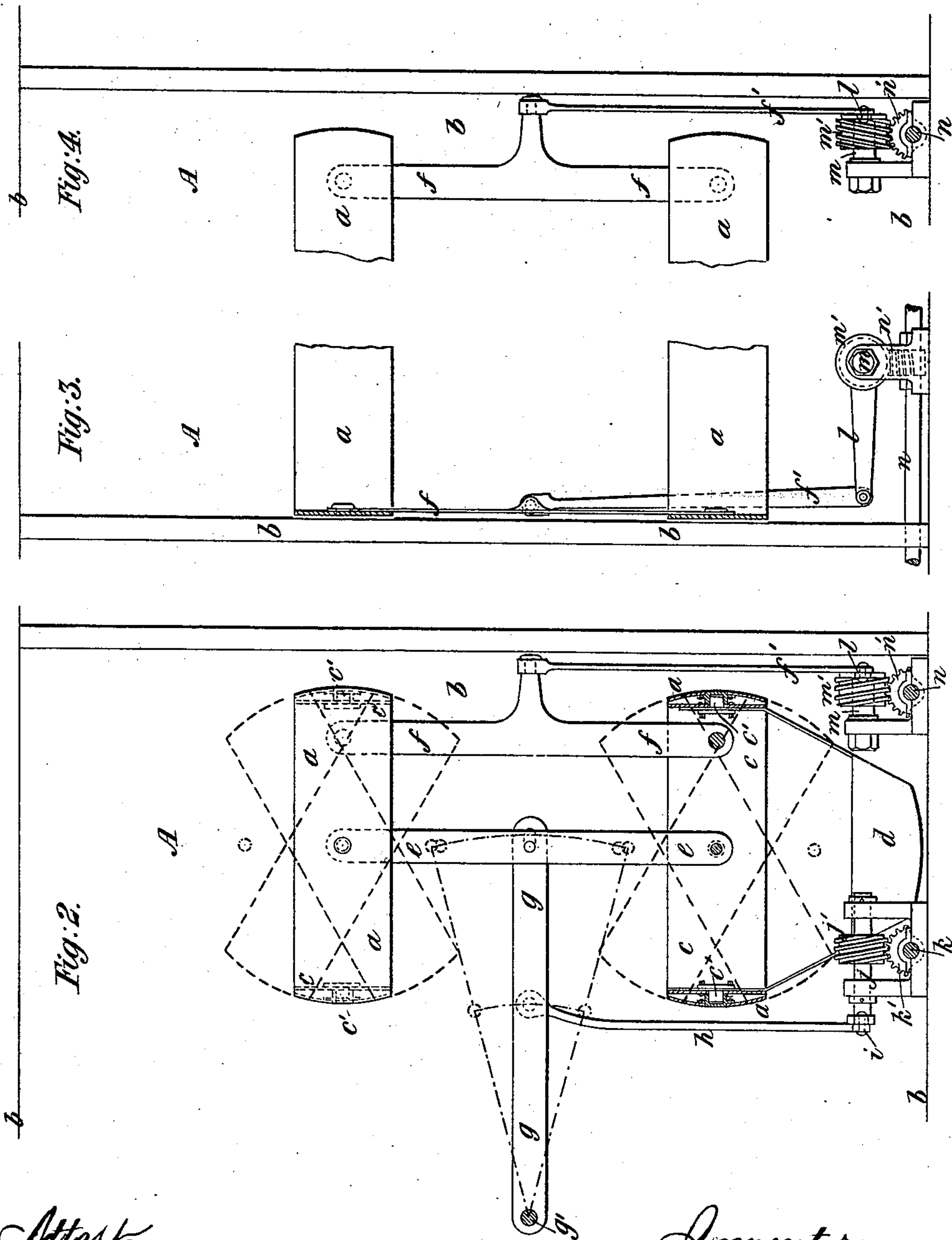
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Fig: 5.

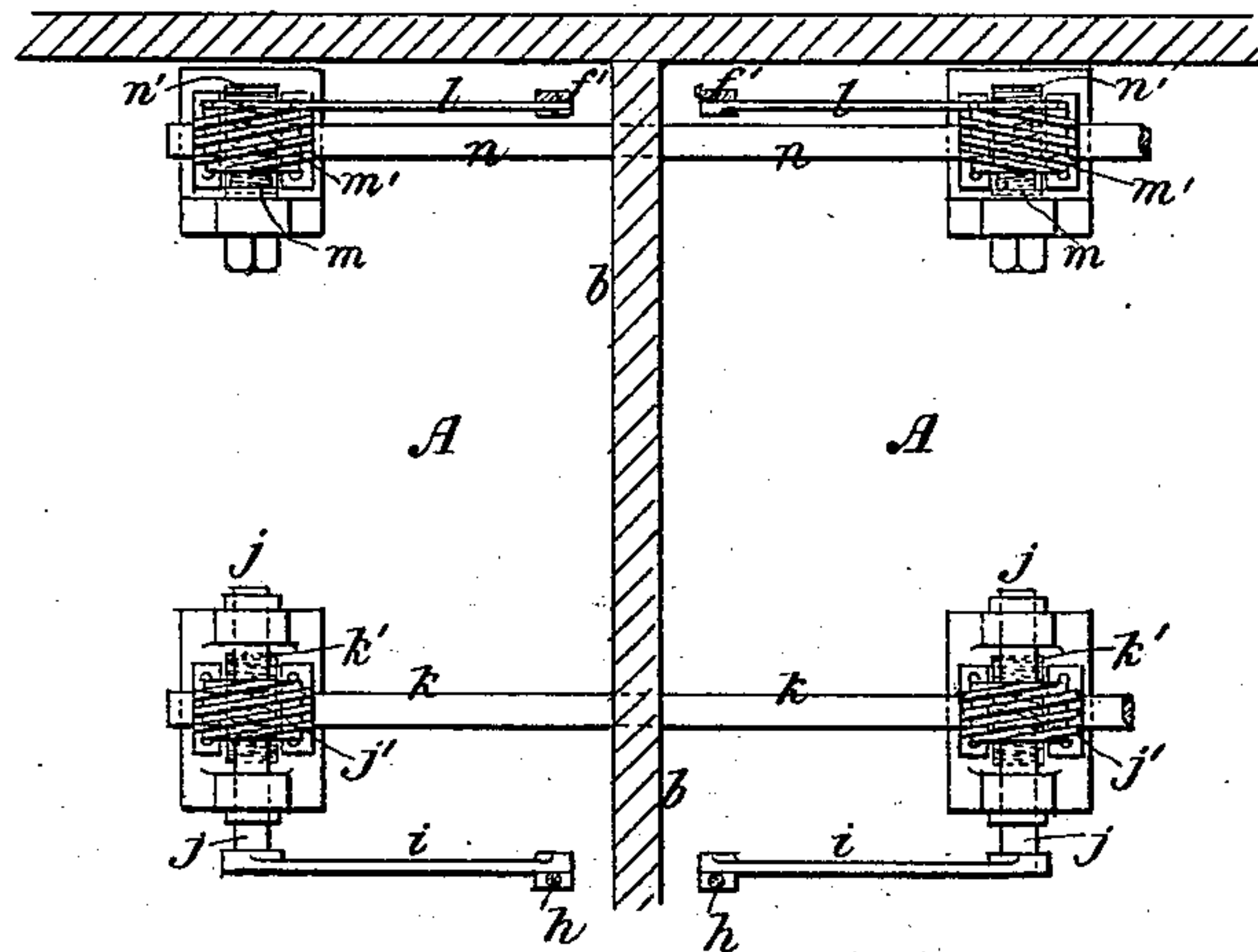


Fig: 6.

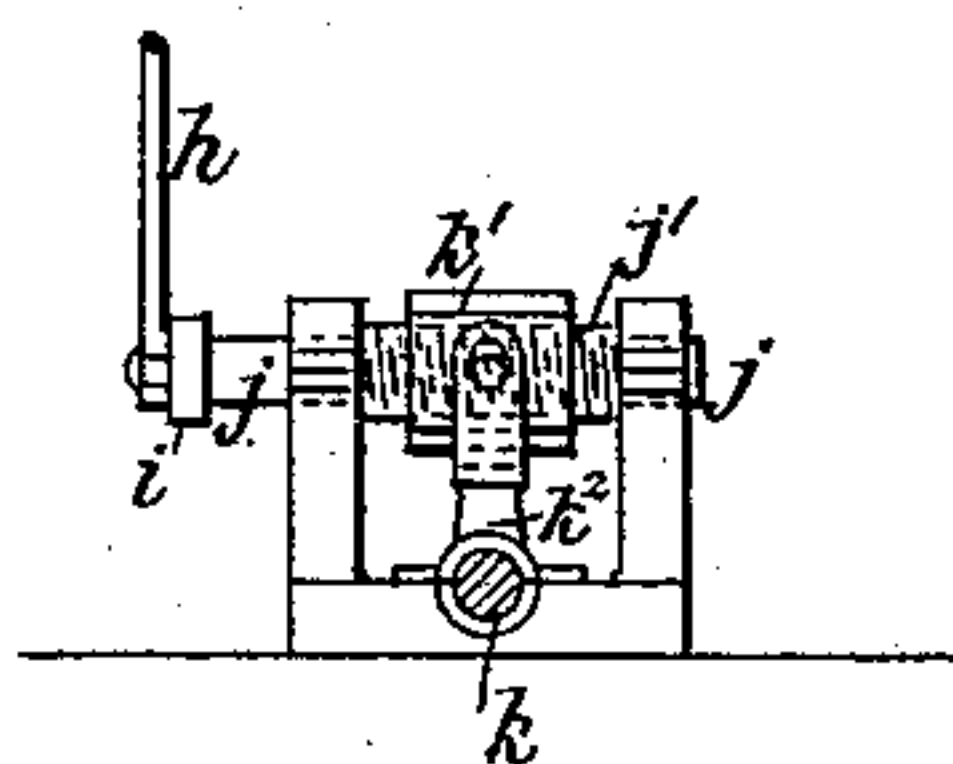
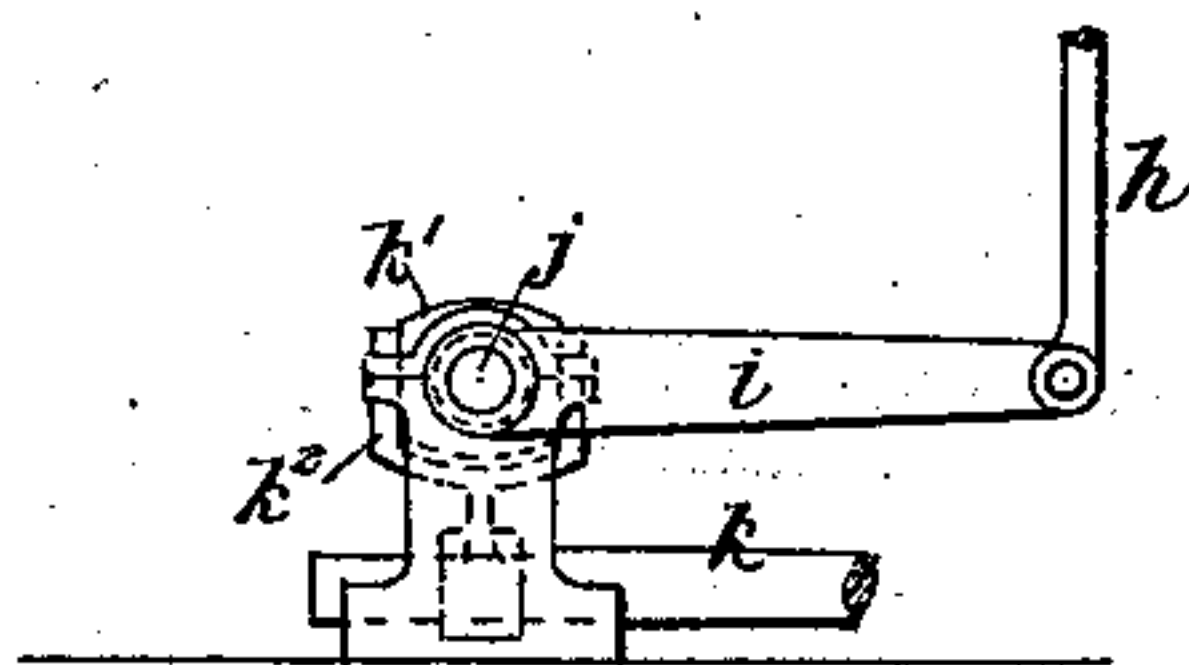


Fig: 7.



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UNITED STATES PATENT OFFICE.

JOHN C. THOMPSON, OF BROOKLYN, NEW YORK.

SELF-LEVELING BERTH.

SPECIFICATION forming part of Letters Patent No. 260,911, dated July 11, 1882.

Application filed September 2, 1881. (No model.) Patented in England August 8, 1881, No. 3,438; in Belgium September 15, 1881, No. 53,548; in France November 2, 1881, No. 144,527; and in Germany March 10, 1882, No. 17,215.

To all whom it may concern:

Be it known that I, JOHN CALVIN THOMPSON, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful improvements in or connected with self-leveling berths and other articles on board ship, of which the following is a specification.

The invention has for its object improvements in or connected with self-leveling berths and other articles on board ship to prevent the said articles being deflected from the horizontal by a person getting onto or off the same; and the invention relates to self-leveling berths or other articles constructed with a "pitch-frame" and a "roll-frame" working on centers of motion at right angles to each other, and with a weight or weights attached to the lowermost of a series of berths or other articles connected together or to connections therefrom, in manner now well understood, in order to cause the same always to remain in a level position, notwithstanding the pitching and rolling of the vessel. According to the present invention, I apply to the berths or other articles fitted as above described automatic locking apparatus so arranged as not to interfere with the motion of the pitch and roll frames on their axes, and yet securely to lock the berths or other articles so that motion cannot be given to a connected series of such articles by pressure applied to one or more thereof, but less than the entire number, thereby securing safety and comfort in their use. For this purpose a pitch and roll strap of each pair of berths is connected to levers on separate axes, on each of which is formed or fixed a worm which takes into a worm-wheel fixed on a shaft or axis running under or over a connected series of berths. Instead of employing worms and worm-wheels as the locking means, screws and nuts or other equivalent means may be employed for such purpose. By these means, as the vessel pitches and rolls, motion is given by the pitch and roll frames to the worms and worm-wheels, or to other equivalent locking means, so that although the pitch and roll frames are free to work upon their supporting pivots or axles they cannot move independently of each other, nor can the series of berths be moved by any pressure being

applied to any number of them less than the entire series.

In order that my said invention may be more clearly understood and readily carried into effect, I will proceed, aided by the accompanying drawings, more fully to describe the same.

In the drawings, Figure 1 is a side view, partly in section, of a pair and parts of an adjacent pair of self-leveling berths with my invention applied thereto. Fig. 2 is an end view of the same, partly in section. Fig. 3 is a sectional side view. Fig. 4 is an end view, and Fig. 5 is a plan, of parts; and Figs. 6 and 7 represent a slight modification.

a a are roll-frames mounted on axes of motion *a'*, working in the bulk-heads *b*.

c c are pitch-frames provided with axes of motion *c'*, working in bearings fixed to the roll-frames *a a*.

d d are weights fixed to the lower pitch-boxes to retain the berths always in a level position, notwithstanding the pitching and rolling of the vessel.

e e are pitch-straps connecting the upper and lower pitch-frames, *c c*, together, and *f f* are roll-straps connecting the upper and lower roll-frames, *a a*, together, to secure the simultaneous and equal motion of the said pitch and roll frames on their axes of motion.

If desired, a pitch-strap and a roll-strap may be connected to each end, respectively, of the said frames. The arrangement of parts above described forms no part of my present invention; but my present invention consists in the addition of automatic locking mechanism applied to the said pitch and roll frames.

In carrying my invention into effect I connect the pitch-strap *e* at one end of a berth to a lever, *g*, mounted on an axis of motion at *g'*, carried by the bulk-head *b*, dividing two adjoining cabins, *A*. This lever, by means of a link, *h*, gives motion to a lever, *i*, fixed to the axis *j*, of a worm or screw *j'*, which latter takes into and gives motion to a worm-wheel or segmental worm-wheel, *k'*, fixed on a pitch-shaft, *k*. I also, according to my invention, connect the roll-strap *f* at one end of a berth by a link, *f'*, to a lever, *l*, fixed to the axis *m* of a worm or screw, *m'*, which latter takes into and gives motion to a worm-wheel or segmental worm-wheel *n'* on a roll-shaft, *n*.

In carrying my invention into effect the pitch and roll shafts may, as shown in the drawings, be made of such length as to lock the berths in two adjacent cabins, in which case
5 the shafts are short and conveniently handled; or they may be made to extend along several cabins and serve to lock a larger series of berths.

I would here remark that other locking
10 means than those above described may be employed. For instance, the arrangement represented in Figs. 6 and 7 may be adopted, in which the worms and worm-wheels before described are replaced by screws and nuts, the
15 latter giving motion to the shafts k and n through the short levers k^2 .

The worms j' and worm-wheels k' for locking the pitch-frames will be all cut or otherwise formed in the same direction, as, although
20 the movements of the ends of pitch-frames in adjacent cabins are opposite to each other, the levers i are in opposite directions, and therefore connect the motion; but the worms m'

and worm-wheels n' for locking the roll-frames in adjacent cabins will be formed alternately 25 right-handed and left-handed, as, although the movements of the roll-frames in adjacent cabins are alike, the levers l are in opposite directions to each other.

Having thus described my invention, what I 30 claim as new, and desire to secure by Letters Patent, is—

The combination, with berths or other furniture on board ship, of worms or screws connected by suitable intermediate mechanism or 35 attachments with the respective berths or series of berths, and working in worm-wheels or nuts on connecting-shafts, substantially as described, thereby preventing the independent movement of the berths or series of berths, 40 while permitting their free simultaneous movement under the influence of gravity.

JOHN C. THOMPSON.

Witnesses:

OSCAR KING,
EDGAR CONKLIN.