

F. LEBACQ.
SELF LEVELING BERTH.

No. 282,649.

Patented Aug. 7, 1883.

Fig. 1.

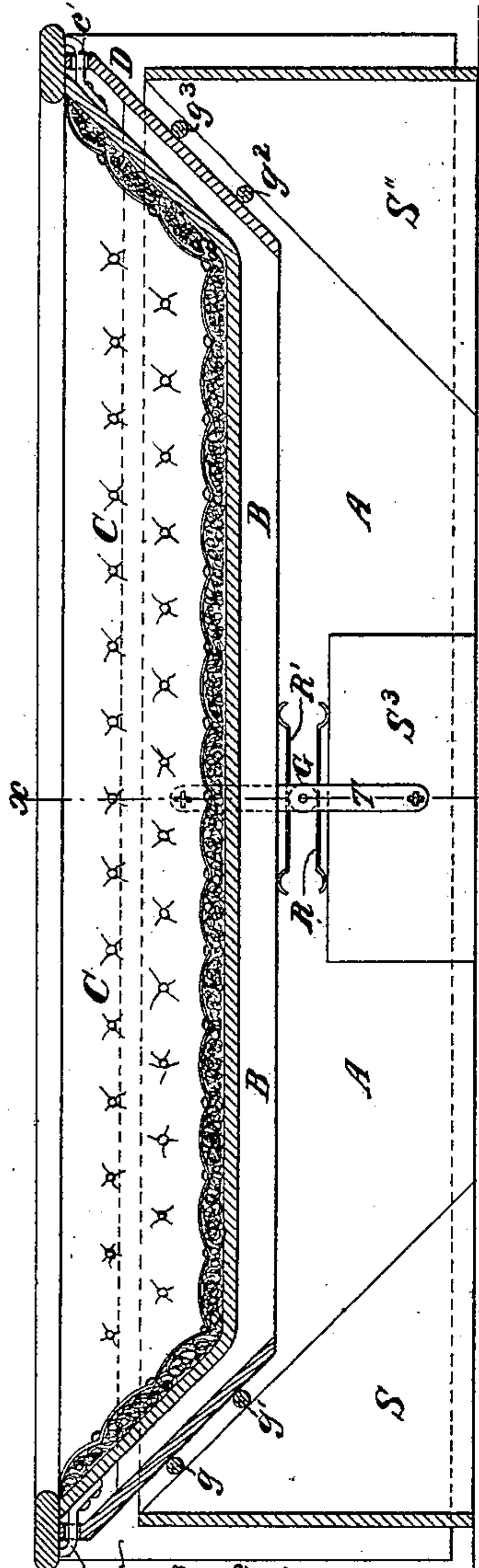


Fig. 1*.

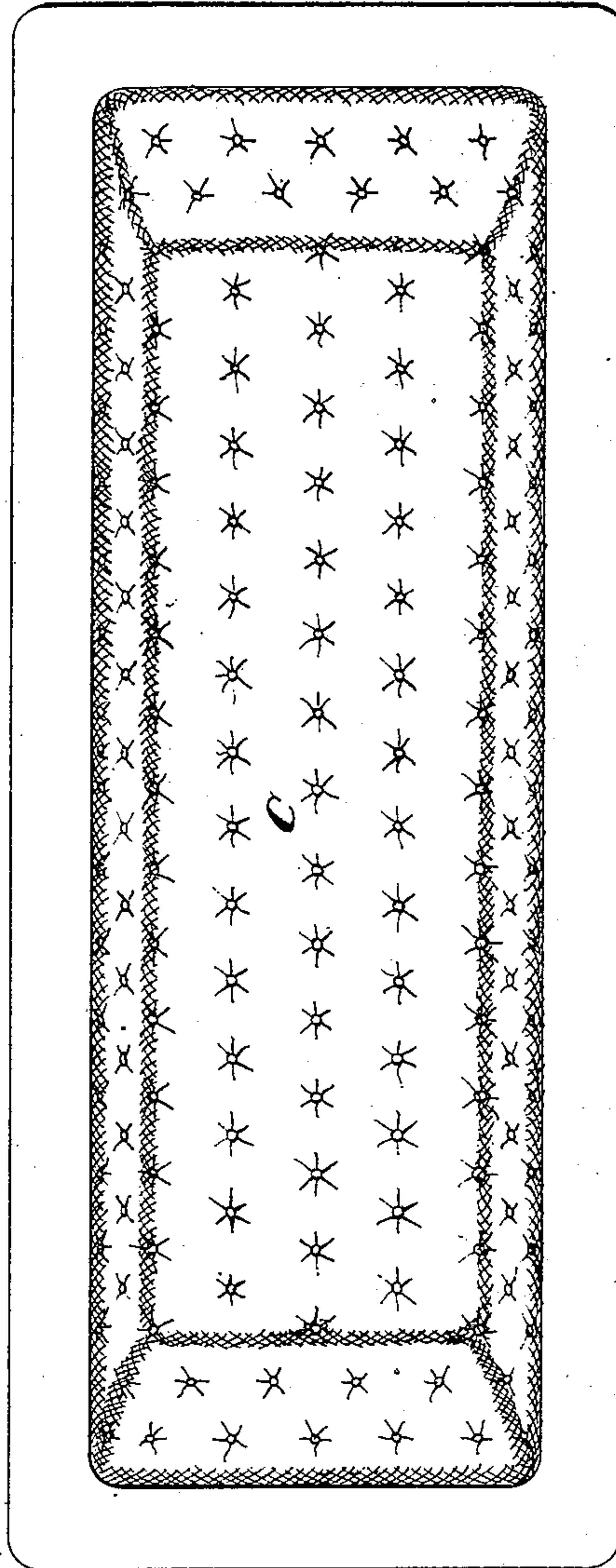


Fig. 2.

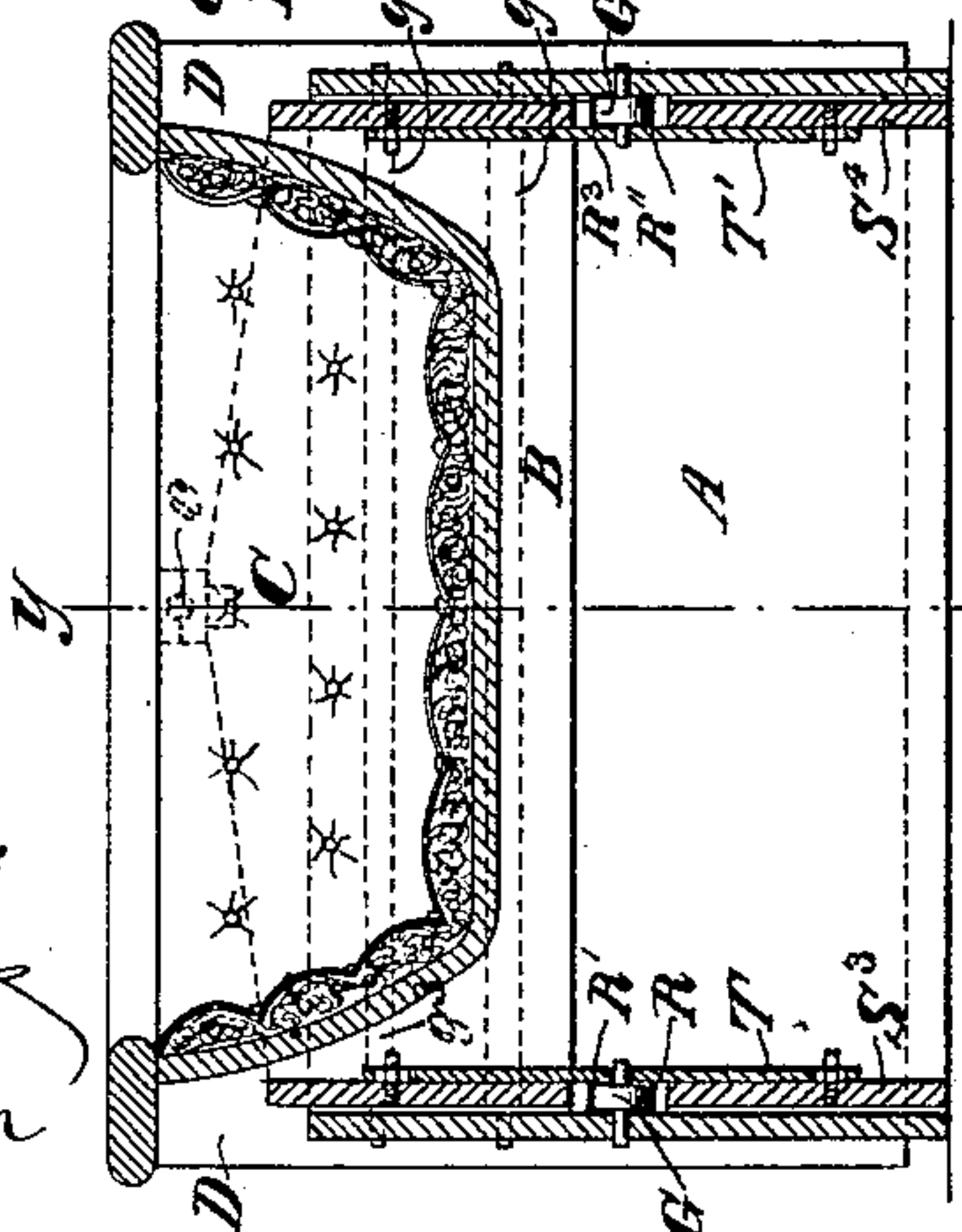
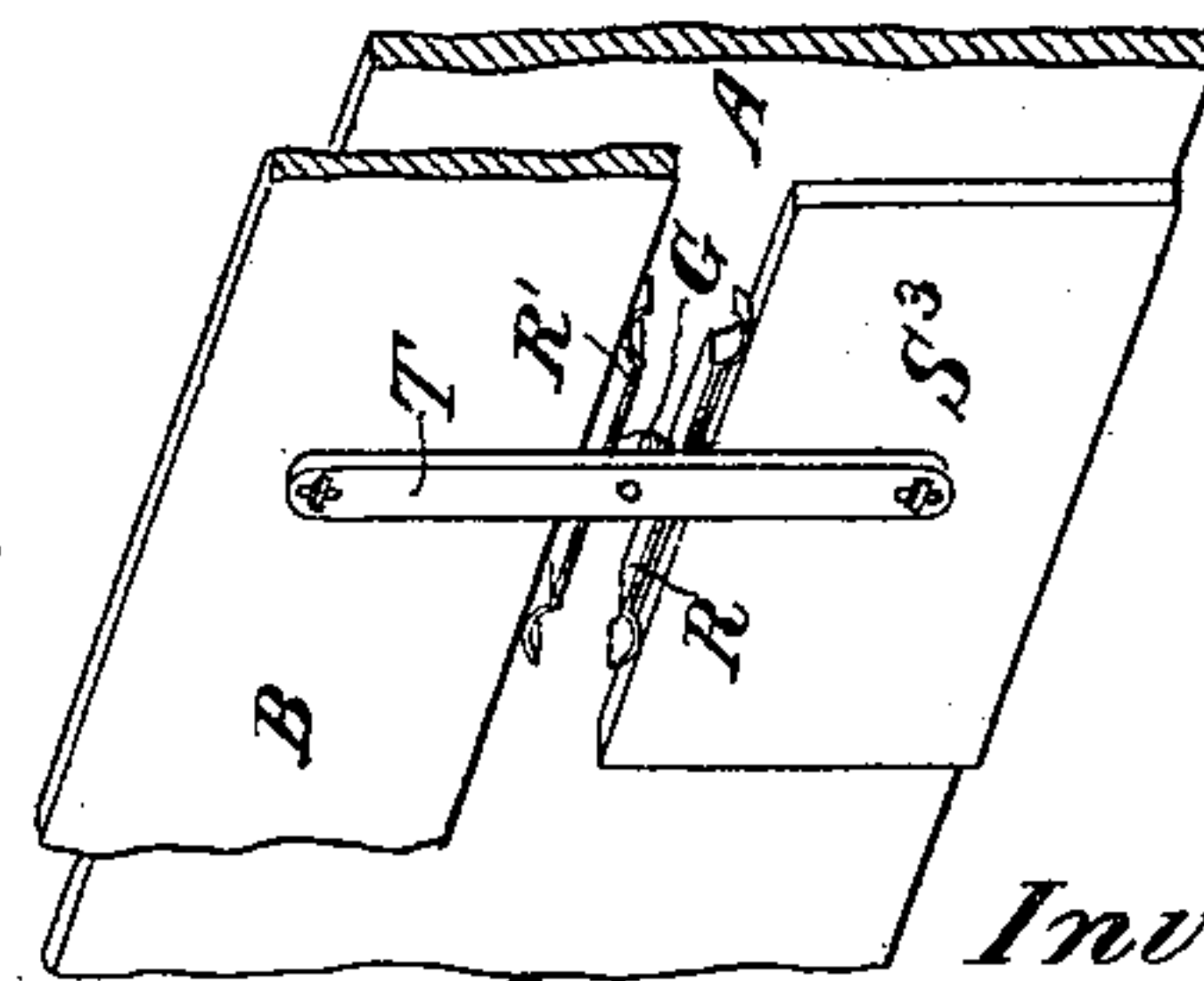


Fig. 6.



Witnesses:
J. H. Hayes
Ed. L. Moran

Inventor:
Francis Lebacqz
By his Attorney
Brown & Brown

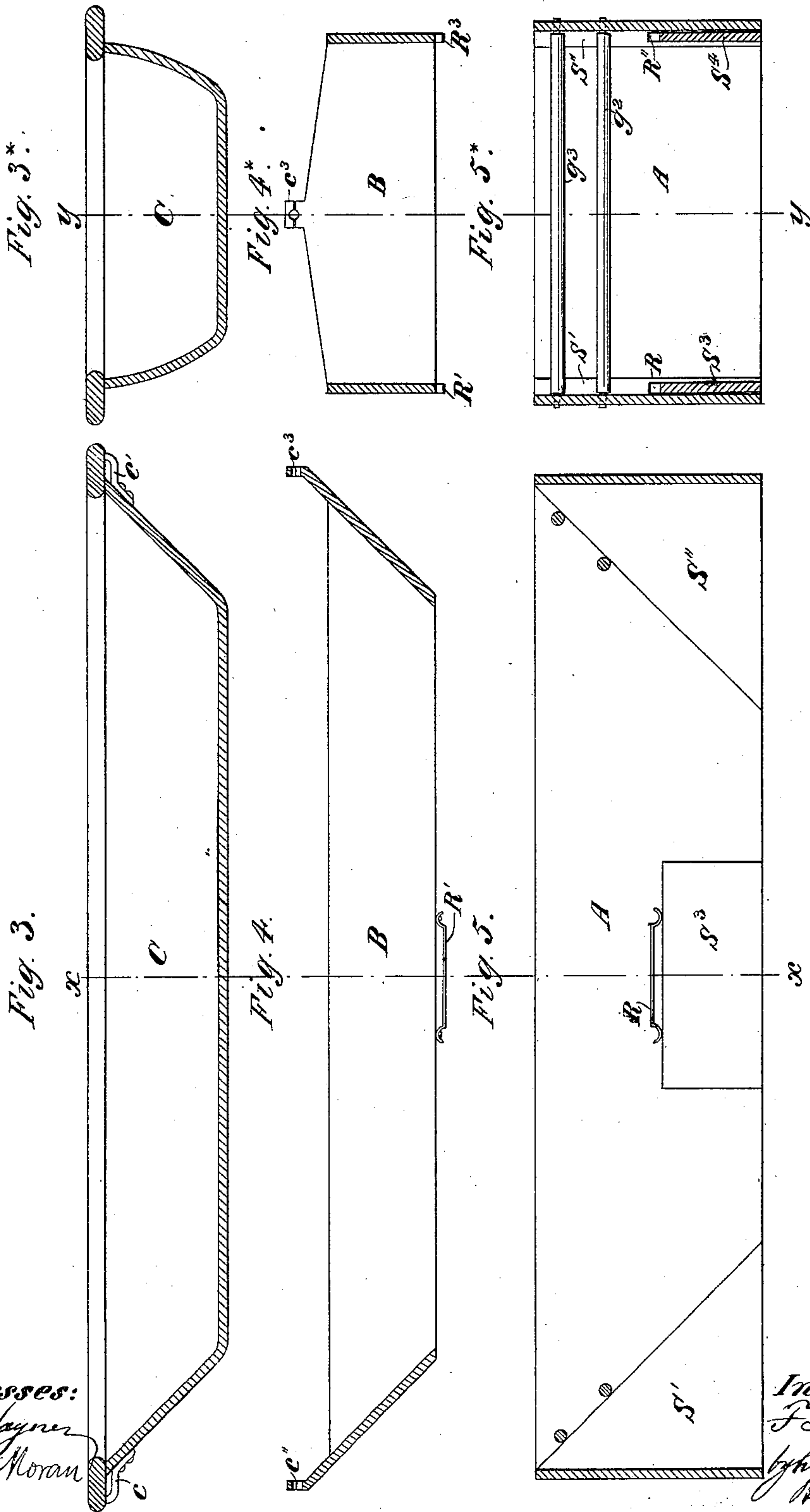
(No Model.)

2 Sheets—Sheet 2.

F. LEBACQ.
SELF LEVELING BERTH.

No. 282,649.

Patented Aug. 7, 1883.



Witnesses:
Jus Wagner
Ed. L. Moran

Inventor:
F. Lebaeq
Jus Wagner
Ed. L. Moran

UNITED STATES PATENT OFFICE.

FRANCOIS LEBACQ, OF BRUSSELS, BELGIUM.

SELF-LEVELING BERTH.

SPECIFICATION forming part of Letters Patent No. 282,649, dated August 7, 1883.

Application filed October 5, 1882. (No model.) Patented in England March 8, 1882, No. 1,125; in Belgium May 20, 1882, No. 42,084; in France May 30, 1882, No. 137,122; in Russia June 4, 1882, No. 4,100; in Germany June 5, 1882, No. 23,768, and in Italy June 9, 1882, No. 5,751.

To all whom it may concern:

Be it known that I, FRANCOIS LEBACQ, of Brussels, in the Kingdom of Belgium, have invented a certain new and useful Improved Swinging Bed, (for which I have obtained Letters Patent in Great Britain, dated March 8, 1882, No. 1,125; Belgium, May 20, 1882, No. 42,084; France, May 30, 1882, No. 137,122; Germany, June 5, 1882, No. 23,768; Italy, June 9, 1882, No. 5,751; Russia, June 4, 1882, No. 4,100;) and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in swinging beds for use at sea; and the objects of my improvements are, first, to provide guides by which the bed is made to retain its horizontal position longitudinally in spite of the pitching of the vessel in which it is placed; and, second, in combination with such guides, to provide other arrangements by which the bed is unaffected by the rolling or transverse movement of the vessel. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 represents a longitudinal section through the line *y y* through the complete bed. Fig. 1* is a plan of the same. Fig. 2 is a transverse section on the line *x x*. Figs. 3 and 3* show, respectively, the transverse and longitudinal sections of the frame or case C. Figs. 4 and 4* show similar sections of the frame or case B. Figs. 5 and 5* show similar sections through the frame or case A. Fig. 6 is a perspective view, showing the method of attaching one of the guide-plates T.

Similar letters refer to similar parts throughout the several views.

A is the lower frame or case of the bed. B is an intermediate frame or case. C is the upper frame, containing the bed itself. *S' S''* are inclined supports inside the frame A. *S³ S⁴* are central supports in the lower part of the frame A. *g g' g² g³* are frictional rollers interposed between the inclined ends of the frame A and those of the intermediate frame B, and

journalled in the two sides of the frame A. *G G'* are central wheels arranged between the springs *R* and *R²* on the one side and *R' R³* on the other side. The springs *R' R³* are attached to the bottom of the frame B, and the springs *R R²* are attached to the central supports, *S³ S⁴*, and serve as elastic rails to the wheels *G G'*. *T T'* are guide-plates for the wheels *G G'*, receiving the outer journals of said wheels, the frame A forming bearings for the opposite journals. These guide-plates *T T'* are each connected at one end with the central support, *S³ S⁴*, and at their other end to the side of the movable frame B by pins on said supports passing through vertical slots in the guide-plates *T* and *T'*. This mode of connection serves to allow the frame B to run back and forth on the rollers or wheels *G* and *G'*, and to rise and fall slightly, as permitted by the elasticity of the springs, without being restricted by the said guide-plates, which meanwhile keep the rollers *G G'* in proper place. *c c'* are pivots fixed to the ends of the upper frame of the bed C and turning in eyes or bearings *c'' c³*, fixed upon the ends of the frame B.

The entire apparatus, as shown, consists—

First, of the fixed rectangular wooden frame A, having neither top nor bottom, which is provided on the interior of each of its ends with inclined supports *S' S'' S³ S⁴*, also preferably of hard wood.

Second, of the movable wooden frame or case B, the ends of which are inclined and remain parallel to the inclined ends of the supports *S' S''*, whatever position the external case A may take longitudinally—that is to say, during the pitching of the vessel, the frame B from its weight and peculiar shape remaining always horizontal. This movement, as described, of the one frame within the other is effected by means of the two wheels *G G'*, arranged on each side of the frame A, and the rollers *g g' g² g³*, interposed between the inclined ends of the frames A and B. These rollers and wheels are preferably of metal covered with india-rubber or of hard wood, and there may be one, two, or more at each end, as required.

Third, of a third frame, C, stuffed or padded, having at the upper part of its ends two pivots or axes turning in eyes *c*, fixed upon

the top of the inclined ends of the movable frame B; or the frame C may be suspended in two yokes. This method of arrangement allows the frame C to remain always unaffected by the rolling motion of the vessel. The frame C is adapted to be fitted with a mattress and other bed-furniture, and its edge may be finished with a border of polished wood, with drapery D suspended from the same and hanging around and covering the whole of the apparatus.

It will be seen that the method of arrangement and operation of the frame B in the lower frame, A, serves to neutralize the inclination of the bed caused by the pitching of the vessel, while the arrangement and operation of the frame or bed C in the intermediate frame, B, neutralize the inclination caused by the rolling of the vessel—that is to say, in the direction of its width or from larboard to starboard, and vice versa; consequently that the bed itself retains constantly its desired horizontal position.

The apparatus, as hereinafter described and shown, may be applied not only to ships, but to other means of locomotion—as, for instance, to ambulances and to railway or other carriages—and it may be made in wood, iron, or other suitable material, and of a shape and size which may be varied according to the different circumstances or conditions under which it is to be used, and such modifications may be made in its details—as, for instance, in the

method of attaching the rollers $g\ g'\ g''\ g^3$, the wheels G G', and the bearings $c\ c'\ c''\ c^3$ —and I do not confine myself to the precise form and arrangement shown in the drawings, which may be varied to suit varying circumstances; but

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the stationary frame A, having inclined ends $S'\ S^2$, the intermediate movable frame, B, also having inclined ends parallel to the ends of the stationary frame A, the transverse rollers $g\ g'\ g^2\ g^3$, journaled in said stationary frame and interposed between the inclined ends of each frame, the central rollers, G G', and the frame C, pivoted at its ends upon the said intermediate frame, B, all substantially as shown and described.

2. The combination of the frame A, having inclined ends, the frame B, also having inclined ends, the interposed rollers, $g\ g'\ g^2\ g^3$, supports $S^3\ S^4$, springs R R' R² R³, the central wheels, G G', the guide-plates T T', and the frame C, adapted to be oscillated transversely in the frame B, all substantially as shown and described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

F. LEBACQ.

Witnesses:

P. MIGNOT,
ADOLPH STEIN.