

(No Model.)

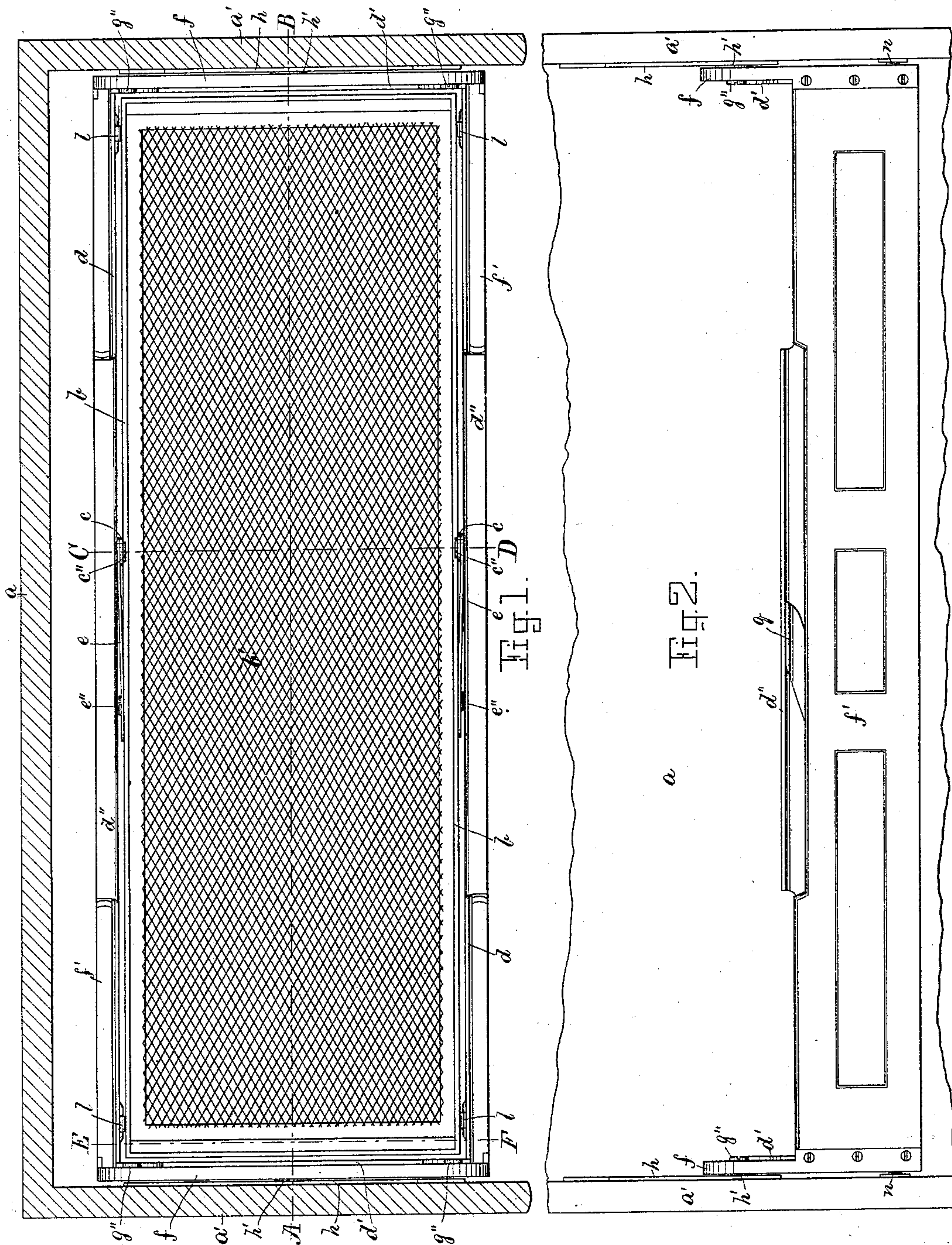
3 Sheets—Sheet 1.

D. PARKS.

SELF LEVELING SHIP'S BERTH.

No. 280,233.

Patented June 26, 1883.



Witnesses

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Inventor

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Fig. 3.

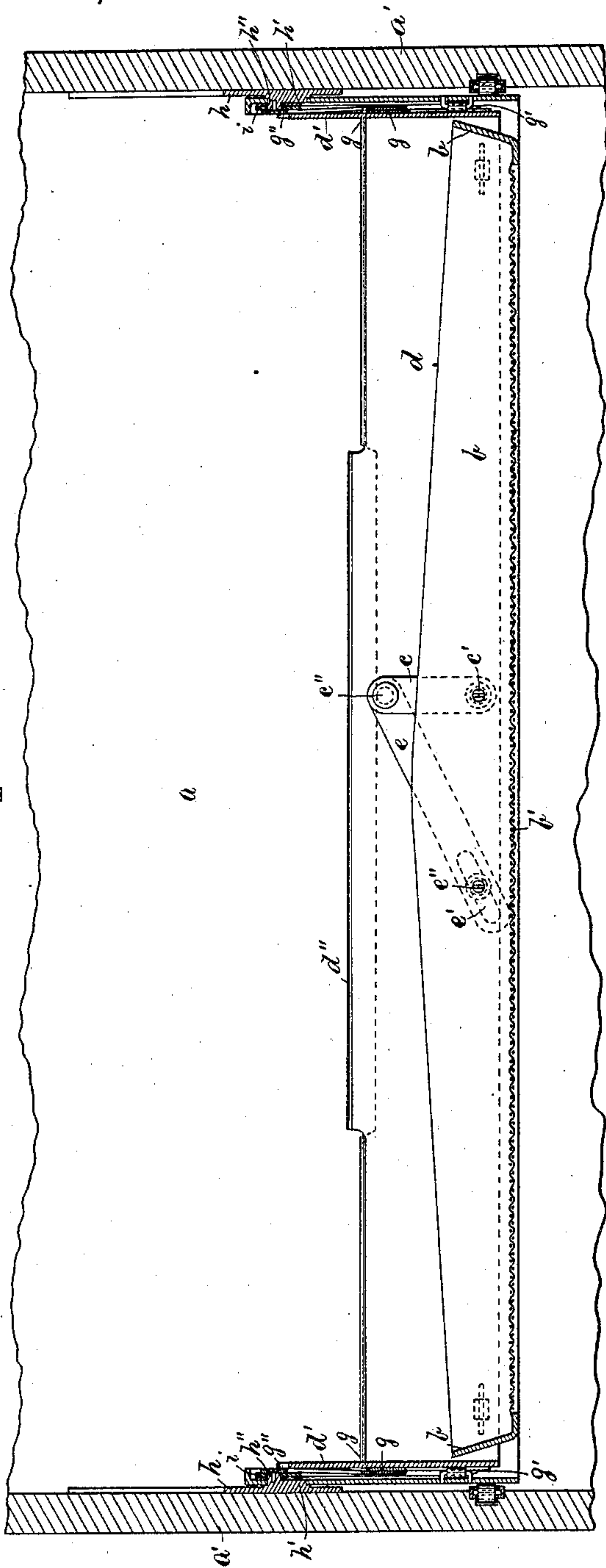
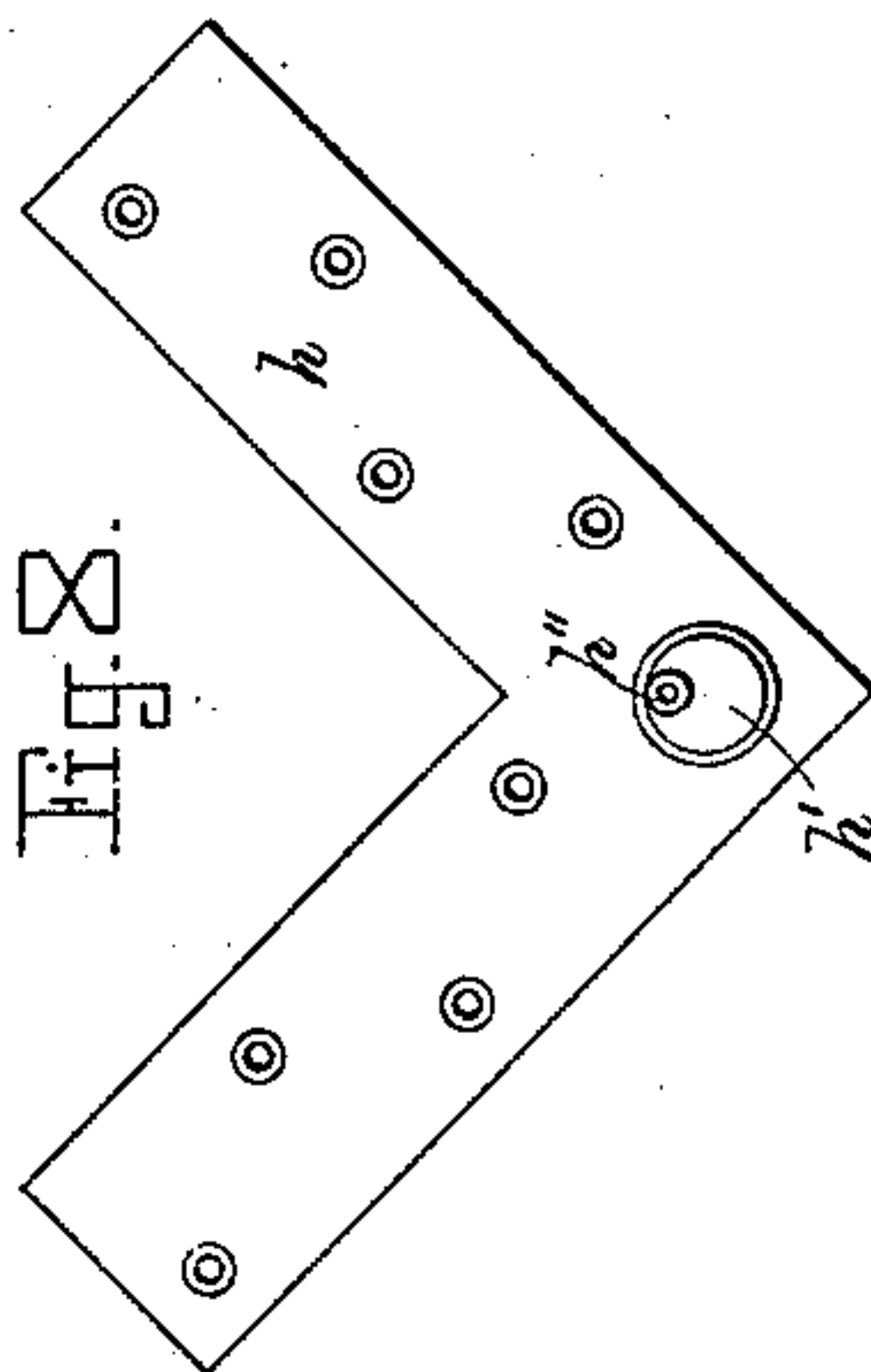


Fig. 4.



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(No Model.)

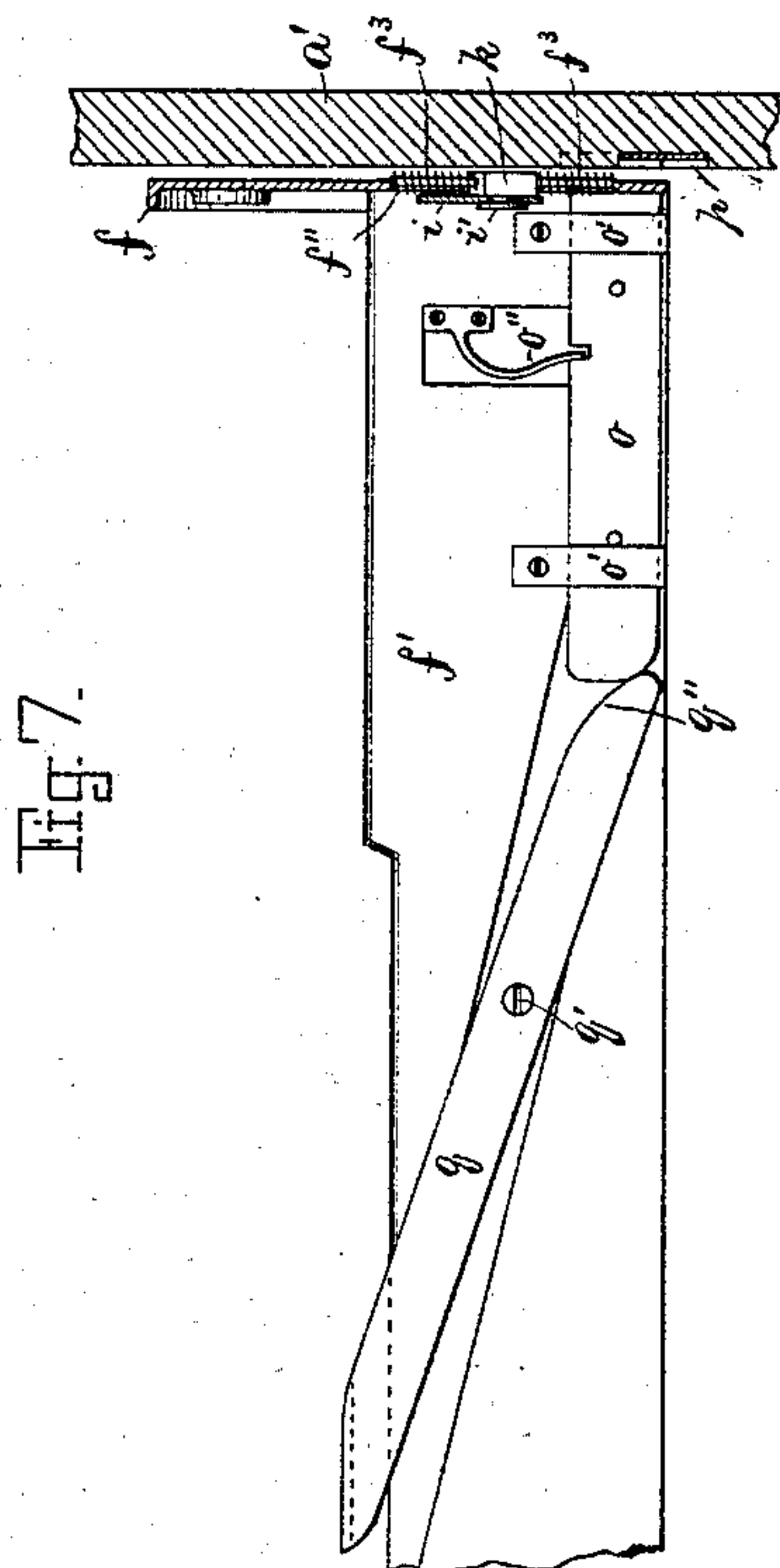
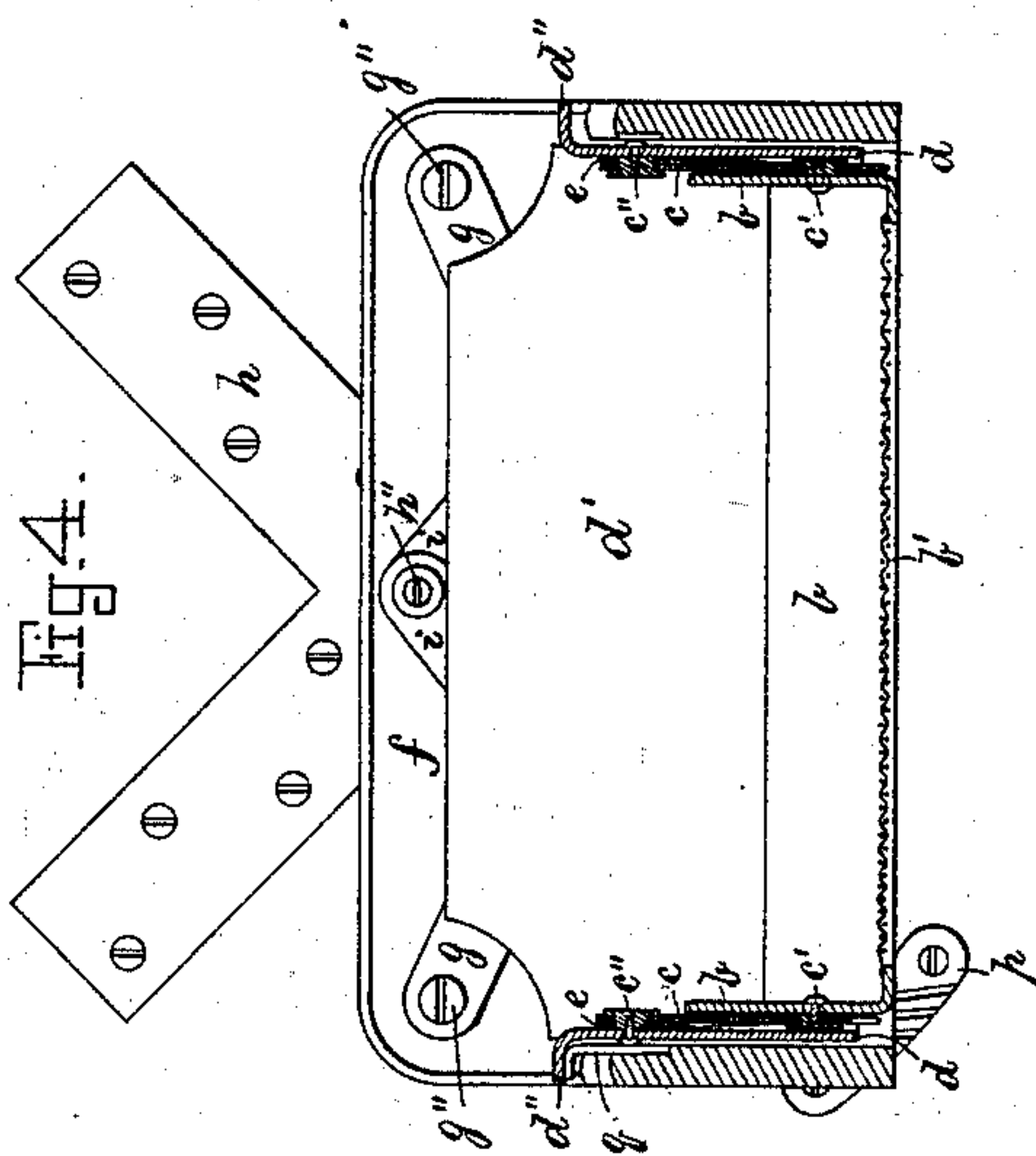
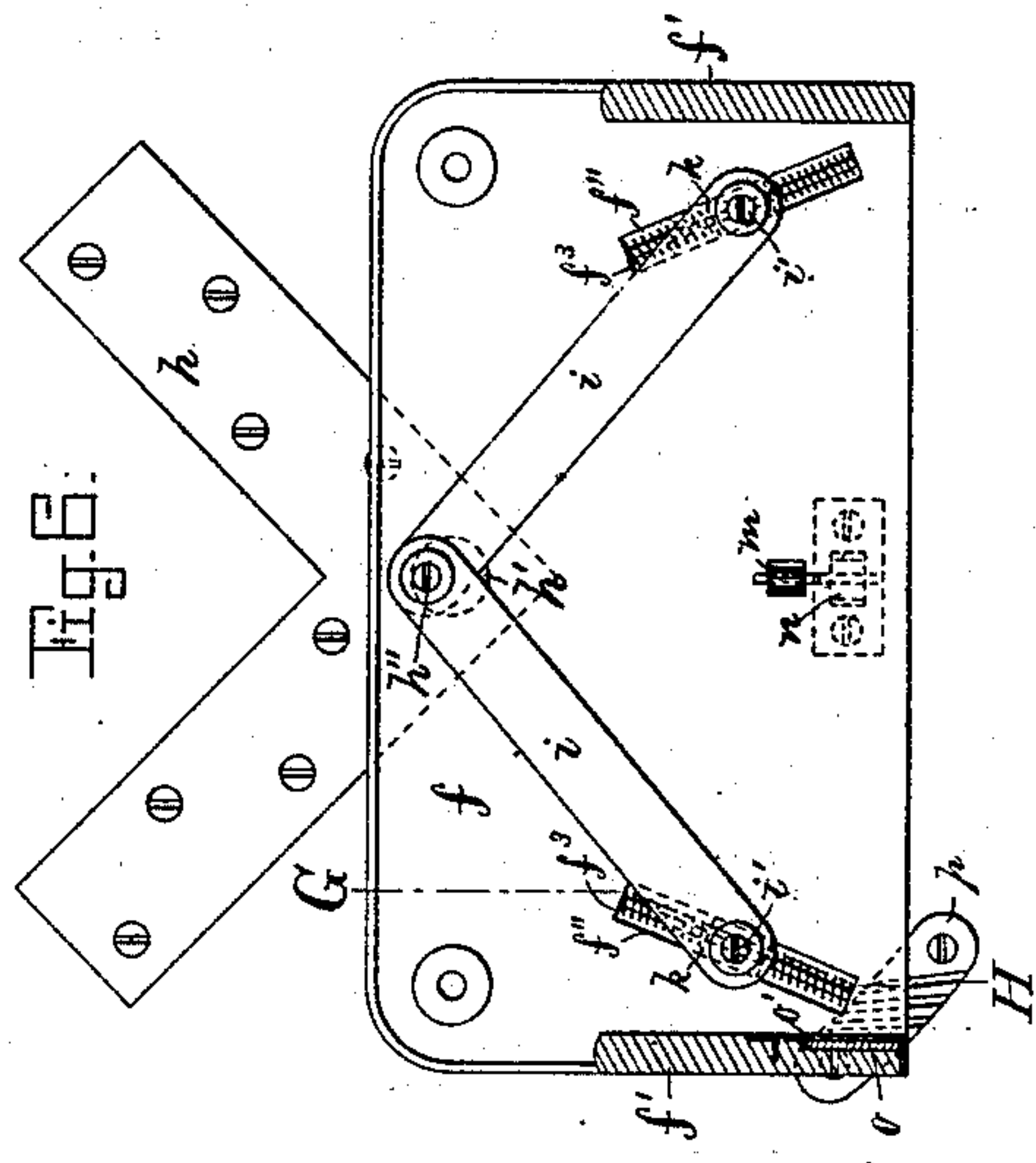
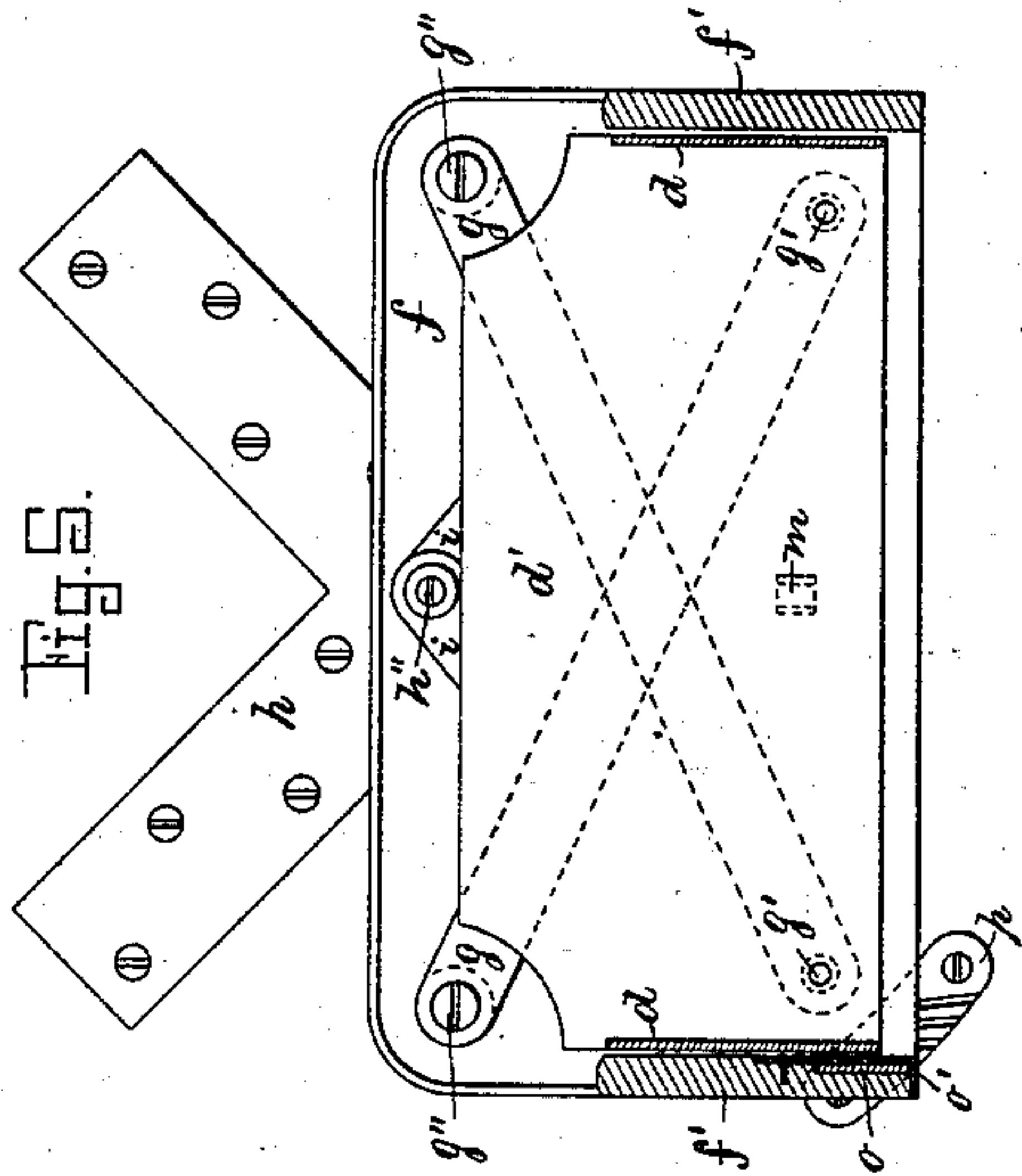
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UNITED STATES PATENT OFFICE.

DANA PARKS, OF BOSTON, MASSACHUSETTS.

SELF-LEVELING SHIP'S BERTH.

SPECIFICATION forming part of Letters Patent No. 280,233, dated June 26, 1883.

Application filed April 6, 1883. (No model.)

To all whom it may concern:

Be it known that I, DANA PARKS, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Self-Leveling Ships' Berths; and I do hereby declare that the same are fully described in the following specification and illustrated in the accompanying drawings.

This invention relates to improvements in self-leveling ships' berths; and it is carried out as follows, reference being had to the accompanying drawings, where—

Figure 1 represents a plan view, and Fig. 2 represents a side elevation, of the improved berth. Fig. 3 represents a longitudinal section on the line A B, shown in Fig. 1. Fig. 4 represents a cross-section on the line C D, shown in Fig. 1. Fig. 5 represents a cross-section on the line E F, also shown in Fig. 1, with the inner section or berth shown as removed. Fig. 6 represents a similar section with the inner section, its end piece, and links shown as removed. Fig. 7 represents a partial longitudinal section on the line G H, shown in Fig. 6; and Fig. 8 represents an end view of one of the berth-supporting brackets.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

In ships' berths of the self-leveling kind it is desirable that the berth should not be too sensitive to the rolling motions of the vessel, as by being over sensitive to said motions the berth will oscillate farther than its level position, and thus be objectionable rather than advantageous. It is also desirable in such berths that its lateral adjustment in relation to the rolling motion of the ship shall be as independent as possible from its longitudinal adjustment in relation to the fore-and-aft motion of the vessel. Another desirable feature in a ship's berth of this kind is to automatically lock it in any desirable position when going in or out of the berth. And with these objects in view I carry out my invention as follows:

a a' a' are the cabin-walls, as usual.

b represents the inner section or berth proper, with its spring-wire mattress *b'*, or other suitable bottom, as may be desired. The berth

b is hung at *c' c'* to the short links *c c*, the upper ends of which are hinged at *c'' c''* to the inside of the middle section, *d d*, as shown.

To each of the fulera *c''* is hinged the upper end of the inclined link *e*, having a slot-hole, *e'*, in its lower end, that embraces the stud or set-screw *e''*, secured to the sides of the inner section, *b*, as shown in Figs. 3 and 4, by which arrangement the berth or inner section, *b*, is normally supported and made to swing on the lower fulera, *c' c'*, until the fore-and-aft motion of the vessel increases sufficiently to bring the stud or set-screw *e''* to the upper or lower ends of the slot-hole *e'* in the link *e*, when a triangular support for the berth is obtained, consisting of pins or screws *c', c''*, and *e''* on each side of the berth *b*, in which condition the berth is made to rock on the upper fulera, *c'' c''*, to compensate for the fore-and-aft motion of the vessel.

The middle-section sides, *d d*, are made of thin metal and secured firmly to the thin metal end pieces *d' d'*, which are jointed loosely to the respective metal end pieces *f f* of the outer section, *f' f'*, by means of a pair of diagonal or cross links, *g g*, in each end of the berth, as shown in Fig. 5. Said links *g g* are hinged in their lower ends to the respective middle-section ends *d' d'* by means of the fulcrum pins or screws *g' g'* and in their upper ends to the respective outer-section ends *f f* by means of the fulcrum pins or screws *g'' g''*, by which arrangement the middle section and its suspended berth or inner section, *b*, may move in a lateral direction independently of the outer section, and to a certain extent act as retarding means in an opposite direction to the lateral motion of the outer section, and thus to aid in keeping the berth as level as possible, and preventing it from being rocked too far laterally by the sudden rolling of the vessel, as well as compensate for and yield automatically to changes in position of the occupant.

h h are the brackets, secured to the inner walls of the cabin *a' a'*, as shown. Each of such brackets has a circular projection or fulcrum, *h'*, adapted to fit into a corresponding circular perforation in the upper part of each outer-section end *f*, and said projections *h' h'* serve as fulera on which the outer section of the berth may swing in a lateral direction; but to

prevent the berth from rocking too easily, and to swing too far in a lateral direction, I provide each of the circular projections or fulera h' with an eccentric crank-pin or cam projection, h'' , (shown in Fig. 8,) to which the inclined links $i i$ are hinged, as shown in Fig. 6, the lower ends of said links being hinged by means of pins or screws $i' i'$ to the adjustable blocks $k k$, which are movable in the slotted perforations or recesses $f'' f''$ in the outer-section ends f , and provided with the compressible springs $f^3 f^3$, as shown in Fig. 6, by which arrangement the berth is prevented from rocking too far or too easily on its fulera $h' h'$ by the rolling motion of the vessel; and by this means sudden jerks and concussions of the berth are prevented during the roll of the vessel in quick and short seas.

$l l l l$ are anti-friction rollers, located between the inner and middle sections, as shown in Figs. 1 and 3, in journals either on the outside of inner section or inside of outer section, as may be desirable. Similar anti-frictional rollers, $m m$, are located between the end pieces of the outer and middle sections, as shown in Figs. 3 and 6; and $n n$ are similar rollers, located between the outside of the end pieces for the outer sections and the inside of the cabin-walls, as shown, so as to prevent frictional resistance of the different parts.

The locking device for securing the berth rigidly to the cabin, when a passenger desires to go in or out of the berth, is made as follows: On the inside of the outer section, f' , is arranged the locking-bar o , which is movable in the guides $o' o'$, secured to the section f' , and is normally held in an unlocked position by means of the spring o'' , secured to section f' , and having its lower end resting in a groove or recess in the locking-bar o , as shown in Fig. 7. To the cabin-wall a' is secured the notched locking-plate p , in the notches of which the outer end of the locking-bar o is adapted to lock.

q is a lever movable on the fulcrum-pin q' , secured to outer section, f' , and having its lower cam-shaped end, q'' , lying loosely in contact with the inner end of the locking-bar o , as shown.

The middle section, d , is provided with an outwardly-curved edge, d'' , that ordinarily projects and lies over the upper edge of the outer-section side f' , without touching it, and in such a manner as to rest loosely on the upper end of the locking-lever q , as shown in

Fig. 2; and it will thus be seen that when a downward pressure is brought to bear on the curved edge d'' by the occupant pressing down on it by going out or into the berth, the lever d'' is turned on its fulcrum q' , causing its lower end, q'' , to force the locking-bar o into any of the notches on the stationary locking-plate p , and thus to hold the berth secured to the cabin wall as long as the pressure is continued on the flange or edge d'' . As soon as such pressure is relieved, the locking-bar o is withdrawn from the notched plate p by the influence of the spring o'' , and the berth is then instantly made self-leveling, as heretofore described.

The top of the flange or edge d'' may be covered or suitably upholstered, so as to be out of sight and at the same time be soft and elastic, for the comfort of the occupant when pressing or resting on said part, for the purpose as set forth.

Having thus fully described the nature, construction, and operation of my invention, I wish to secure by Letters Patent and claim—

1. The self-leveling ship's berth, as described, consisting, essentially, of the following elements: an inner section or berth pivoted to the sides of a middle section, a middle section pivoted in its ends to the ends of the outer section, the latter being pivoted in its ends to the cabin-walls, as and for the purpose set forth.

2. In a ship's berth, the inner section pivoted at its sides to the middle section, and the latter jointed in its ends to the ends of an outer section by means of diagonal links, as and for the purpose set forth.

3. In a ship's berth, the stationary supporting-brackets $h h$, having projections or fulera $h' h'$ and eccentric cam projections $h'' h''$, in combination with the links $i i$ and adjustable sliding blocks $k k$, adapted to yield and move in slots or recesses in the ends of the outer section of the berth, as set forth.

4. In a ship's berth, an inner section pivoted to the middle section, the latter having an outwardly-projecting edge or flange adapted to operate a lever pivoted to the outer section, to cause the berth to be locked by pressure on said flange or edge, as set forth.

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

DANA PARKS.

Witnesses:

ALBAN ANDRÉN,
HENRY CHADBURN.