

No. 762,530.

PATENTED JUNE 14, 1904.

E. HOLMAN.
DRAWING CABINET.

APPLICATION FILED NOV. 10, 1902.

NO MODEL.

4 SHEETS—SHEET 1.

Fig. 1.

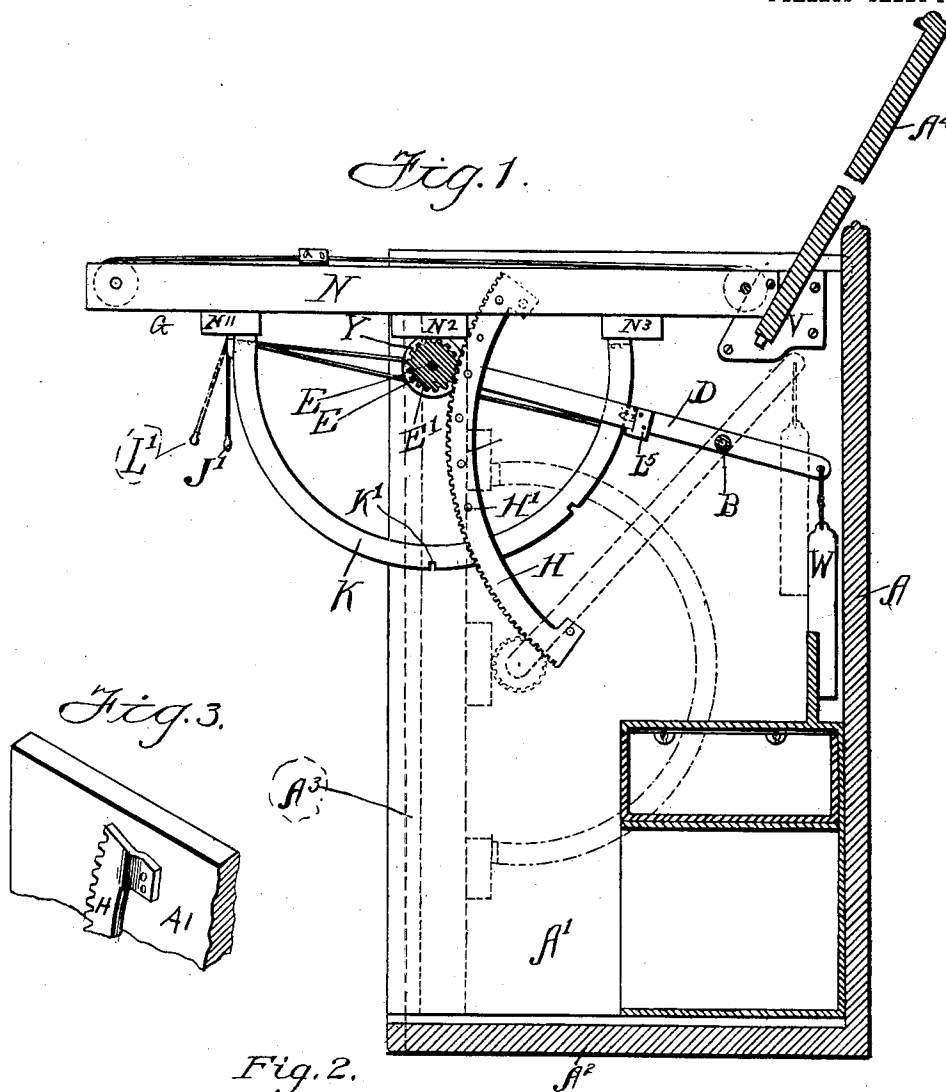


Fig. 3.

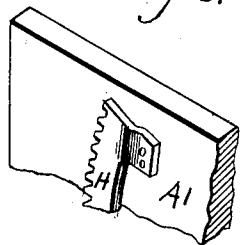
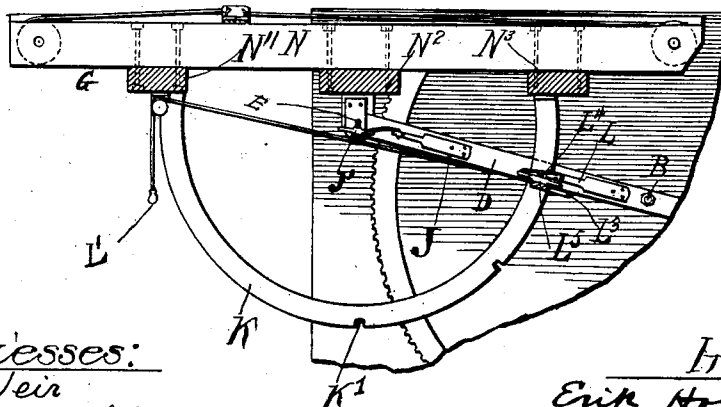


Fig. 2.



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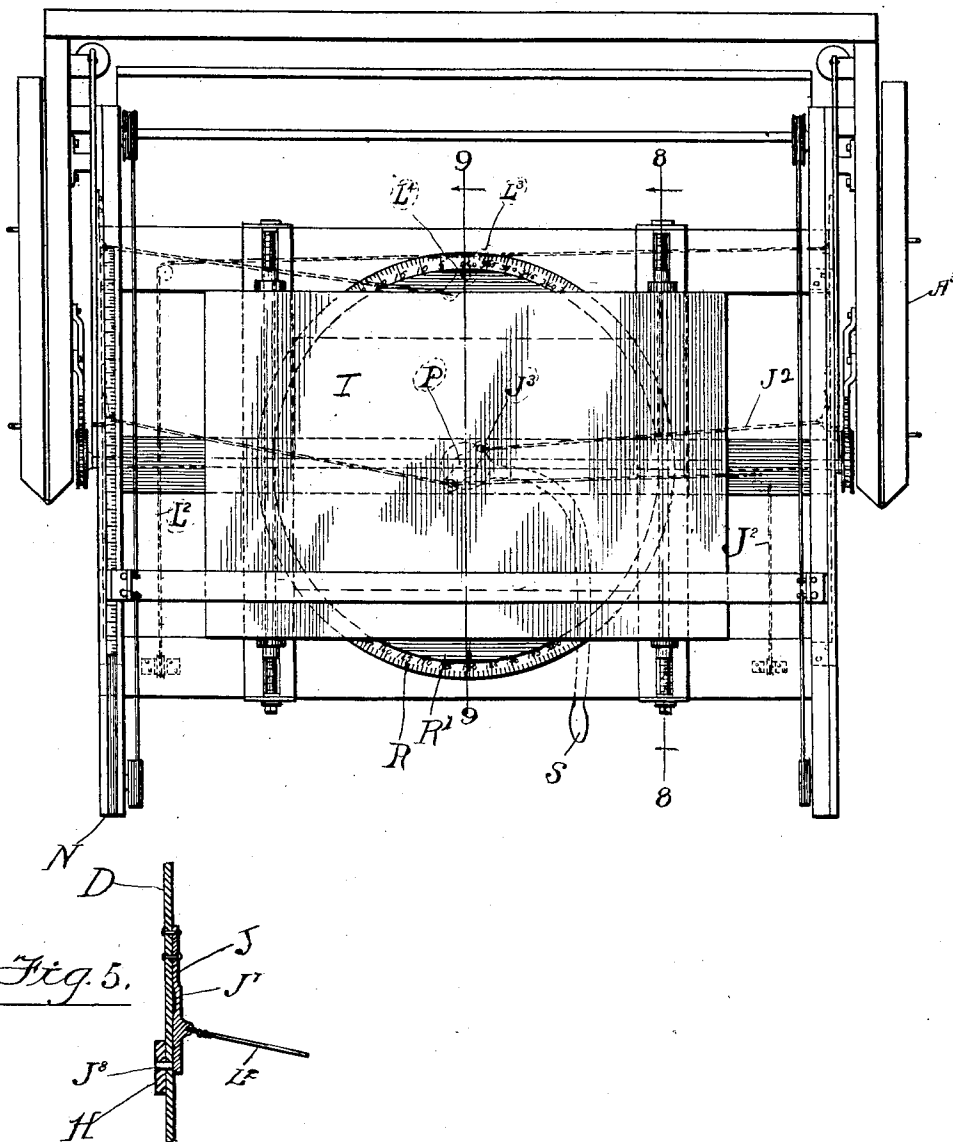
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4 SHEETS—SHEET 2.

Fig. 4.



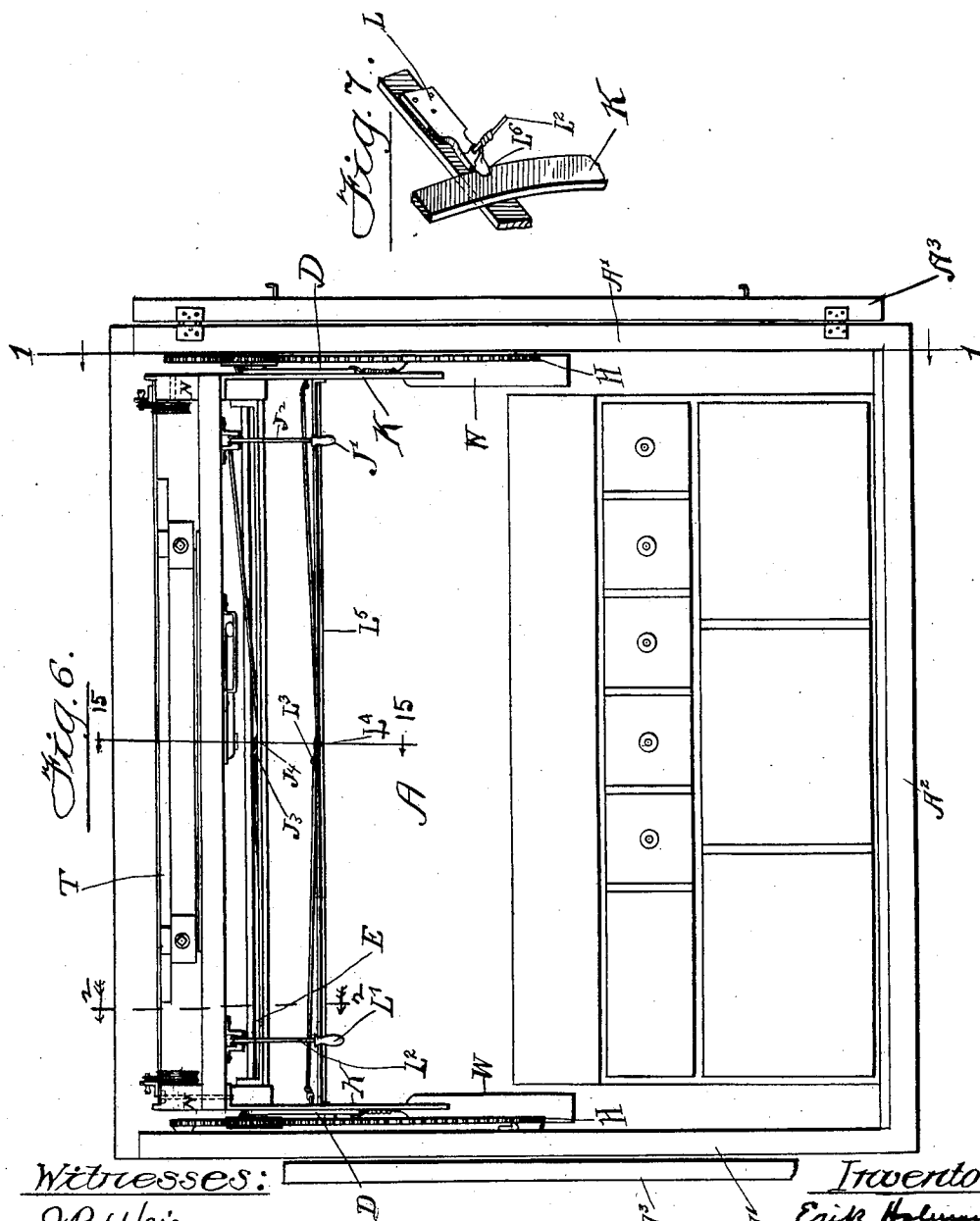
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4 SHEETS—SHEET 3.



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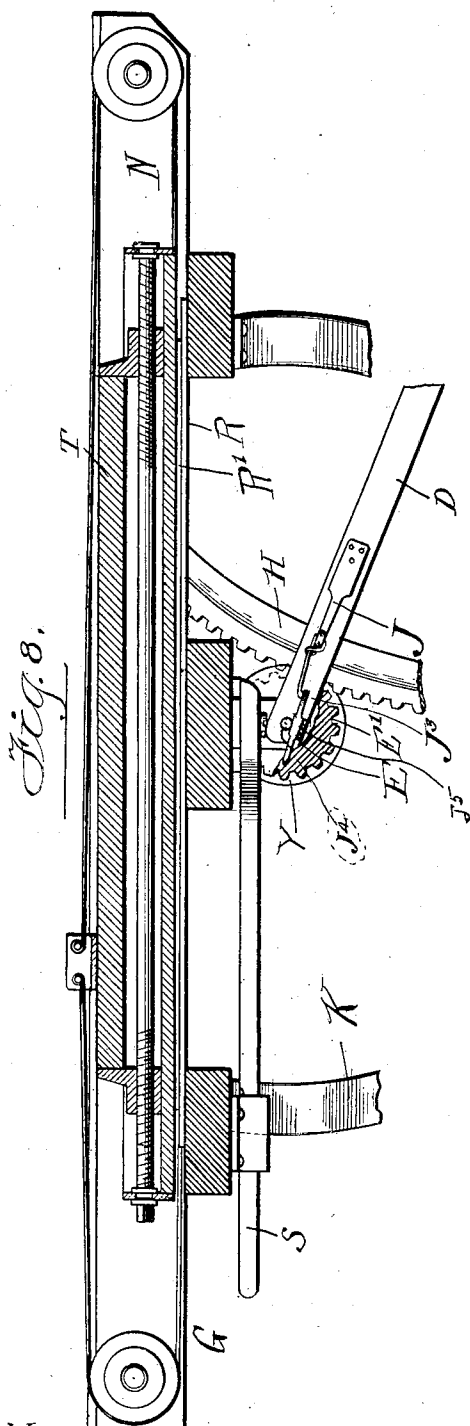
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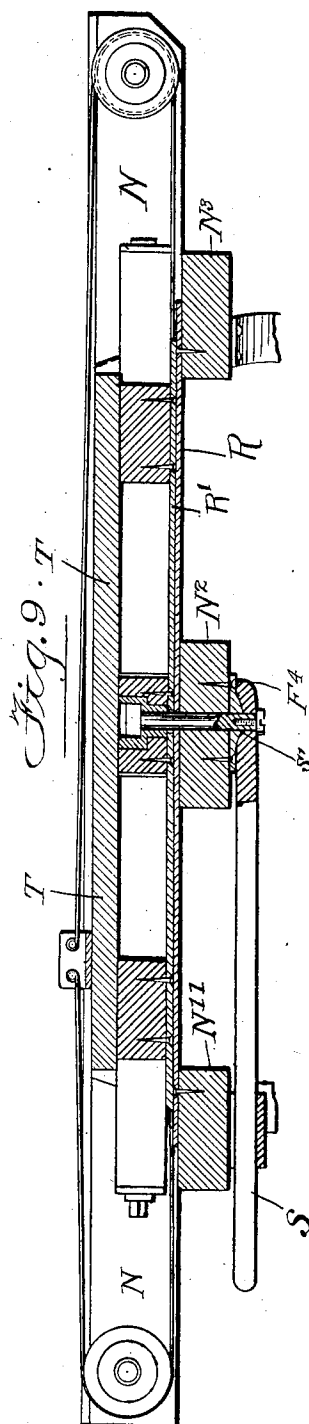
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4 SHEETS—SHEET 4.



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UNITED STATES PATENT OFFICE.

ERIK HOLMAN, OF LAGRANGE, ILLINOIS.

DRAWING-CABINET.

SPECIFICATION forming part of Letters Patent No. 762,530, dated June 14, 1904.

Application filed November 10, 1902. Serial No. 130,734. (No model.)

To all whom it may concern:

Be it known that I, ERIK HOLMAN, a citizen of the United States of America, and a resident of Lagrange, Cook county, Illinois, have invented certain new and useful Improvements in Drawing-Cabinets, of which the following is a specification.

The object of this invention is to provide an unusually convenient means for holding a drawing-board in the various positions of use and for protecting it by means of a very small cabinet when it is not in use. To this end I provide a cabinet whose top is removable and whose front opens upon hinges and within the cabinet mount a board-carrying frame which when the cabinet is closed normally lies near the front, parallel thereto and in registry therewith. Two arms are pivoted to the side walls of the cabinet in a line parallel to the medial horizontal axis of the frame, and the free forward ends of these arms are pivotally connected to the frame approximately in said axis. Now if the arms be swung upward the frame rises bodily until said axis is approximately in the plane of the top of the cabinet, and it is then rocked upon its axis to bring it to horizontal or any other desired position, the front and top of the cabinet having been moved out of position, of course, to permit the frame to make these movements. It follows from this construction that the frame's length and breadth equal the height and width of the interior of the cabinet and that the front-to-rear depth of the latter need be little more than one half the length of the frame.

In the drawings, Figures 1 and 2 are sections on the lines 1 1, 2 2, Fig. 6. Fig. 3 is a detail view. Fig. 4 is a plan view, the apparatus being opened for use. Fig. 5 is a detail view. Fig. 6 is a front elevation, the cabinet being open. Fig. 7 is a detail view. Figs. 8, 9 are sections on the lines 8 8, 9 9, Fig. 4.

The cabinet consists of a rear wall A, side walls A', floor A², front (doors) A³, and top A⁴. As shown, the front forms two doors, which swing open until parallel to the side walls, and the top may be removed to expose the whole interior. Normally a plane frame N N' N² N³ lies inside the closed cabinet near,

parallel to, and in registry with the front. Arms D are pivoted at B B between their ends to the side walls, respectively, in a line parallel to the medial horizontal axis of the frame. In the forward ends of the arms is loosely mounted a shaft E, approximately coinciding with the horizontal axis of the frame, and upon this shaft the frame is arranged to rock. The rear ends of the arms bear counterweights W, which balance the frame and whatever is ordinarily borne thereby. To the side walls, respectively, are fixed gears H, concentric with the pivots B, and upon the shaft E are fixed pinions E', which engage the gears and compel the two arms to rise and fall exactly together or through precisely equal angles. Each pinion has flanges Y, which extend out on each side of the gears, holding the latter, and hence the side walls, at a fixed distance from each other. To the lower side of the frame is fixed a circular rack K, provided with peripheral notches K' and having its center in the axial line of the shaft E. A spring-pawl L engages in these notches and fixes the frame in its adjustments about the axis of the shaft E. The pawl is disengaged by means of a handle L', chain L², (passing around suitable direction-changing pulleys,) lever L³, and chain L⁶, the lever L³ being centrally pivoted at L⁴ upon a cross-bar L⁵, connecting the arms. The frame is locked against bodily movement about the axis B B by a pawl J, having at its free end a pin J⁸, engaging in perforations H' in the gear H, and this pin is retracted by means of a handle J', chain J², lever J³, and chain J⁶, the lever J³ being pivoted at J⁸ upon a bar J⁵, connecting the frame's bearings for the rod or shaft E. Upon the lower side of the frame is fixed a central plate F¹, having a cam-face to coact with cam-face upon a lever S to draw down a bolt S', to be connected to devices which may be mounted upon the frame. There is also fixed to the frame a graduated arc R to facilitate angular adjustments.

The devices to be carried by the frame are not herein claimed; but as illustrating the use of the claimed apparatus a drawing-board T and various accessories thereof have been shown in the drawings.

What I claim is—

1. The combination with a normally closed cabinet, of a plane frame normally within the closed cabinet near and parallel to its front and mounted to rock upon a horizontal axis nearly at its middle and to swing bodily about a parallel axis at some distance in the rear of the frame, and means for locking the frame in desired angular adjustments about each of said axes; the front and top of said cabinet being movable out of the path of the frame.

2. The combination with a normally closed cabinet having an openable front and top, of a plane frame normally within the cabinet near and parallel to the closed front, parallel, frame-carrying arms pivotally fixed at their forward ends to the frame near its middle horizontal line, extending rearward and pivoted to the cabinet in a parallel line, means for locking the frame against angular motion about the first line, and means for locking the arms in the desired angular adjustment about the second or parallel line.

3. The combination with a suitable cabinet or case, of arms pivoted to the opposite walls of the case, respectively, a shaft mounted in the free ends of said arms, circular gears fixed to the case alongside said arms, respectively, and having their centers in the pivotal axis of the latter, pinions mounted upon said shaft and engaging said gears, respectively, and a board-supporting frame mounted upon said shaft.

4. The combination with a suitable cabinet, of arms pivoted to the opposite walls of the cabinet, a shaft connecting corresponding ends of said arms, segmental gears fixed to the cabinet-walls, pinions mounted upon said shaft, engaging said gears, respectively, and provided with projecting flanges embracing the gears, and a frame pivotally supported by said shaft.

5. The combination with a suitable cabinet, of a movable frame mounted within the cabinet, arms pivoted at their ends to the movable frame and pivoted to the side walls of the cabinet, a shaft concentric with the pivots connecting the arms to the movable frame, pinions fixed upon the shaft, segmental gears fixed to the walls of the cabinet and adapted to be engaged by said pinions, and spring devices for locking the arms to the gears, substantially as set forth.

6. The combination with a suitable cabinet, of a movable frame in the cabinet, arms pivoted to the cabinet and at their ends to the movable frame, a shaft concentric with the pivots connecting the arms and frame, pinions fixed to said shaft, segmental gears fixed to the walls of the cabinet, spring devices for locking the ends of the arms to the gears, circular racks fixed to the frame and concentric with the shaft, and spring devices for locking the racks with respect to the arms.

7. The combination with a cabinet having stationary side and rear walls, of arms pivoted to the side walls to swing about a common axis, a frame mounted on the free forward ends of said arms to swing about a second, parallel axis, and to rise and fall bodily with said arms, means for locking the arms, means for locking the frame against movement on the second axis, doors adapted to open and close the front of the cabinet, and a top adapted to be moved into and out of position for upwardly closing the cabinet.

8. The combination with a cabinet having stationary rear and side walls and openable doors in front, of arms pivoted to the side walls, respectively, a frame borne by the forward ends of the arms, gears fixed to the side walls and concentric with the arm-pivots, a transverse shaft connecting the forward ends of the arms, pinions fixed to said shaft and engaging said gears and means for locking the devices against movements about the arm-pivots.

9. The combination with a cabinet having fixed rear and side walls openable doors in front and a removable top, of arms pivoted between their ends to the side walls, respectively, a frame supported by the forward ends of said arms and rocking upon a pivotal axis therein, counterweights at the opposite ends of the arms, means for locking the devices against swinging on the arm-pivots, and means for locking the frame against motion about said axis.

Signed at Chicago this 3d day of November, 1902.

ERIK HOLMAN.

Witnesses:

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CARRIE E. JORDAN.