

*W. Lines,
Ash Siere.*

N^o 36,659.

Patented Oct. 14, 1862.

Fig. A.

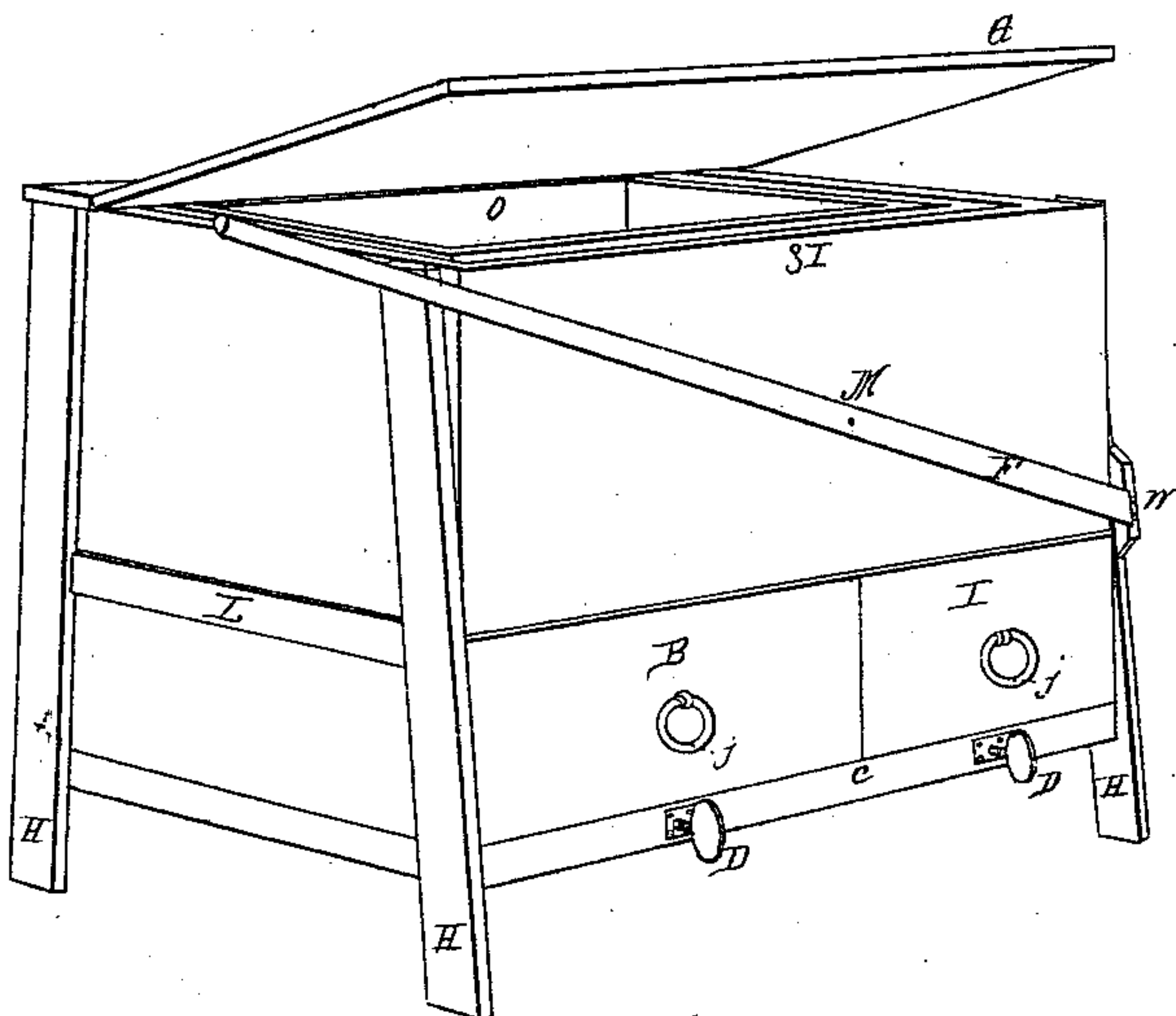


Fig. 1.

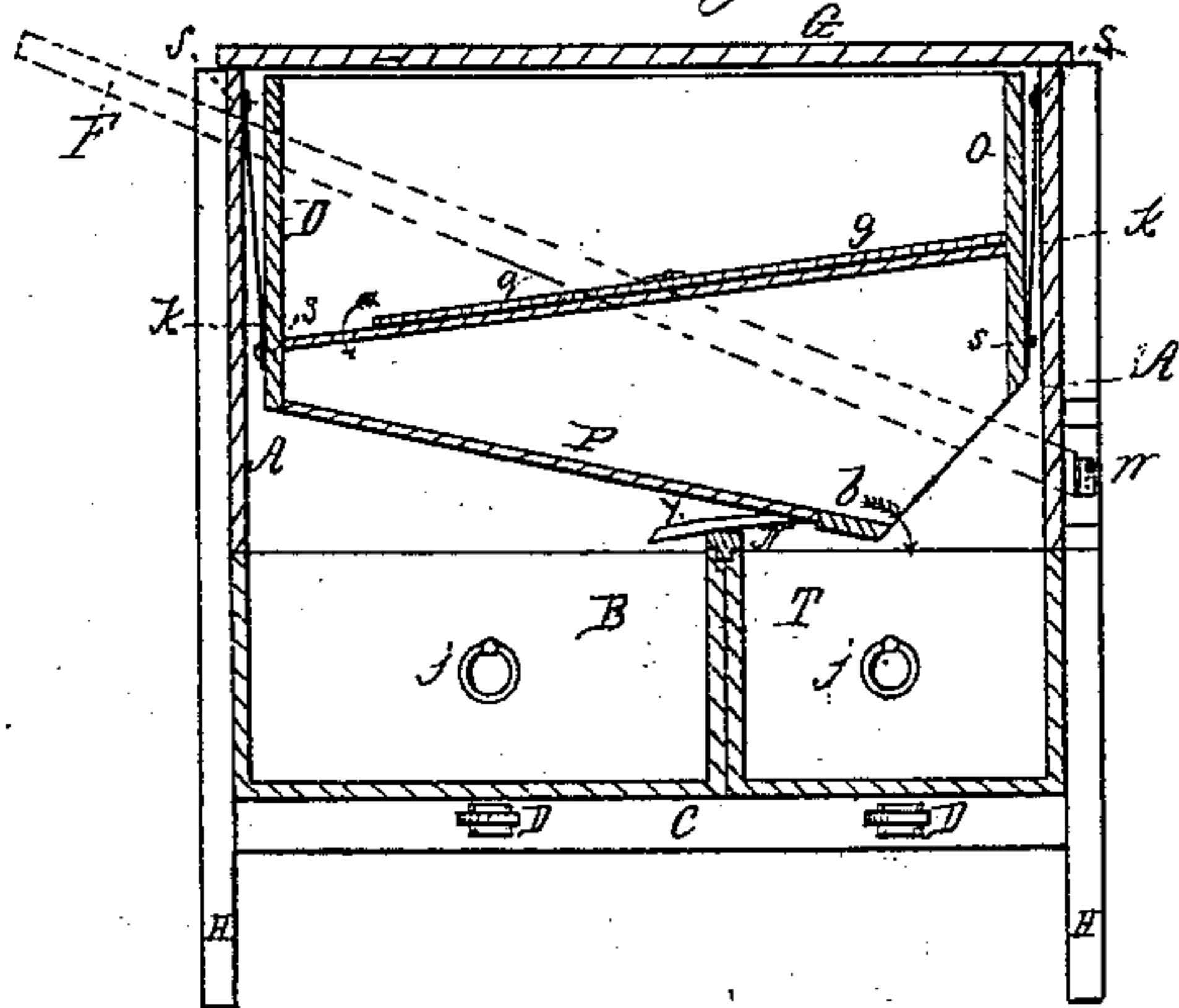


Fig. 2.

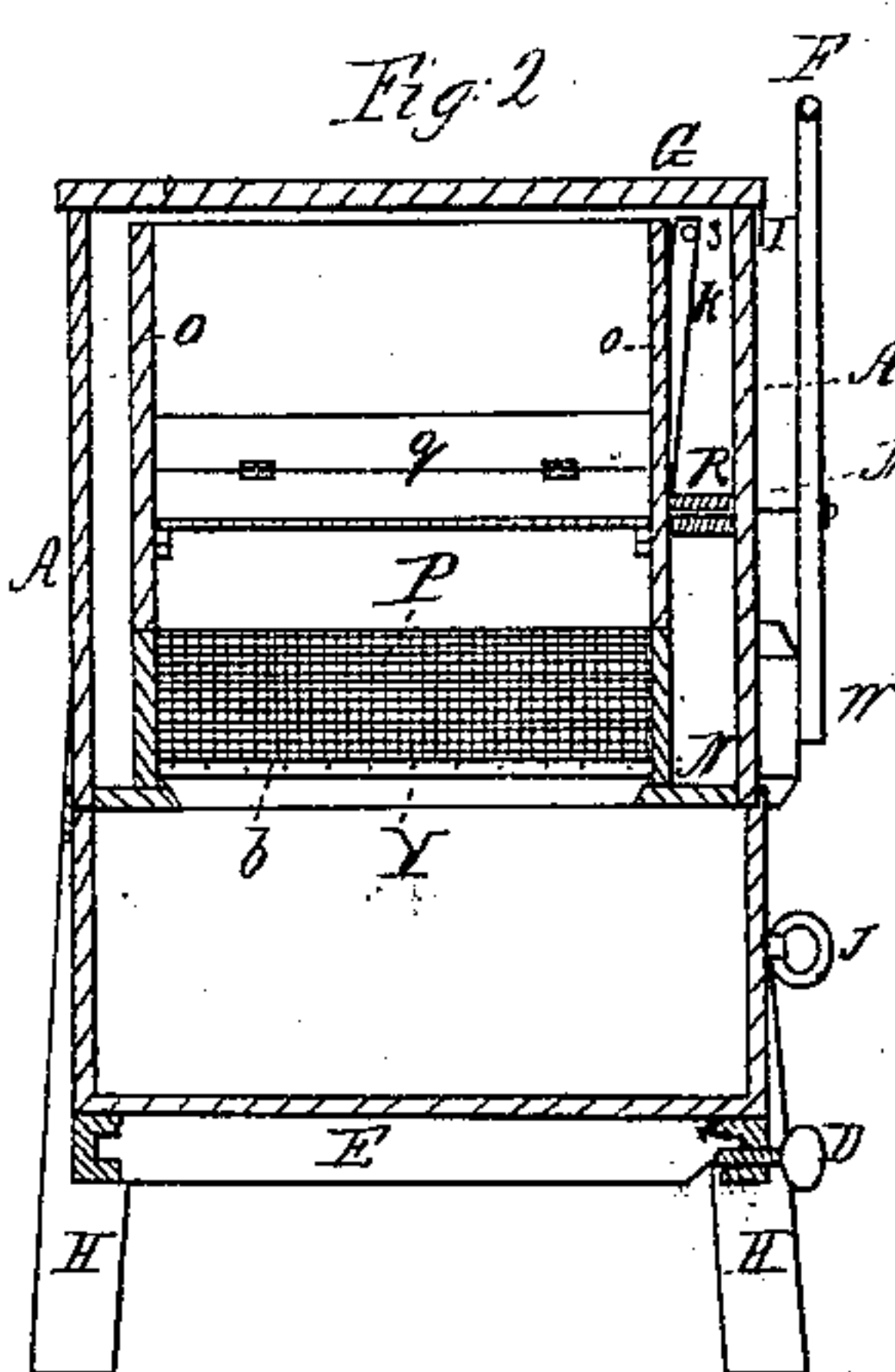
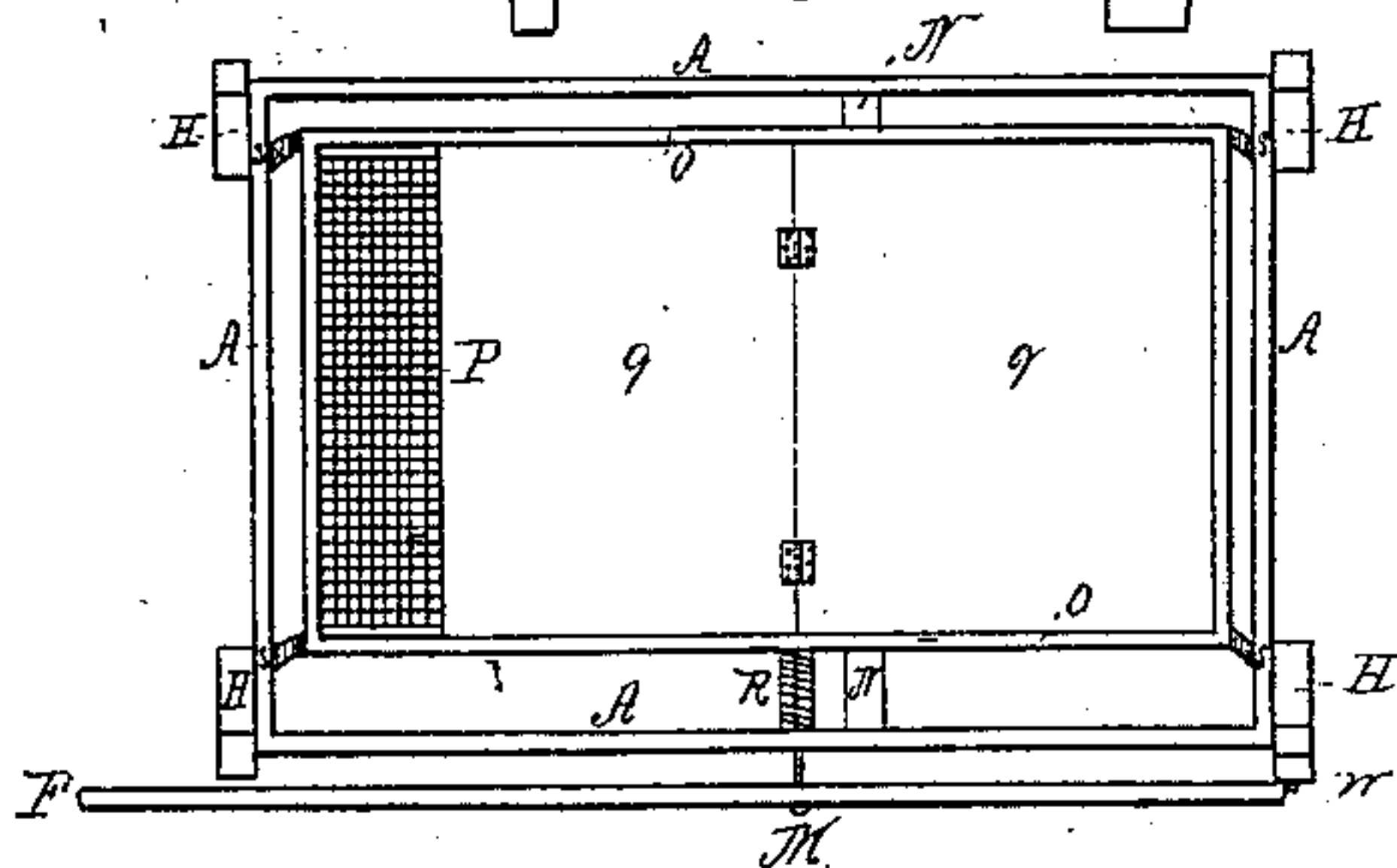


Fig. 3.



Witnesses:

Henry R. Vanderbilt

Geo. Haunburger

Inventor:

William Lines.

UNITED STATES PATENT OFFICE.

WILLIAM LINES, OF ROCHESTER, NEW YORK.

IMPROVEMENT IN COAL-SIFTERS.

Specification forming part of Letters Patent No. 36,659, dated October 14, 1862.

To all whom it may concern:

Be it known that I, WILLIAM LINES, of Rochester, in the county of Monroe and State of New York, have invented a new and useful Improvement in Ash and Coal Separators; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure A is a perspective view of the apparatus. Fig. 1 is a front elevation with the side of the outer case, A, above the drawers B and T and that part of the inner case, O, removed, and showing the arrangement of the feed-board *q*, the screen or riddle P, and the ash-guide Y. Fig. 2 is a transverse vertical section showing one of the adjusting-bars and set-screws E and D. Fig. 3 is a top view with the lid or cover G removed.

The nature of this invention will be understood by reference to the drawings and specification.

To enable others to make and use my invention, I will proceed to describe its construction and operation.

The outer box or case, A, is provided with four supports or legs, H, which give it the desired elevation; and it is also provided with a hinged cover, G. The lower part of the case is furnished with two drawers, B and T, one to receive the ashes and the other the coal. The inner case, O, is made small enough to admit of the proper degree of vibration, and it is suspended to the sides of the outer case by four pivoted hangers, K. The feed-board *q* is inclined ten degrees, (more or less,) as seen in Fig. 1, and it is divided, as seen in Figs. 1, 2, and 3. The upper portion is fixed to the case O, and the lower part is hinged to the said upper or fixed portion, and rests upon a cleat nailed to each side of the case, which allows the hinged part to be raised up, and thus afford access to the screen when necessary to clear it from cinders or other substances that may lodge upon it. There is a space left between the lower edge of the board and the case for the coal and ashes to pass through onto the screen P, which latter is fixed to the bottom of the case O, and is inclined in the opposite direction from the feed-board *q*. There is an inclined return-plate, Y, of tin, sheet-iron, or wood, fixed to the lower edge of the sieve or screen P, as seen in Fig. 1, to con-

duct the ashes from the lower part of the screen into the ash-drawer B. The inner case, O, is vibrated by means of the lever F, the lower end of which is hinged to the projection W, and is connected with the case by the rod M, the outer end of which is attached loosely to the lever, and the other end passes through the side of the outer case and is screwed into the side of the inner case. The spiral spring R encircles the rod M between the two cases. The joints between the drawers and the lower edge of the outer case is covered on each end and the rear side by batten-strips L.

The adjusting-bar E under each drawer has its ends framed loosely into the front and rear sills C, as seen in Fig. 2, and the upper side is made somewhat crowning, so as to insure a bearing under the center of the drawers when the set-screw D is turned in, which forces the front end of the bar upward, which is done by the point of the screw pressing against the bevel-shoulder under the tenon at that end. This adjustment compensates for the necessary play to admit of the easy movement of the drawers out or in, and for any shrinkage that may occur in them or in the sides of the outer case.

Operation: The refuse from the furnace is deposited upon the feed-board *q*, and the cover G immediately closed and secured by the hook I. The inner case, O, is then vibrated by the lever F, when the coal and ashes are fed gradually onto the screen P, the ashes and fine cinders dropping through into the drawer B, and the coal moving down over the end *b* of the screen into the drawer T, after which the drawers may be removed by loosening the screws D. The lower edge of the board *q* may be elevated, if it feeds too fast, and a key driven between it and the side of the case to hold it at the point desired.

What I claim as my invention is—

Tightening the joints between the drawers B and T and the case A, for the purpose of preventing the escape of dust or ashes from the apparatus during the process of sifting, by means of the adjusting-bars E, which are constructed and arranged substantially in the manner specified, and operated by the set-screws D.

WILLIAM LINES.

Witnesses:

WM. S. LOUGHBOROUGH,
D. D. GARNER.