

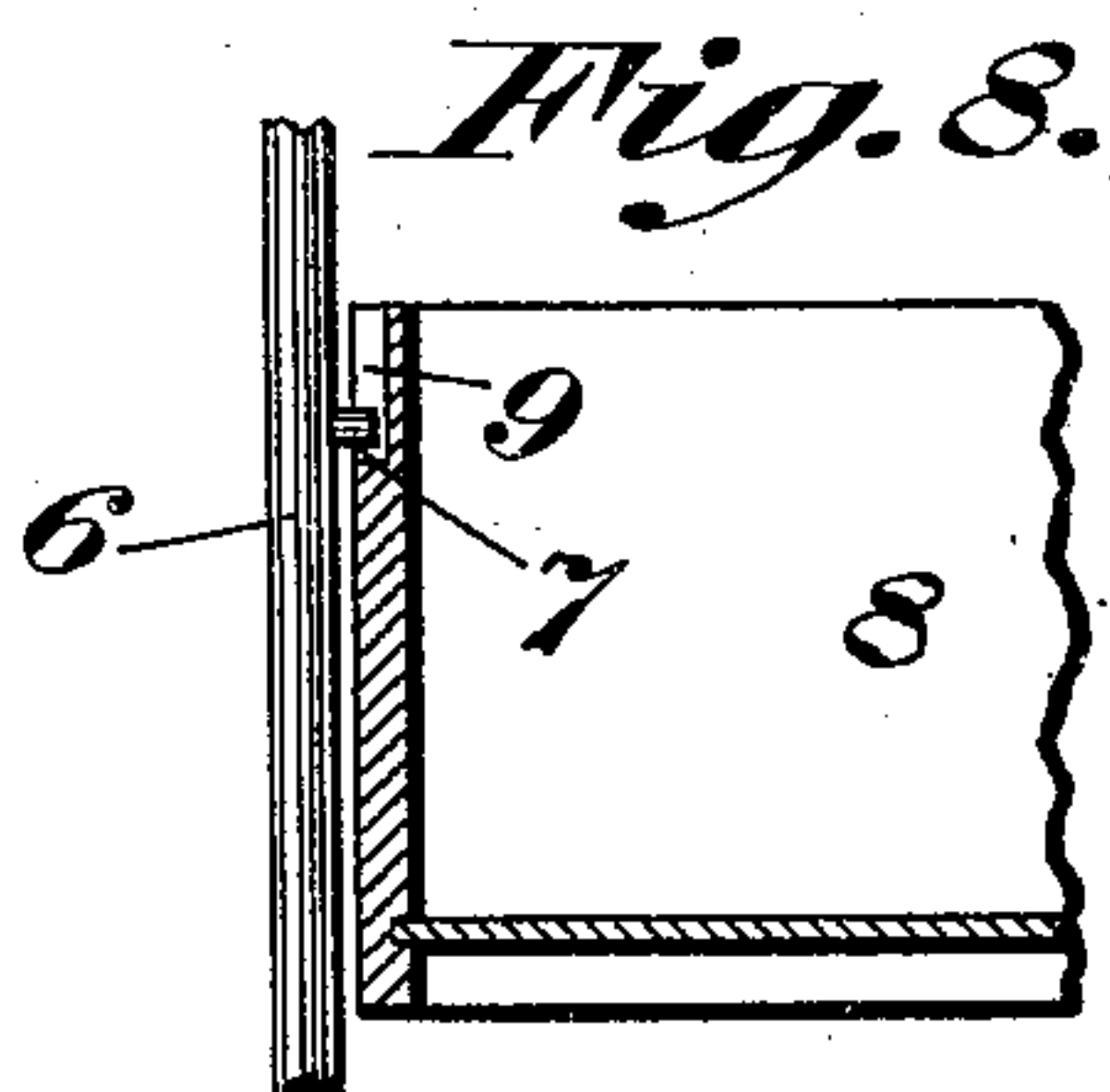
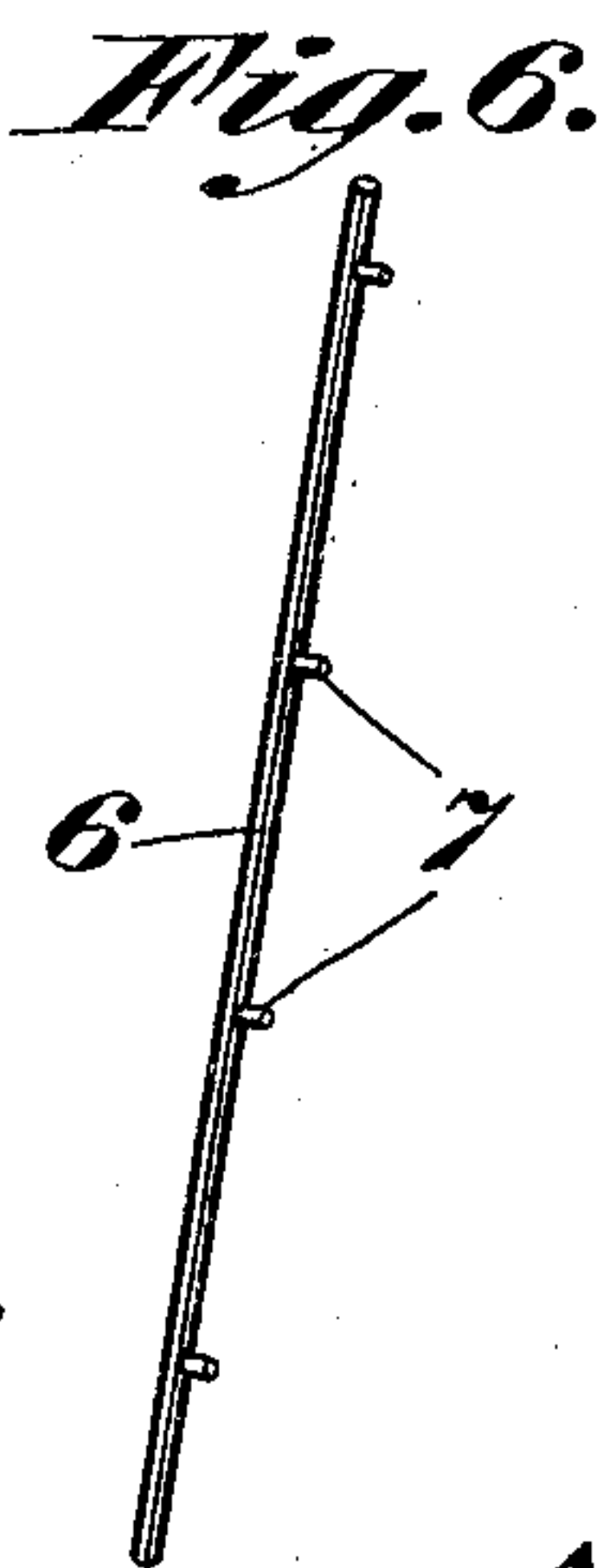
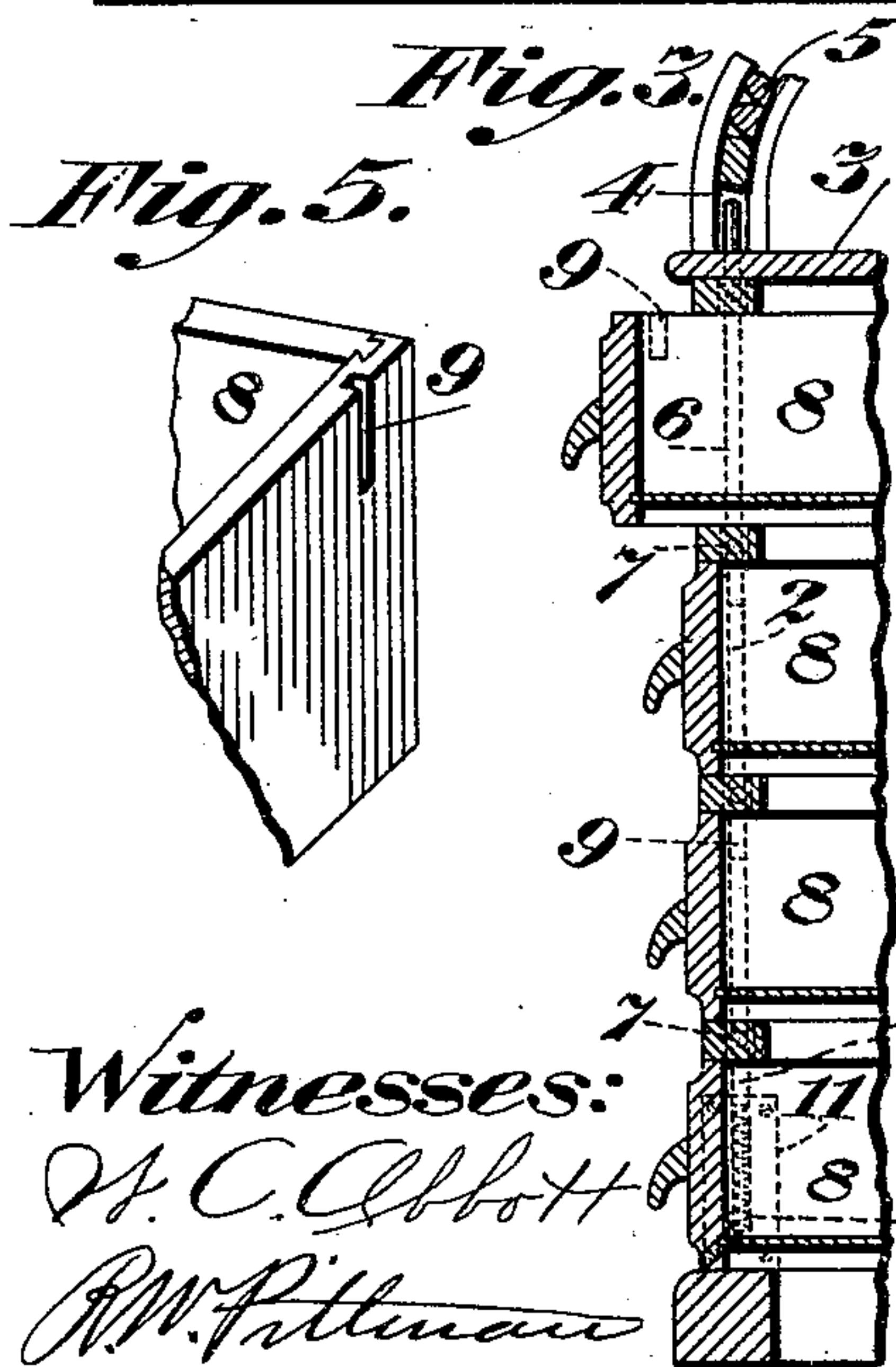
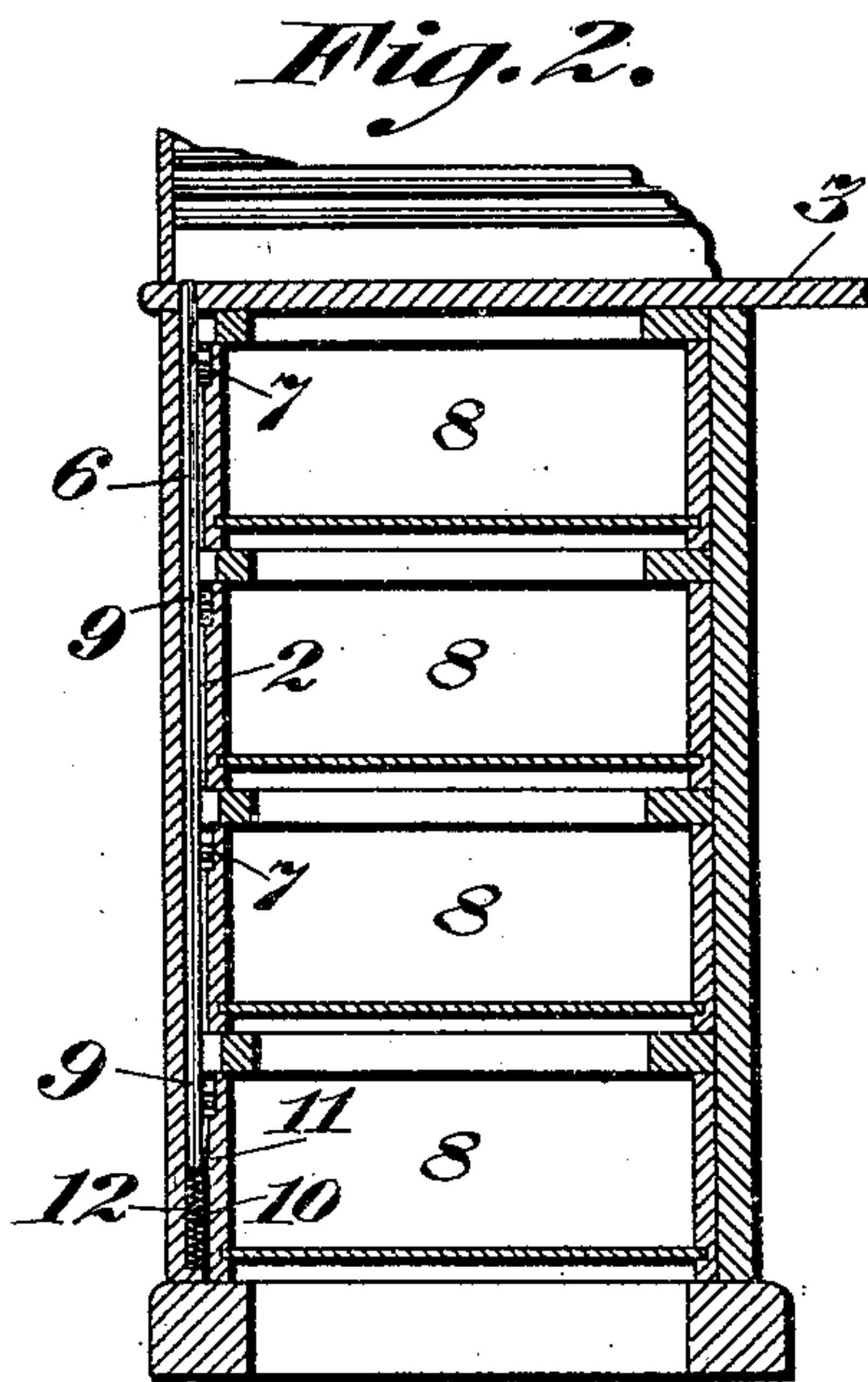
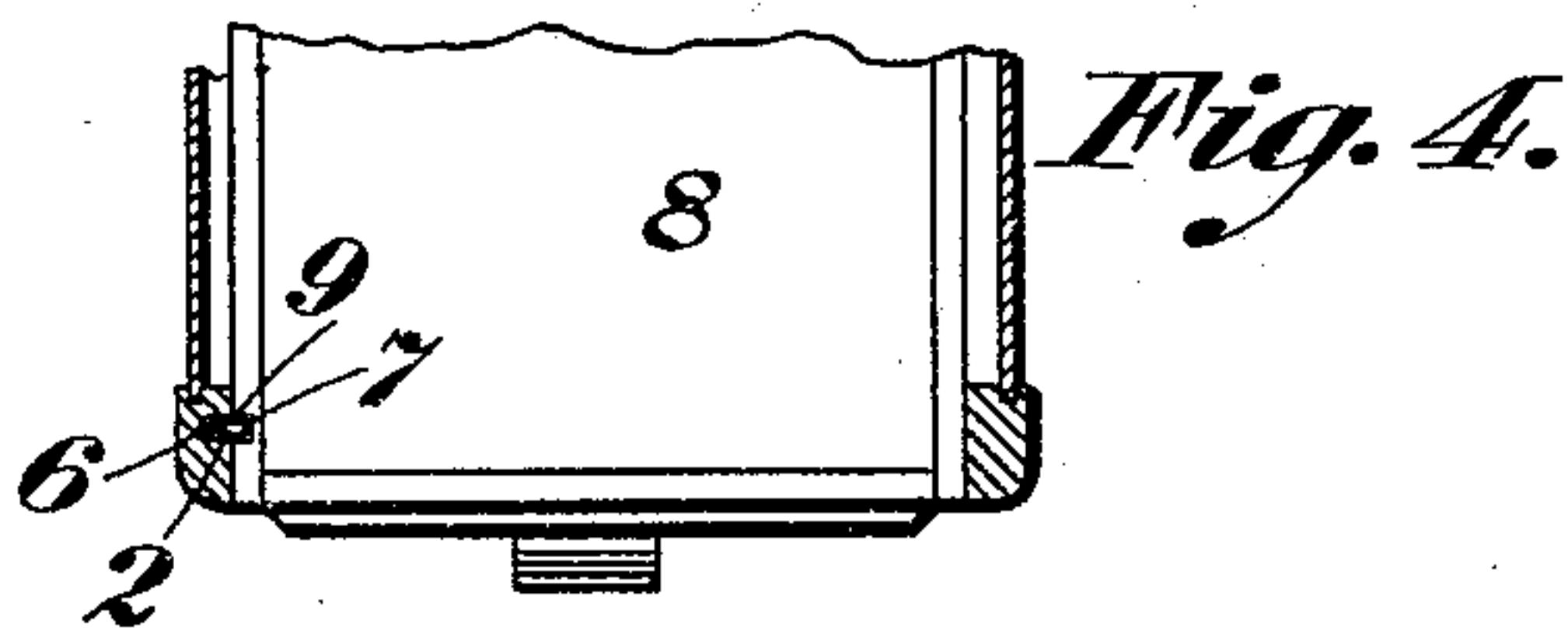
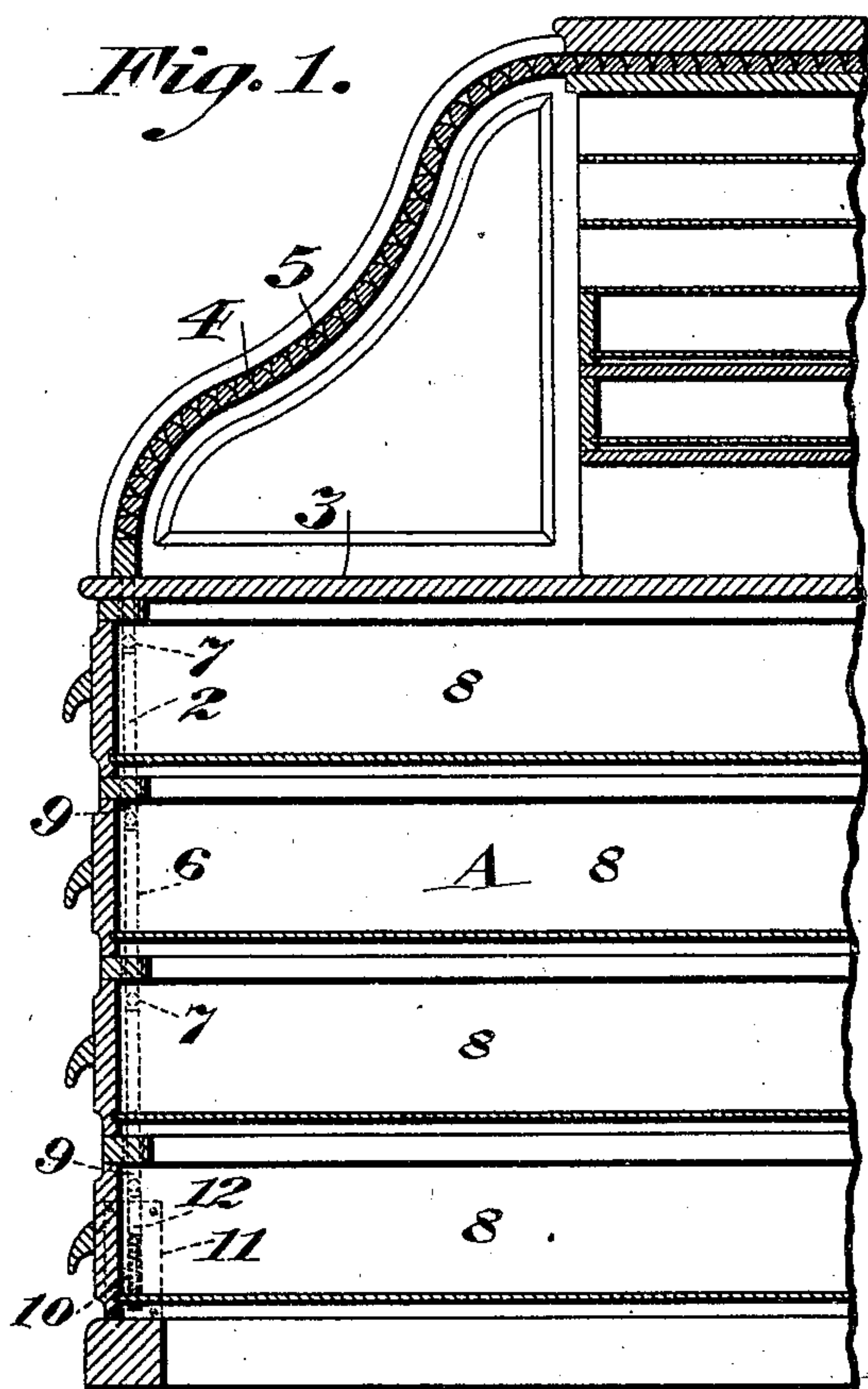
A. R. FERGUSON.

LOCK.

(Application filed Mar. 16, 1901.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:

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No. 697,614.

Patented Apr. 15, 1902.

A. R. FERGUSON.
LOCK.

(Application filed Mar. 16, 1901.)

(No Model.)

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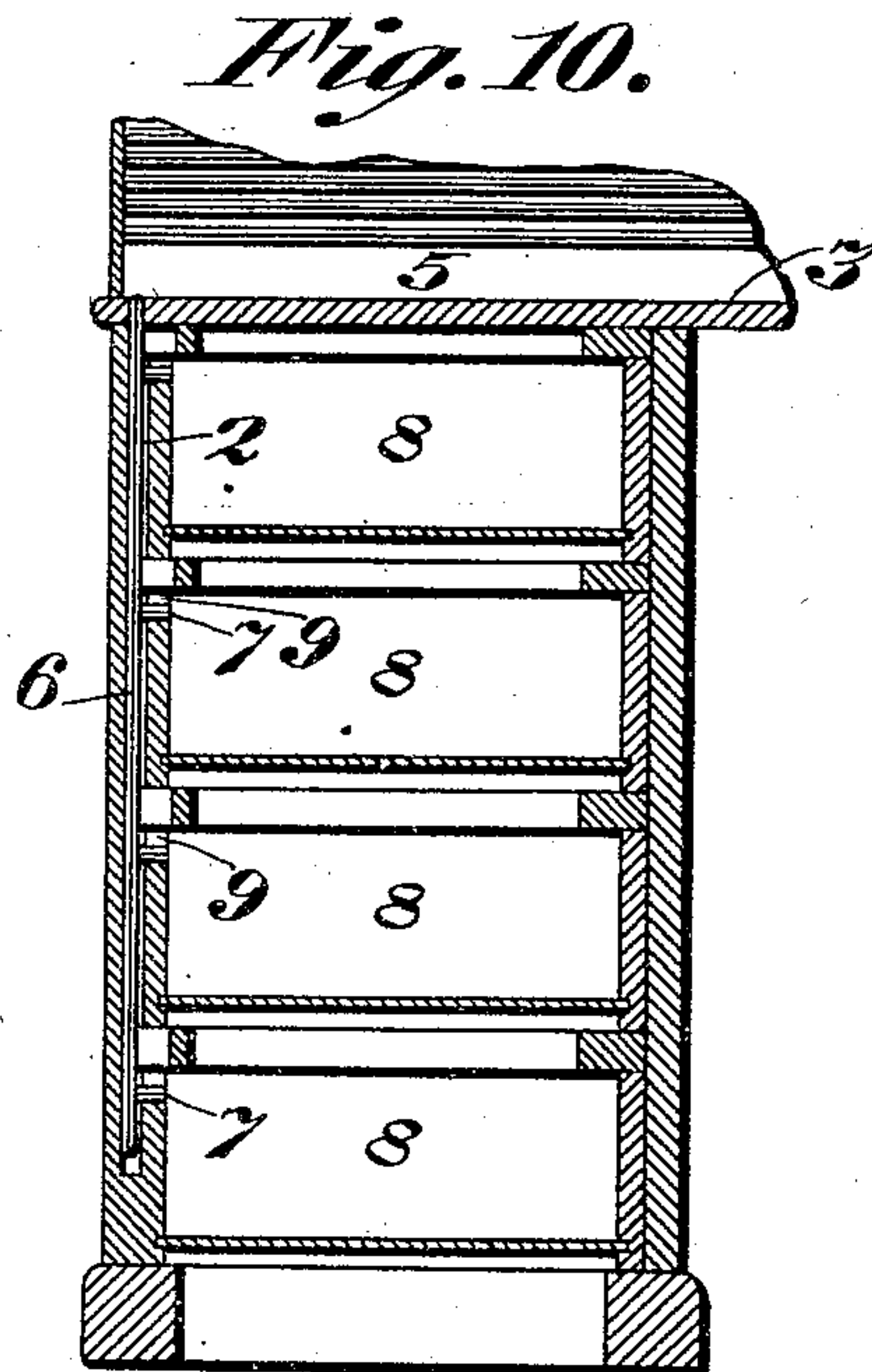
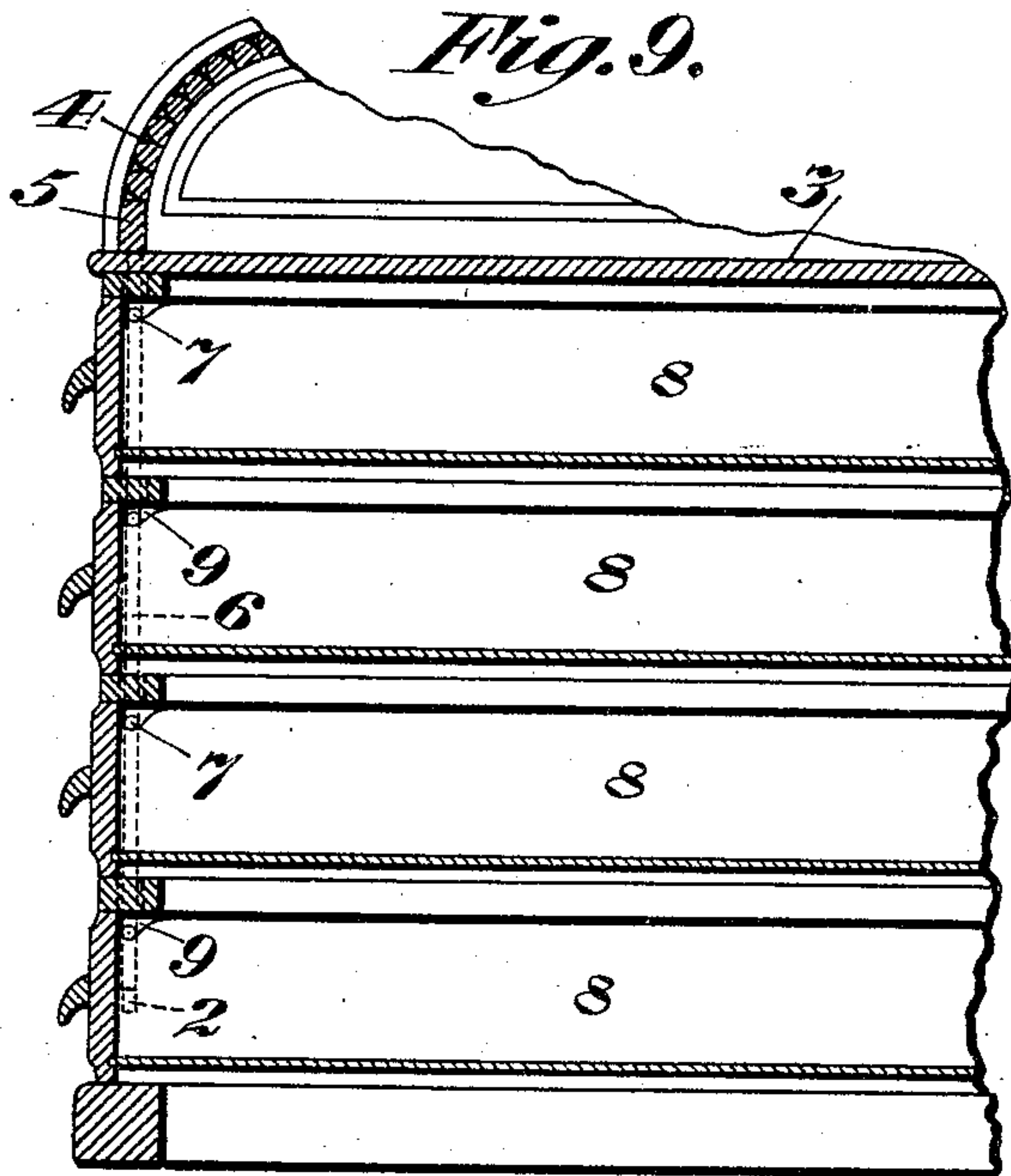


Fig. 12.

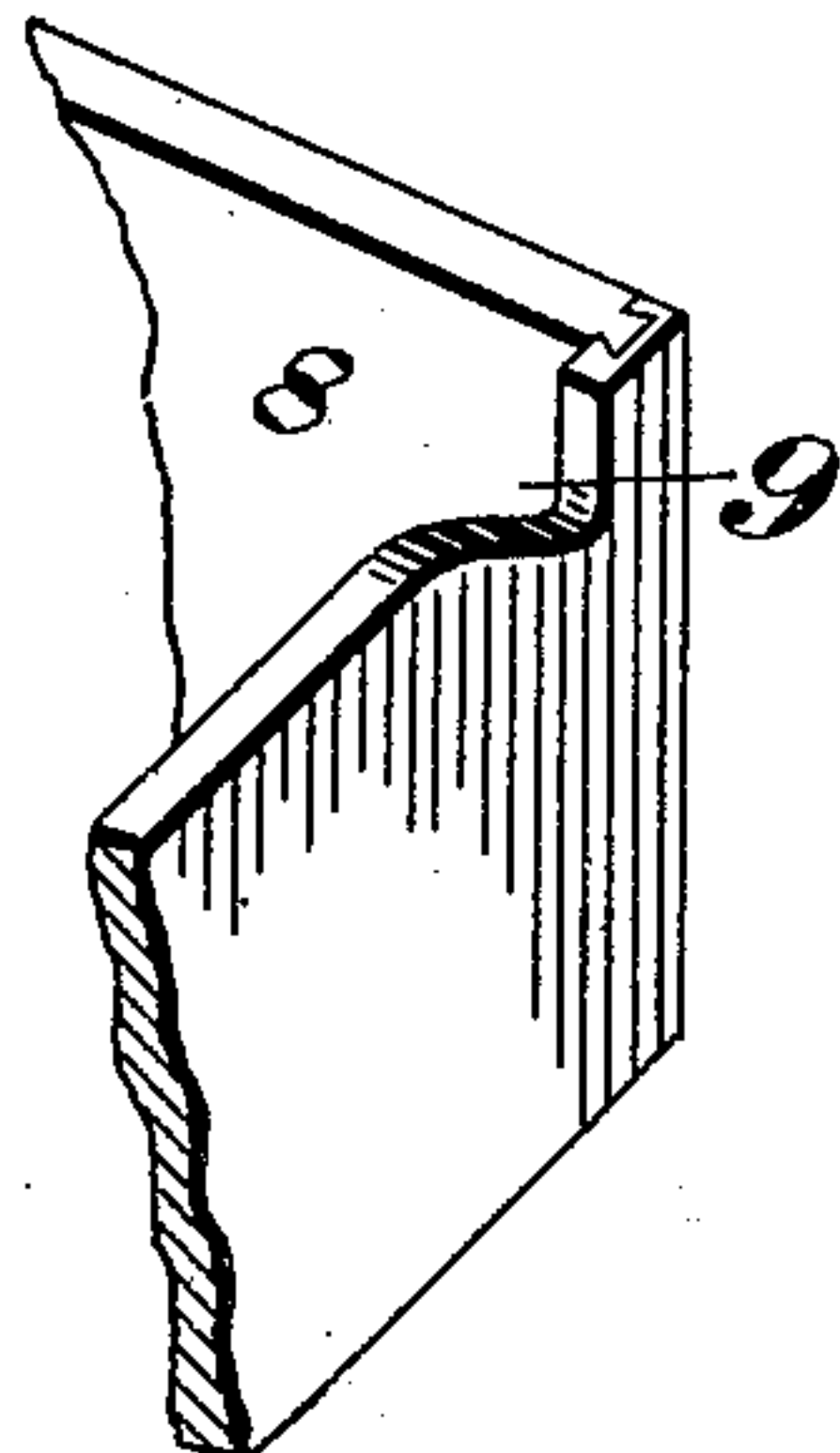


Fig. 13.

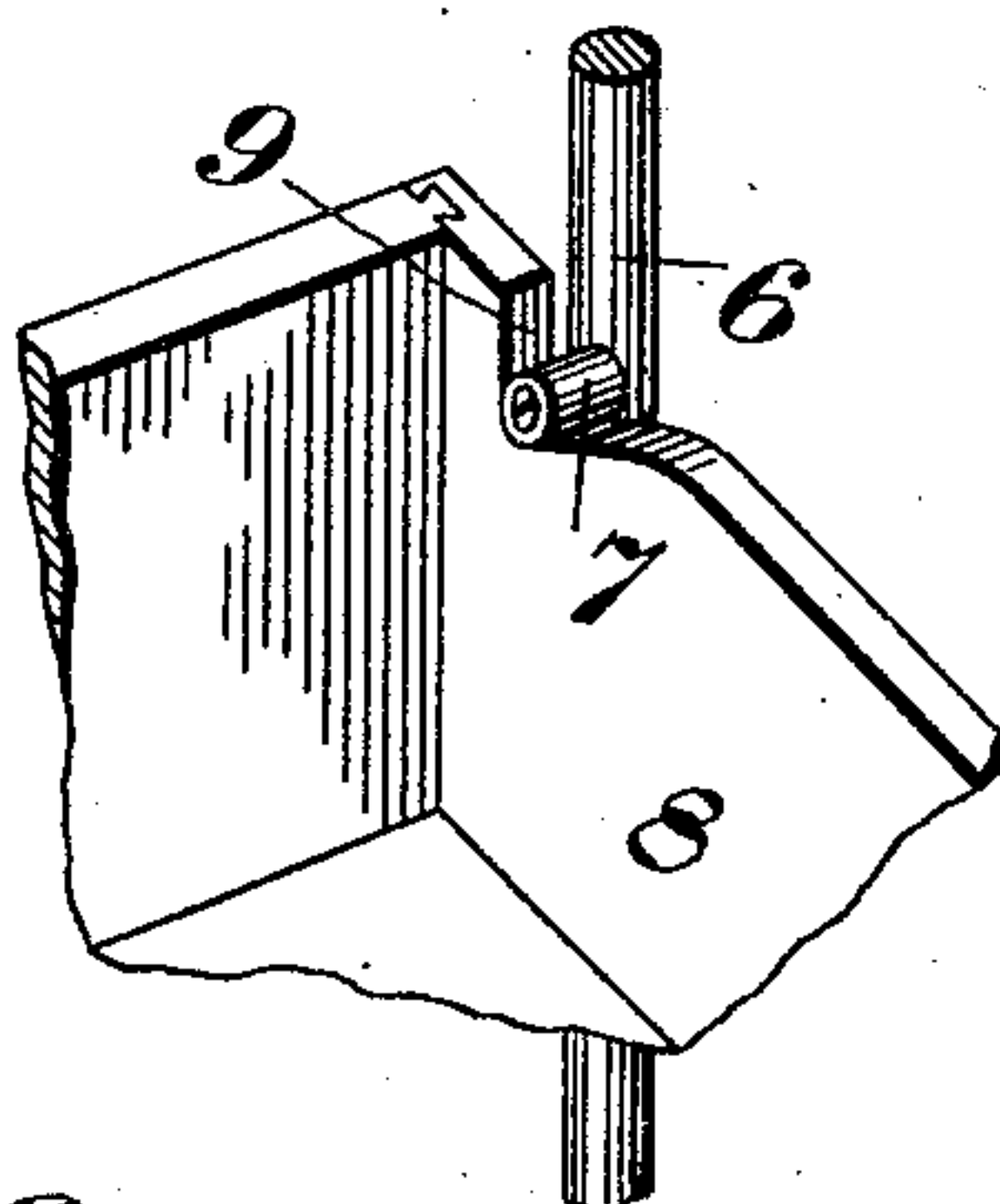


Fig. 11.

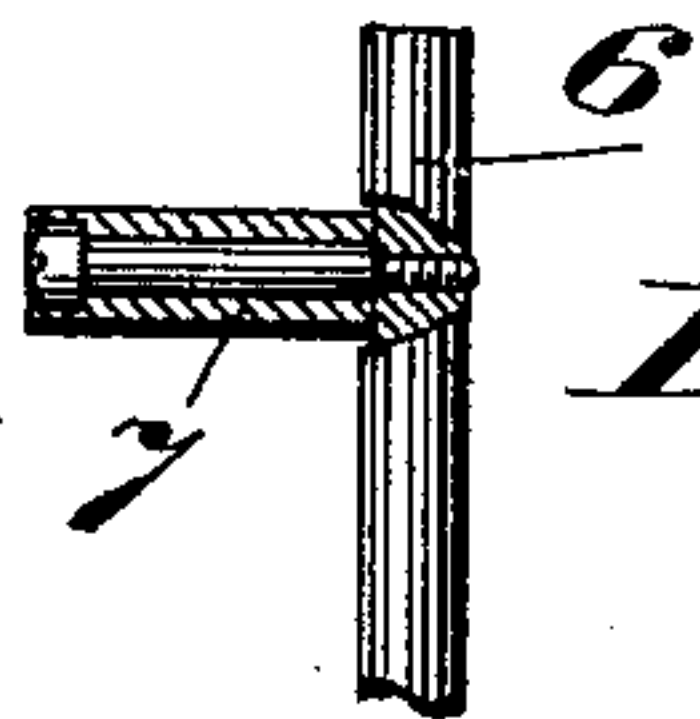
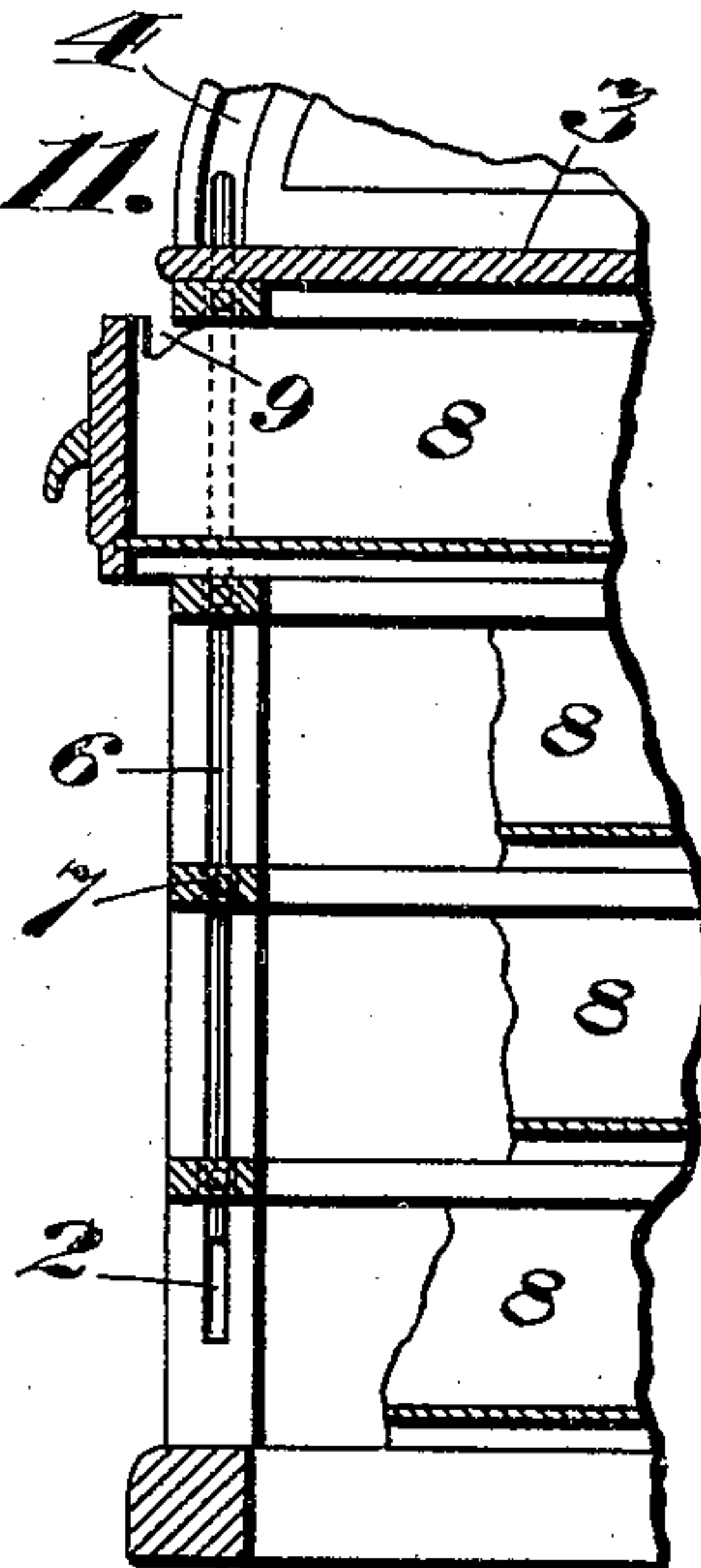


Fig. 14.

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UNITED STATES PATENT OFFICE.

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LOCK.

SPECIFICATION forming part of Letters Patent No. 697,614, dated April 15, 1902.

Application filed March 16, 1901. Serial No. 51,479. (No model.)

To all whom it may concern:

Be it known that I, ALAN R. FERGUSON, a citizen of the United States, residing in Mount Vernon, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Locks, of which the following is a specification.

This invention relates to an improvement in lock mechanism, and more particularly to such as are adapted to be used in desks having roll or sliding tops, the object being to provide a simple, strong, durable, and inexpensive lock mechanism which can be applied to any such desk at slight cost and automatically locks all of the drawers on one side of said desk on the closing of the top and automatically unlocks the same when said top is opened.

This invention comprises in general a sliding bar located between the sides of the drawers and the contiguous side of said desk and provided with projections adapted to enter notches in the sides of said drawers, said bar projecting above the table of the desk and entering the grooves, in one of which the top of such desk slides.

In the drawings accompanying and forming part of this specification, Figure 1 is a transverse sectional view of a part of a roll-top desk with the drawers closed and the top down, showing the application of the improvement. Fig. 2 is a front elevation of the same part in the same condition, partly in section. Fig. 3 is a similar view to Fig. 1 with the top drawer partly open and the roll-top partly raised. Fig. 4 is a plan view of the same part, partly in section. Fig. 5 is a detail perspective view of a corner of one of the drawers, showing one of the notches. Fig. 6 is a detail view of the sliding bar. Fig. 7 is a detail sectional view of a part of a drawer, showing a notch and sliding bar and one of the projections thereon. Fig. 8 is a sectional view of part of a drawer, showing a part of the bar and one of the projections thereon in its locking position in the notch of the drawer. Figs. 9, 10, and 11 are similar views to Figs. 1, 2, and 3, illustrating a modified form of the device, omitting the spring and showing the notches with cam-shaped rear surfaces. Fig. 12 is a detail perspective view of a part of a drawer, showing a notch with a cam-surface.

Fig. 13 is a detail view of a part of a drawer having the notch with a cam-surface, showing the sliding bar in its locked position; and Fig. 14 is a detail view, partly in section, of one form of the projections on the sliding bar.

Similar characters of reference designate corresponding parts in the different figures of the drawings.

In the construction shown, a roll-top desk A, having the usual sides or panels above and below the table, has a groove 2 in the side and near the front extending downward from the table 3 of the desk A to within a short distance of the bottom of said desk A, the top of said groove 2 registering with an aperture in the table of said desk in alinement with the bottom of one of the grooves 4, in which the top 5 of the desk A moves.

Fitting into the groove 2 is a bar 6, which normally extends a short distance above the table 3 of the desk A. The bar 6 has arms 7, which when said bar 6 is in its normal position are just above the upper edges of the sides of the drawers 8. Each drawer 8 has a short groove or recess 9 on the outside extending downward from the upper edge of the side adjoining said bar 6, said groove 9 being adapted to receive one of the arms 7 when the bar 6 is pressed downward by the top 5 of the desk A.

A spring 10 may be placed in the bottom of the groove 2 and secured there in any suitable manner—as, for instance, by means of a small plate 11, closing the said groove 2 and forming a chamber 12, in which said spring 10 is placed. The spring 10 when the top 5 of the desk A is raised returns the rod 6 to its normal position and raises the arms 7 from the grooves 9, releasing the drawers 8.

If the roll-top desk has two columns of drawers, one on each side of the knee-hole of said desk, a similar lock to that shown and described will of course be placed on each side.

Various modifications may be made in the form and construction of the improvement, one of which modifications is shown in Figs. 9 to 14, inclusive, consisting in dispensing with the spring 10 and plate 11 and making the inner sides of the grooves 9 cam-shaped, so that when the top 5 of the desk A is raised the arm 7 will ride up on said cam when the drawer is pulled outward. I do not, there-

fore, limit myself to the particular details of form and construction shown and described, but consider as within the scope of my invention any device adapted to lock the drawers of a desk and to be engaged and operated by the top of such desk when the latter is closed or which prevents the complete closing of the top unless the drawers are also locked.

The arms 7 may be merely projections integral or rigid with the bar 6 or may consist of a hollow cylindrical sleeve secured to said bar 6 by any suitable means, such as a screw.

It will be evident that unless the drawers 8 are closed when it is sought to draw the top 5 of the desk down the top 5 will be prevented from closing by the bar 6 projecting above the table 3 of the desk, since until all of the drawers 8 are properly closed the projections 7 on the bar 6 will not be in alinement with the notches 9. This will prevent the closing of the desk unless all of the drawers are properly locked.

My invention also covers any device for locking the drawers of a roll-top desk which lies in the groove in which the top of such desk slides.

The operation of the improvement is simple, the top 5 of the desk A when lowered coming in contact with the top of the rod 6, the weight of the top 5 serving to depress the rod 6 when the drawers are closed, causing the arms 7 to enter the grooves 9 and lock the drawers 8. When the top is raised, the spring 10 causes the rod 6 to rise to its normal position, raising the arms 7 out of the grooves 9 and releasing the drawers 8.

Having described my invention, I claim—

1. A desk comprising one or more drawers or sliding members; a table; panels or sides located above said table and provided with grooves; a sliding top working in said grooves; and locking means for said drawer or drawers and having a part thereof projecting through said table and into one of said grooves at the forward part thereof and in position to be directly engaged and positively operated by a part of said top on the drawing forward thereof, thereby to lock said drawer or drawers closed.

2. A desk comprising one or more sets of drawers or sliding members; a table; panels or sides located above said table and provided with grooves; a roll-top working in said grooves; locking means for each set of said drawers and having a part thereof projecting through said table and into one of said grooves at the forward part thereof and in position to be directly engaged and positively operated by the roll-top on the drawing forward thereof thereby to lock said drawers closed; and means for returning said locking means to its normal position.

3. A desk comprising one or more drawers or sliding members each having a recess adjacent to its forward end; a table; panels or sides located above said table and provided with grooves; a roll-top working in said

grooves; locking means for said drawer or drawers and comprising a bar having a part thereof projecting through said table and into one of said grooves at its forward end and in position to be directly engaged and positively operated by the roll-top on the drawing forward thereof, said bar having a laterally-projecting arm or arms cooperating with said recess or recesses; and means for returning said bar to its normal position.

4. A roll-top desk comprising a table; panels or sides located above and below said table; guide-grooves in said upper panels; a roll-top working in said grooves; one of said lower panels having a groove; an opening in said table communicating with a groove in one of said upper panels and with the groove in said lower panel; a drawer having a downwardly-extending recess; a sliding bar adapted to work in the lower panel-groove and provided with an arm to enter the recess in said drawer, the upper end of said bar being in position to be engaged by said sliding top on the drawing forward thereof.

5. A desk comprising one or more drawers or sliding members each having a cam-shaped recess in the side thereof; a table carrying panels or sides provided with grooves; a roll-top working in said grooves; and locking means for said drawer or drawers and having a part thereof projecting into one of said grooves and in position to be engaged and operated by the roll-top on the drawing forward thereof thereby to lock said drawers closed, said locking means having one or more laterally-extending projections cooperating with said cam-shaped recess or recesses.

6. A desk comprising a table; one or more drawers below the same, each having a recess adjacent to its forward end; sides or panels supported by said table and provided with grooves; a top working in said grooves, said table having an opening communicating with one of the grooves in said panels; a bar located at the side of said drawer or drawers and having its upper end projecting through said opening in the table and into said groove and provided with an arm or arms adapted to engage said drawer or drawers when said bar is depressed by the roll-top on the drawing forward thereof, the organization being such that when any one of the drawers is open so that one arm is out of register with its recess the bar cannot be depressed by the engagement of the top therewith, whereby the bar acts to maintain the top in a partially-closed position.

7. A roll-top desk comprising a table; two sets of drawers, each drawer having a recess; sides or panels above said table having grooves; side panels below said table also having grooves, said table having a pair of openings communicating with the grooves in said panels; a top sliding in said upper panel-grooves; bars located in the lower panel-grooves at the sides of said drawers and normally projecting above said table and into the grooves for the top and having arms

adapted to enter said recesses when the bars are depressed by the top on the drawing forward thereof.

8. A roll-top desk comprising a table; two
5 sets of drawers, each of said drawers having a recess; sides or panels above said table having grooves; sides or panels below said table also having grooves, said table having a pair of openings communicating with the grooves
10 in said panels; a top sliding in said upper panel-grooves; bars located in the lower panel-grooves at the sides of said drawers and normally projecting above said table and into the grooves for the top and having arms
15 adapted to enter said recesses when the bars are depressed by the top on the drawing forward thereof; and means for returning said bars to their normal position.

9. A desk comprising a table; one or more
20 drawers below the same; sides or panels supported by said table and provided with grooves; a top working in said grooves; and means in position to engage said top and prevent the closing thereof when one or more of
25 the drawers are open.

10. A desk comprising a table; one or more

drawers below the same; sides or panels supported by said table and provided with grooves; a top working in said grooves; and means in position to engage said top and prevent the closing thereof when one or more of the drawers is open, said means comprising a bar having its upper end projecting into one of said grooves and provided with a projection or projections in position to engage
35 said drawer or drawers.

11. A desk comprising a table; one or more drawers below the same; sides or panels supported by said table and provided with grooves; a top working in said grooves; 40 means in position to engage said top and prevent the closing thereof when one or more of the drawers are open, said means comprising a bar having its upper end projecting into one of said grooves and provided with a pro- 45 jection or projections in position to engage said drawer or drawers; and means for raising said bar.

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Witnesses:

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