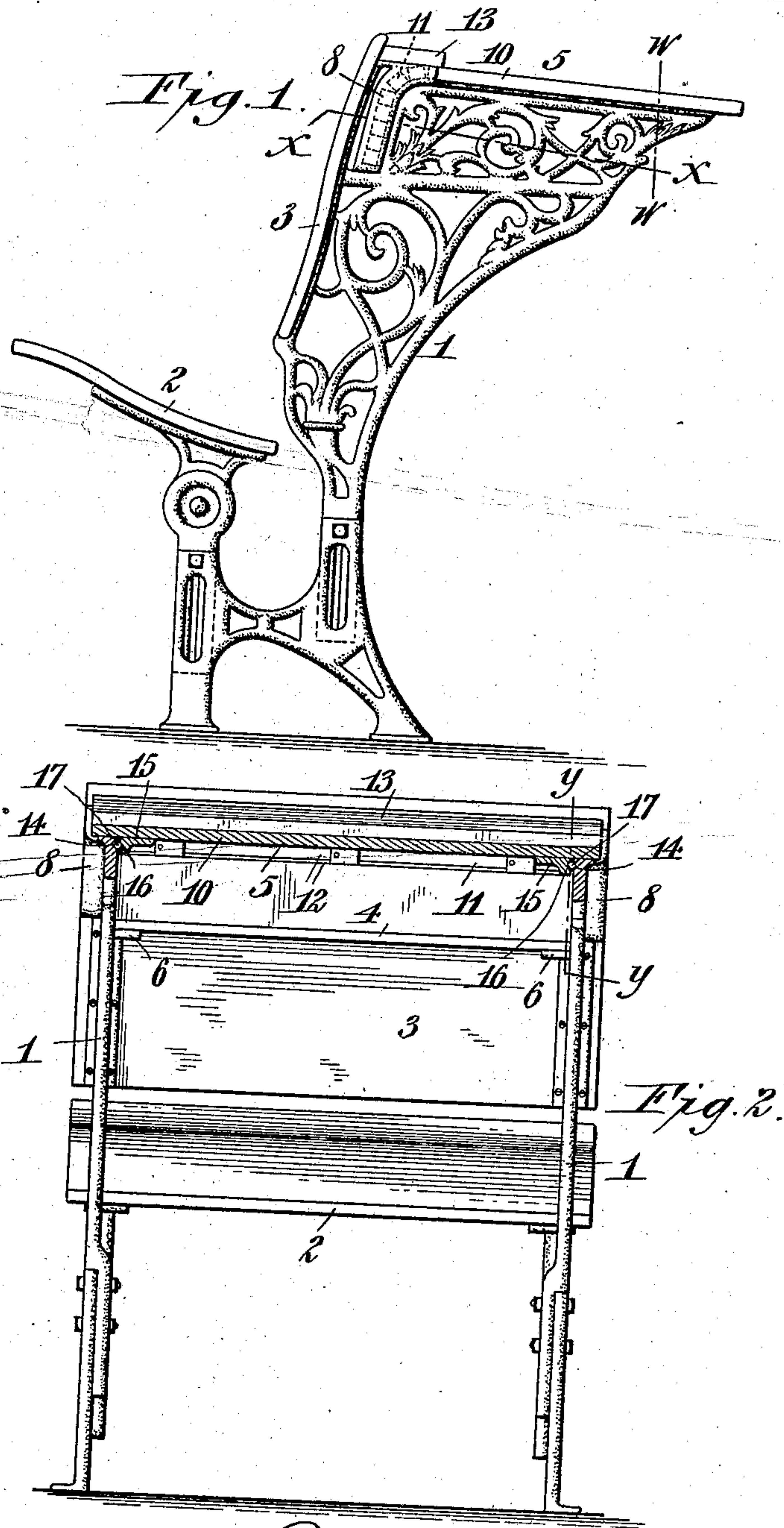


915,903.

J. M. TAYLOR.  
SCHOOL DESK.  
APPLICATION FILED MAY 20, 1907.

Patented Mar. 23, 1909.  
2 SHEETS—SHEET 1.



Witnesses:  
Christ Feinde.  
Harry D. Rapp

James M. Taylor, Inventor.  
By Emil Neuhaus,  
Attorney.

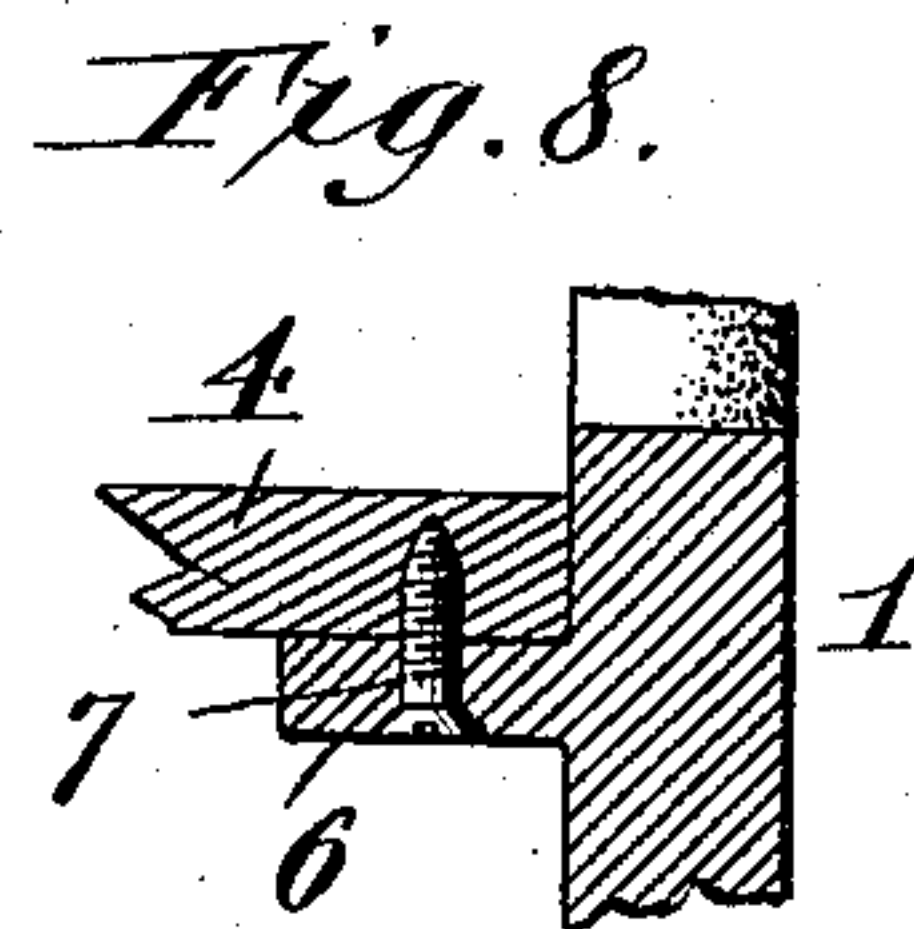
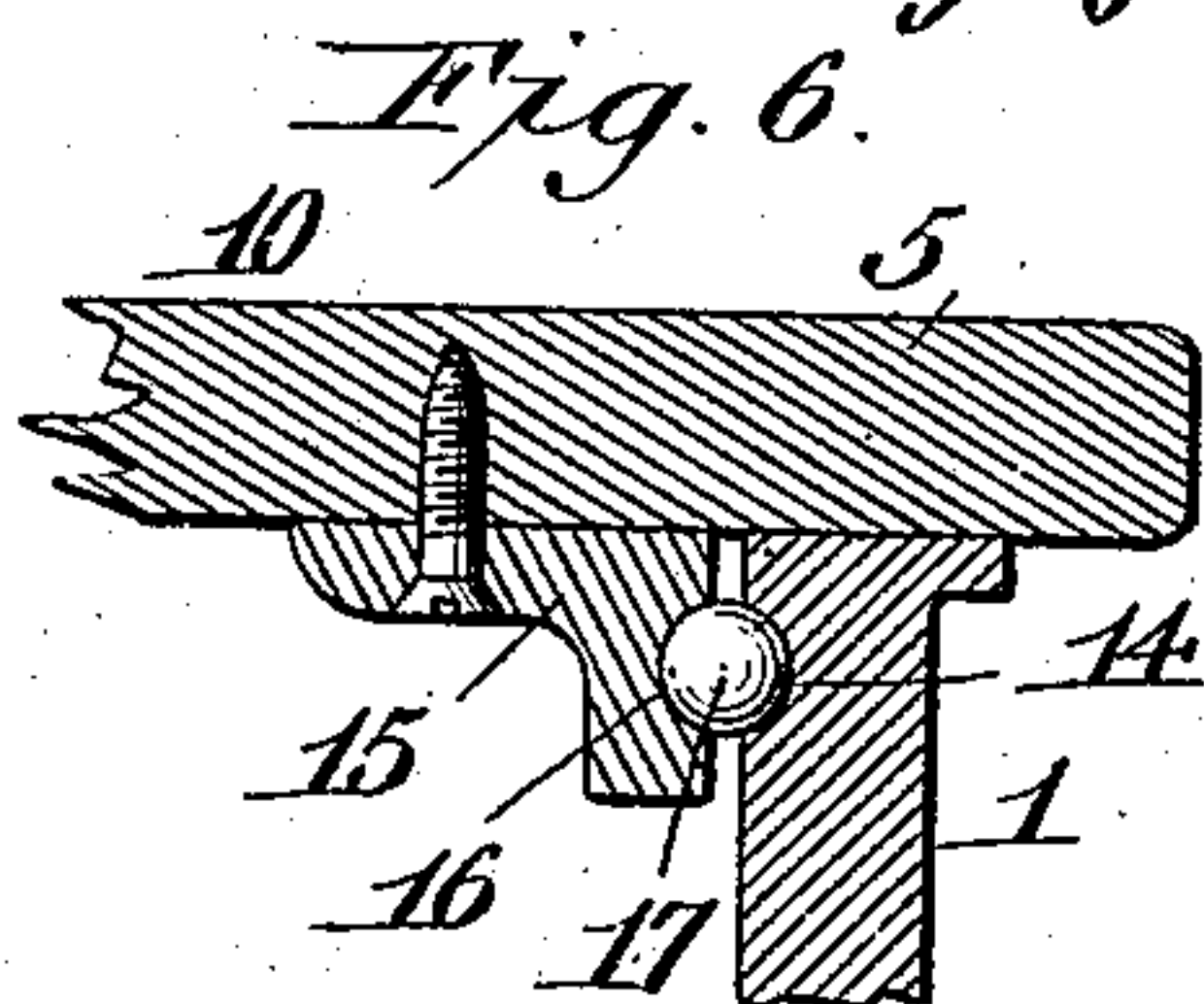
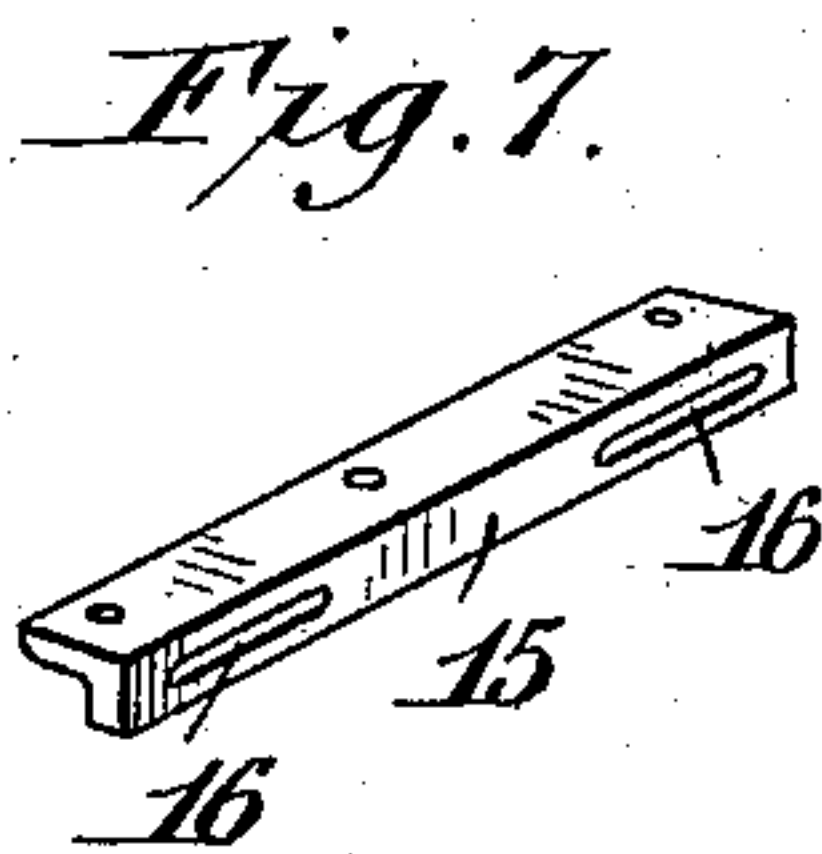
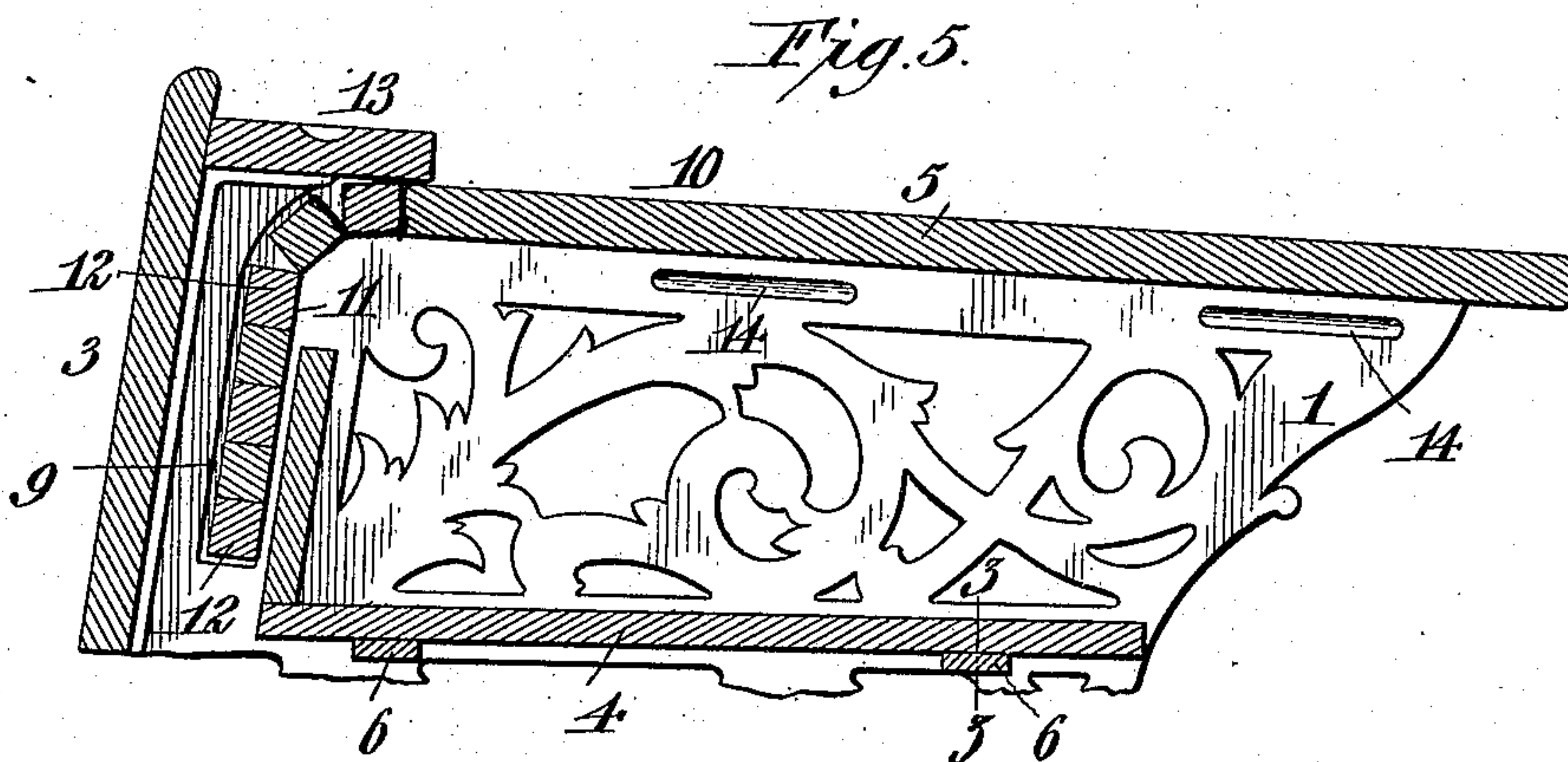
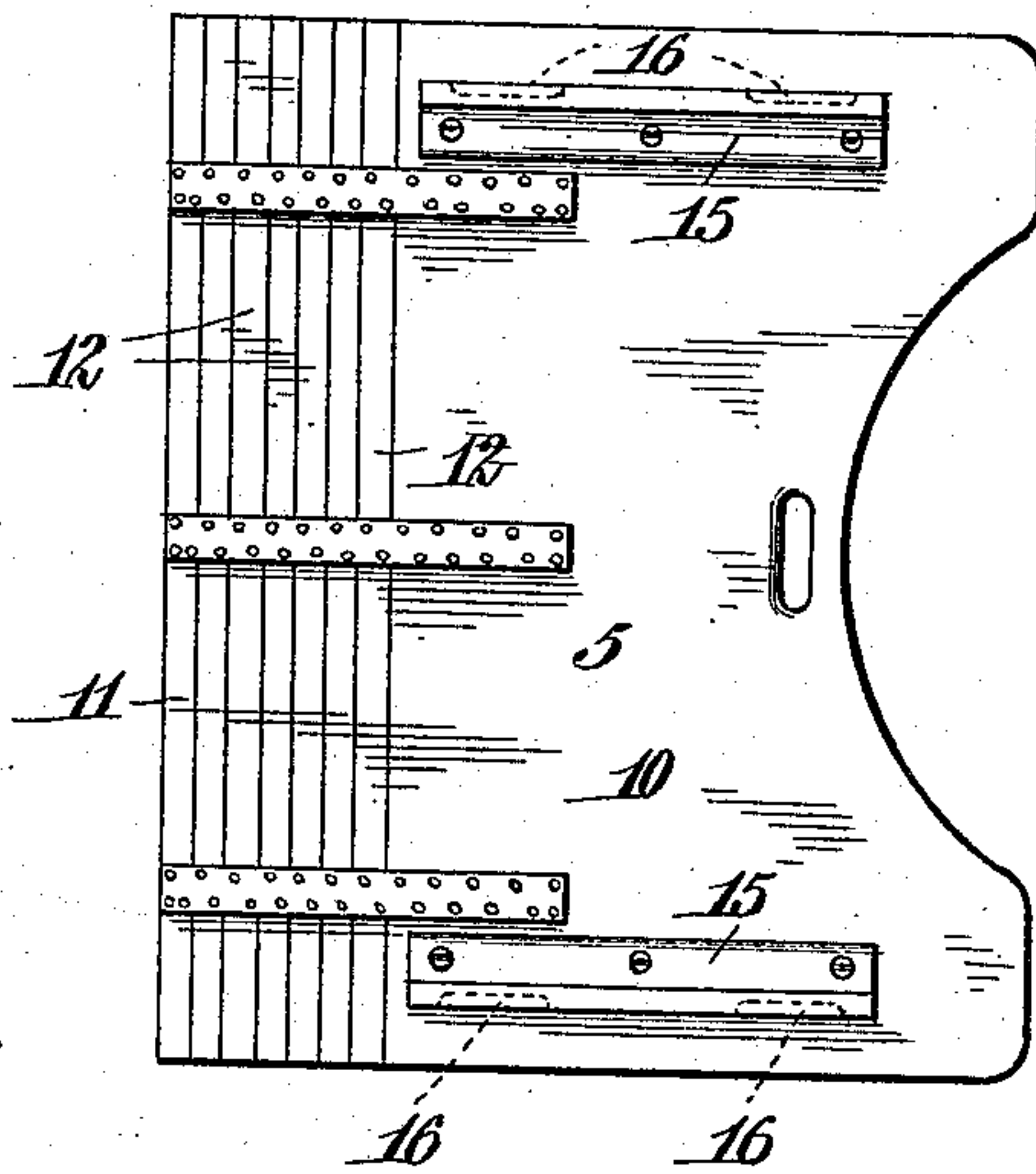
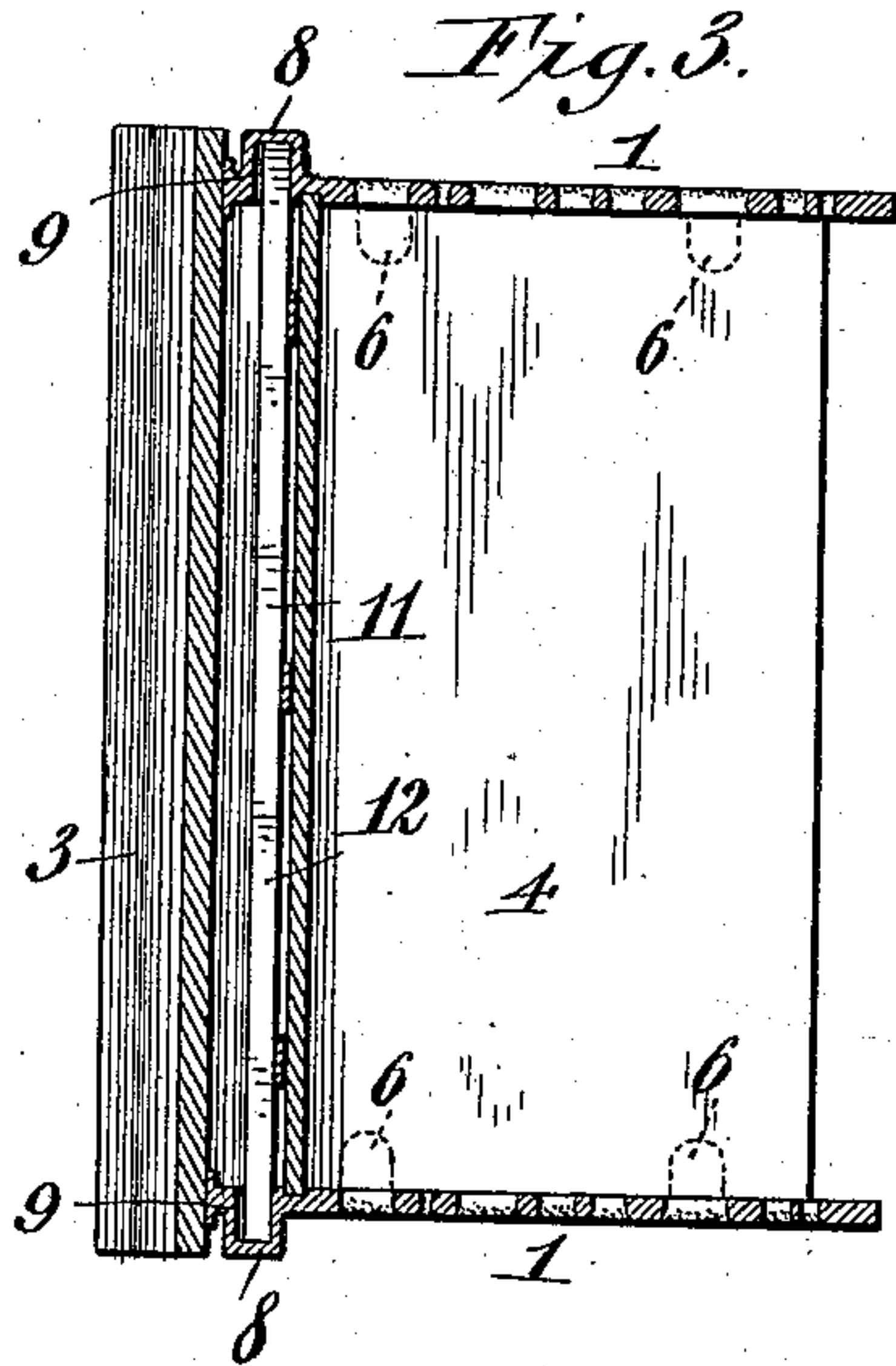
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Fig. 4 2 SHEETS—SHEET 2.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

JAMES M. TAYLOR, OF BLASDELL, NEW YORK, ASSIGNOR TO THE PLUS AND MINUS DESK COMPANY, OF BLASDELL, NEW YORK, A CORPORATION OF NEW YORK.

## SCHOOL-DESK.

No. 915,903.

Specification of Letters Patent.

Patented March 23, 1909.

Application filed May 20, 1907. Serial No. 374,662.

*To all whom it may concern:*

Be it known that I, JAMES M. TAYLOR, a citizen of the United States, and resident of Blasdell, in the county of Erie and State of New York, have invented certain new and useful Improvements in School-Desks, of which the following is a specification.

My invention relates to improvements in school-desks and more particularly to that type of school-desk in which a slidable top is adjustable on standards so that it may be moved toward and from the person using the desk.

The objects of my invention are to simplify the construction of desks of this type; to provide ball-retainers and guides for the slidable top; to improve the construction of the standards so that the flexible rear portion of the top is hid from view when the top is in its normal position and also to prevent the pupil using the desk inserting objects between the slats of said flexible portion at the turn of the grooves in which they slide; and to otherwise improve on school-desks of this type.

With these objects in view, my invention consists in the construction, arrangement, and combination of parts to be hereinafter described and particularly pointed out in the appended claims.

In the drawings in which corresponding numerals of references refer to corresponding parts in the several figures,—Figure 1 is a side elevation of a school desk embodying my invention. Fig. 2 is a sectional elevation, the sectional portion thereof being taken on line *w—w*, Fig. 1. Fig. 3 is a horizontal section taken on line *x—x*, Fig. 1. Fig. 4 is an inverted view of the slidable top. Fig. 5 is an enlarged vertical section taken on line *y—y*, Fig. 2. Fig. 6 is an enlarged transverse section through the upper end of one standard, the adjacent portion of the top, and the grooved guide and retainer-bar whereby the top is held in position on the standards. Fig. 7 is a detached perspective view of one of the retainer-bars. Fig. 8 is an enlarged vertical section on line *z—z*, Fig. 5.

The numeral 1 designates the ornamental standards, connected by the usual pivoted seat 2, the curved back-rest 3, and the book-shelf 4 located beneath the slidable top 5 which rests upon the upper edges of the standards. The manner of securing the seat and the back-rest to the standards is not

essential so far as my invention relates, so long as they are properly secured to connect the standards, but I find it necessary to provide a connection between the book-shelf and the standards that will permit either end of said shelf to be quickly and conveniently disconnected to allow the standards to be spread apart to a slight degree for the purpose of removing the top when necessary. This I accomplish by providing the standards with inwardly directed lugs 6 on which the book-shelf is laid and which lugs have screw-holes 7 through which screws are passed that take in said shelf, serving to retain the latter in place and also to connect the standards and hold them against spreading.

At the upper ends of the standards directly in rear of the back-rest, laterally extending housings 8 are provided which have their upper ends extended above the top of the remaining portions of the standards. Said housings are of channel formation in cross-section and form substantially vertical guide-grooves 9 on the inner sides of the standards. The upper ends of said grooves curve forward and open in a plane above the upper edges of the standards.

The top 5 comprises a rigid front portion 10 and a flexible rear portion 11 formed of connected slats 12 so that they may accommodate themselves to the curved guide-grooves in the housings 8 which they enter and whereby they are hidden from view when the top is moved to its innermost position.

Closing the space between the back-rest and the slidable top is a ledge 13 which is secured to the upper ends of the housings 8 and to the back-rest. This ledge may be grooved to hold penholders, pencils, and other articles, and it may also be used to retain an inkwell.

Each of the standards has one or more grooves 14 formed on its inner side near the upper edge thereof, and secured to the underside of the slidable top are combined guide and retainer bars 15 disposed parallel with the standards and provided with grooves 16 in their outer faces which preferably correspond with those in the standards, which they coöperate with. These bars are in close proximity to the standards and between the two and within coöperating grooves are anti-friction balls 17 which assure even and free action for the top. Said balls and retainer bars provide positive means to hold



the top of the standards and the grooves are preferably of such length that when the top is drawn outward or pushed inward the balls act as stops by striking opposite ends of the grooves in the bars and standards, thereby preventing the withdrawal of the top and limiting the extent of inward movement without permitting the inner end of the top striking the lower ends of the grooves in the housing. In this manner the quick wearing away of the end slat is prevented.

If desired, the grooves in the retainer bars and the standards may be lengthened so that the balls interposed between them will not strike the ends of the grooves formed therein; but when so constructed, it will be necessary to provide means to stop the top at the ends of its forward movement so that the inner end thereof cannot be drawn forward beyond the edge of the ledge 13.

In order to remove the top, it is only necessary to disconnect one end of the bookshelf from the adjacent standard, spread the standards slightly to free the balls at one side of the desk, either from the retainer bars or from the standards, after which the top may be raised and drawn forward to withdraw the flexible rear end thereof from the housings of the standards.

Having thus described my invention, what I claim is,—

1. A desk comprising standards, a slidable top resting upon said standards, retainer-bars on the underside of said top parallel with and arranged between said standards, and anti-friction balls interposed between said retainer-bars and standards and serving to prevent both lateral and upward movement of said top.

2. A desk comprising standards having each a groove near its upper edge, a slidable top resting upon said standards, retainer-bars on the underside of said slidable top having each a groove, and anti-friction balls

between said retainer-bars and said standards and within the grooves thereof so as to prevent both lateral and upward movement of said top.

3. A desk comprising a pair of standards having each a groove in its inner face near its upper edge, a slidable top on said standards, a retainer-bar on the underside of the top adjacent each standard and having a groove cooperating with the groove in the adjacent standard, and an anti-friction ball in each pair of cooperating grooves serving to prevent lateral and upward movement of said top.

4. A desk comprising a pair of standards having each a groove in its inner face near its upper edge, a slidable top on said standards, a retainer-bar on the underside of said top in close proximity to each standard, said retainer-bars having each a groove cooperating with the groove in the adjacent standard, and anti-friction balls between said retainer-bars and the standards acting as guides for said top and with the ends of said grooves serving as stops to limit the movement of said top.

5. A desk comprising standards having lugs on their inner faces and grooves near their upper edges, a book-shelf having its ends detachably secured to said lugs, a slidable top on said standards, a retainer-bar on the underside of said top adjacent each standard having a groove cooperating with the groove in the adjacent standard, and an anti-friction ball within each pair of cooperating grooves whereby said top is held against lateral and upward movement.

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

JAMES M. TAYLOR.

Witnesses:

HELEN G. COLLINS,  
JAMES B. WALL.