

No. 719,338.

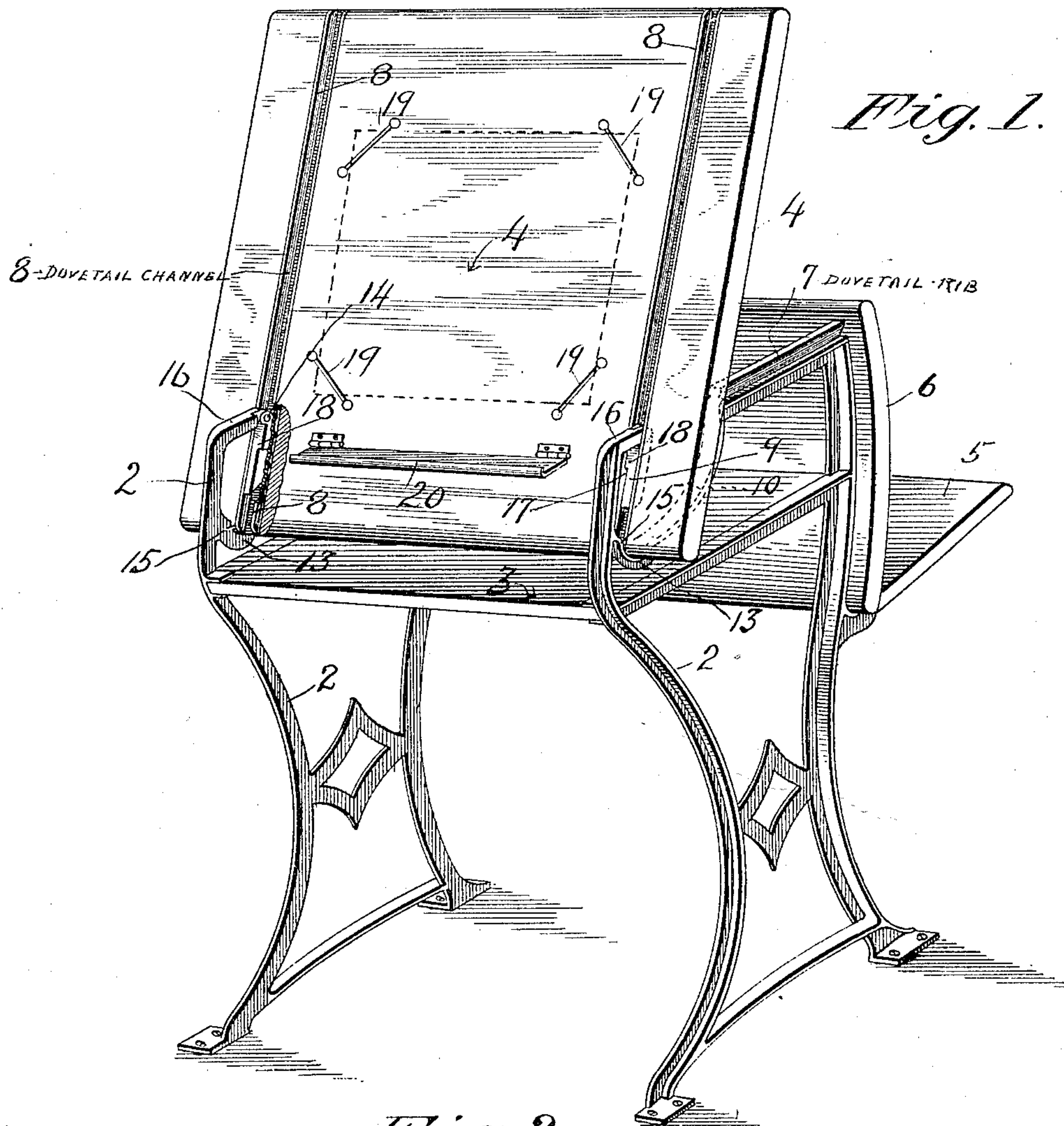
PATENTED JAN. 27, 1903.

J. KARPEN.  
SCHOOL DESK.

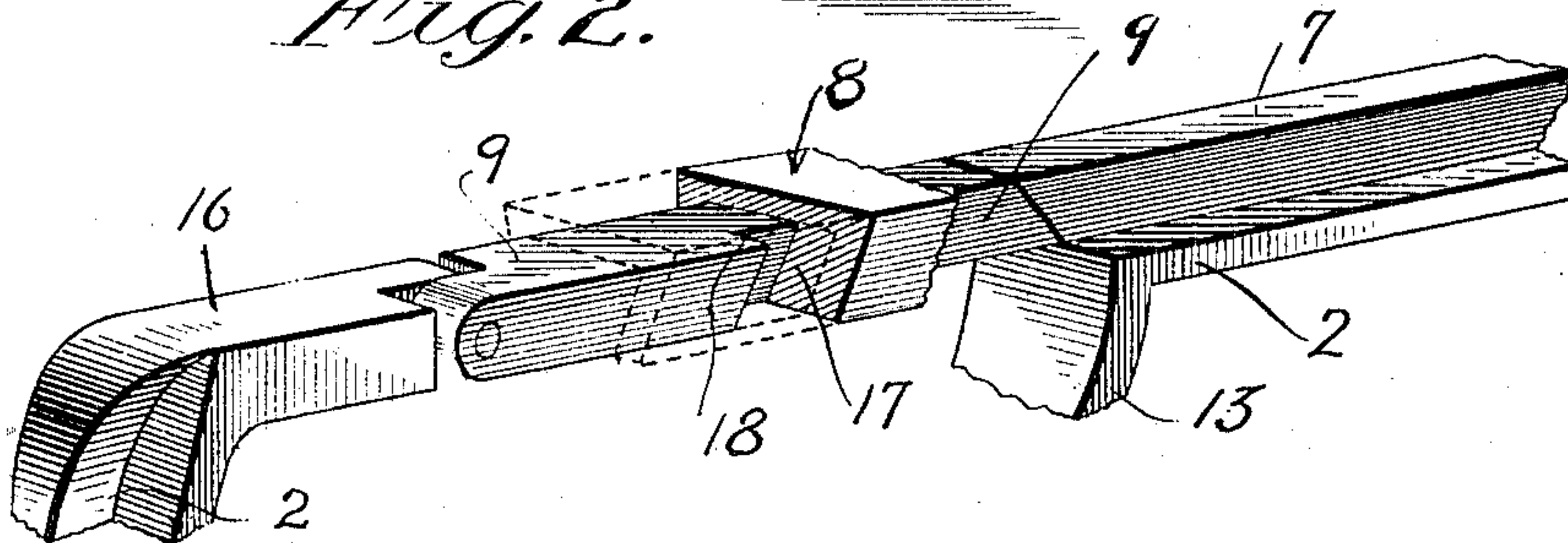
APPLICATION FILED OCT. 18, 1900.

NO MODEL.

4 SHEETS—SHEET 1.



*Fig. 2.*



Witnesses:

*B. Keir*

*Chas. Perry*

Inventor:

*Julius Karpen*  
*Paul Hawley*  
*His Atty's.*

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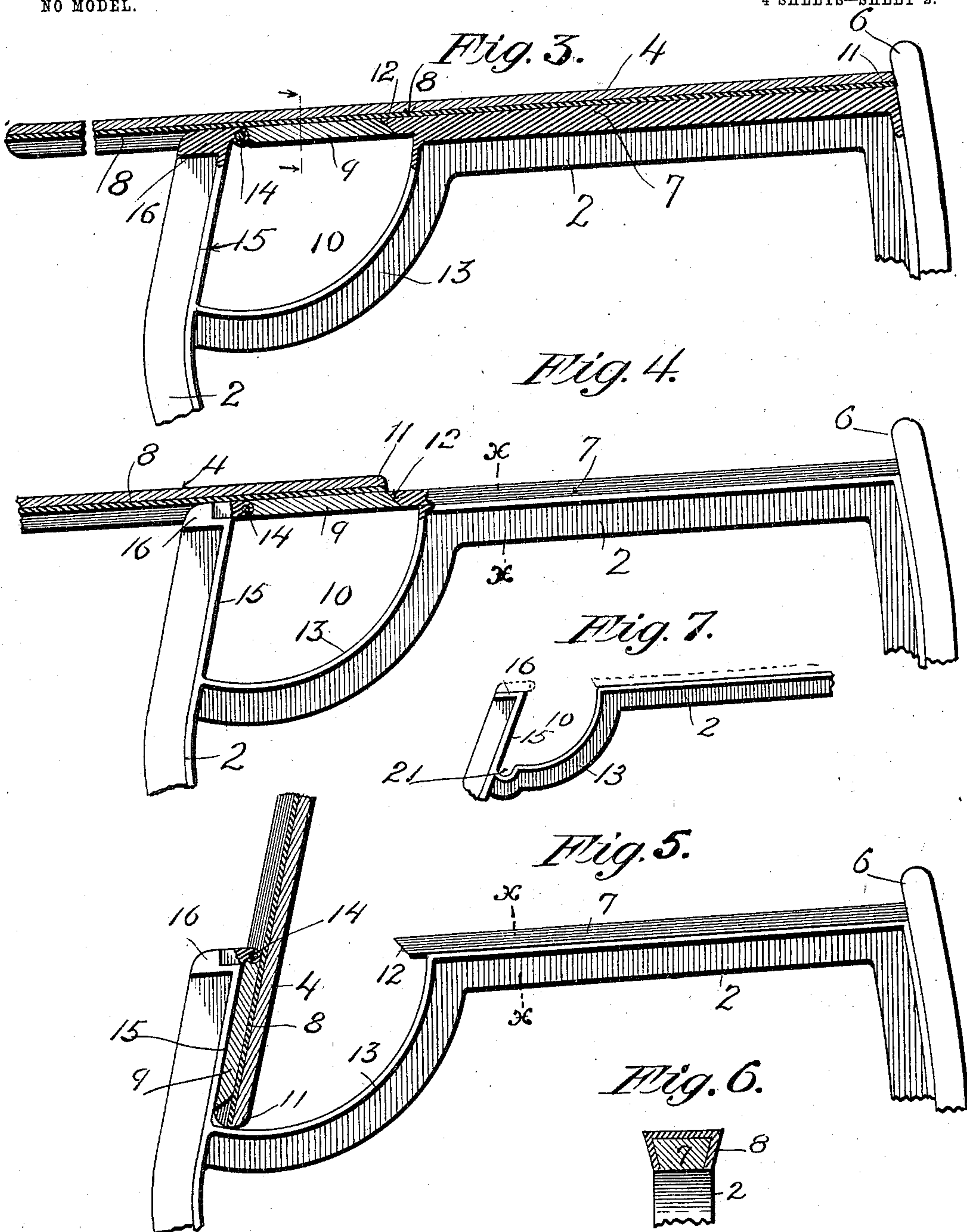
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4 SHEETS—SHEET 2.



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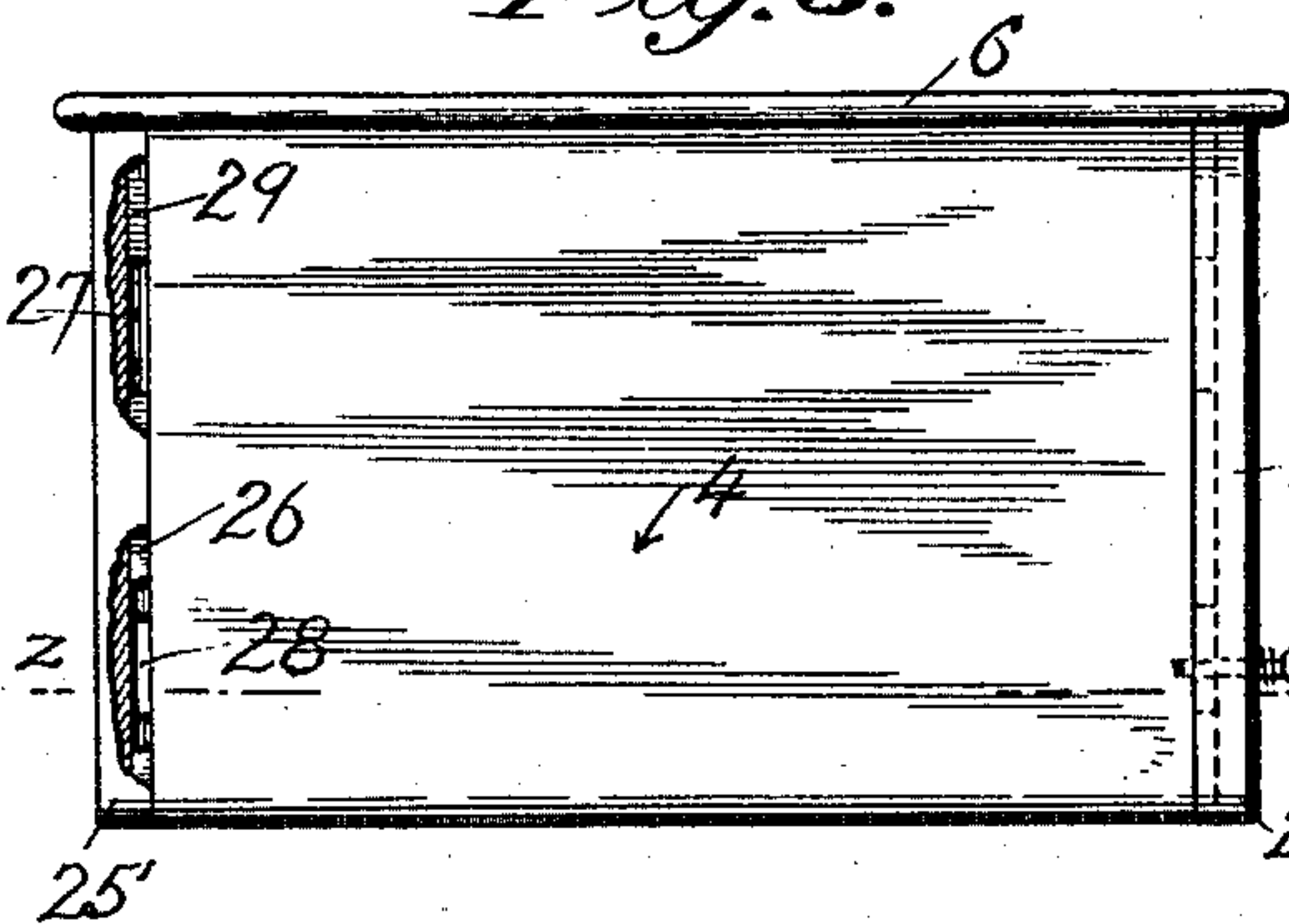
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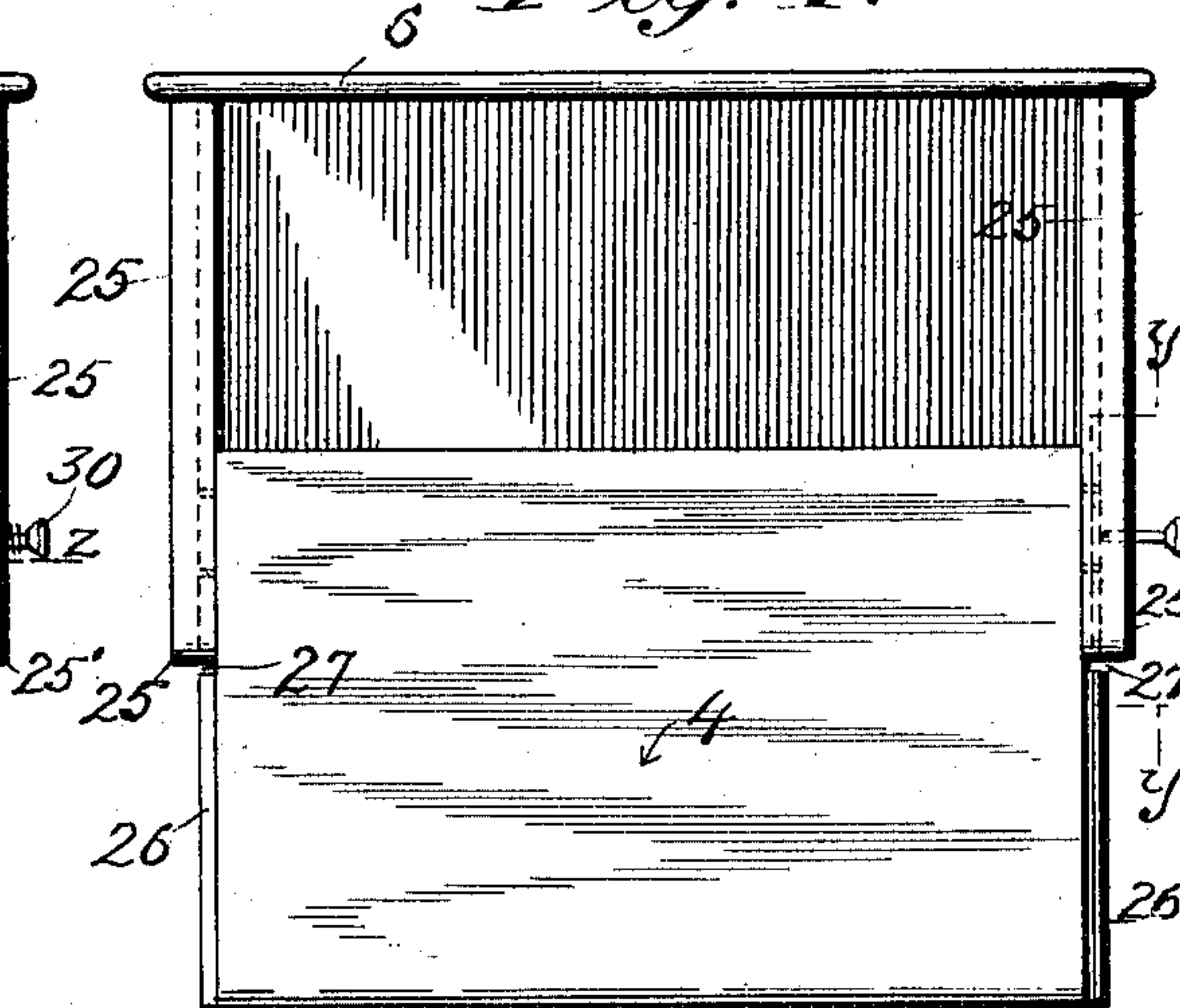
NO MODEL.

4 SHEETS—SHEET 3.

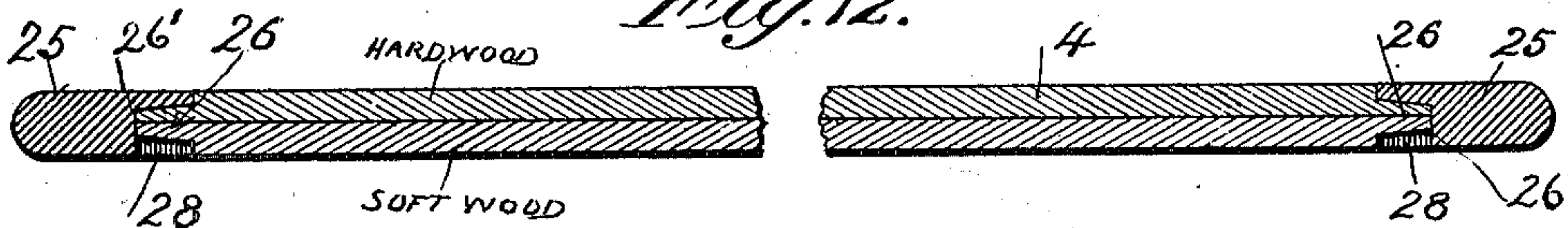
*Fig. 8.*



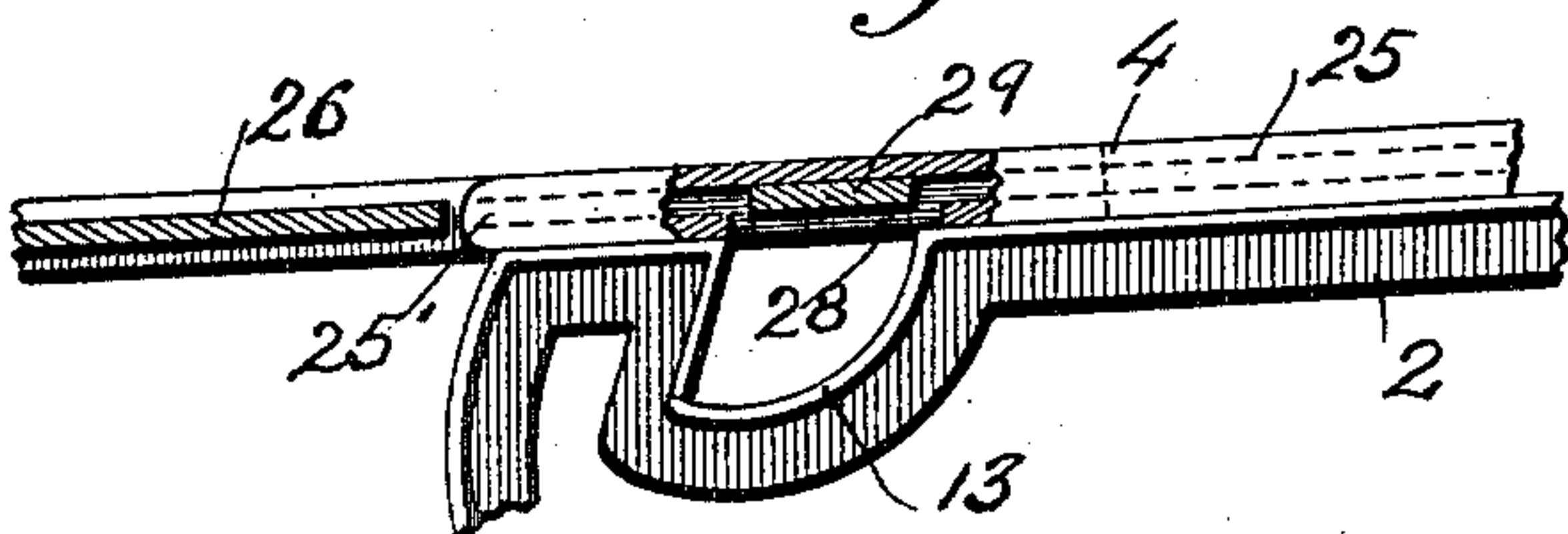
*Fig. 9.*



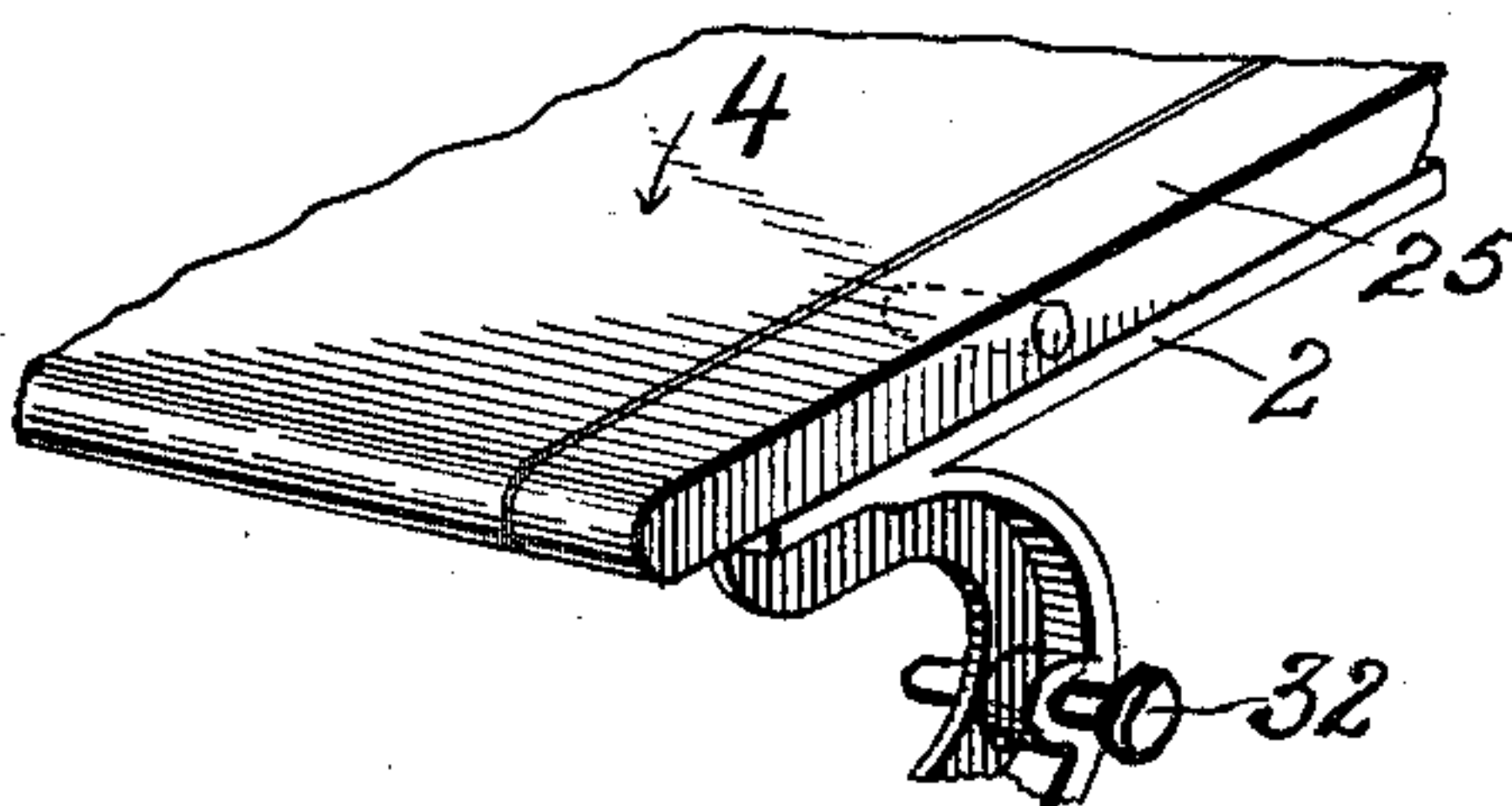
*Fig. 12.*



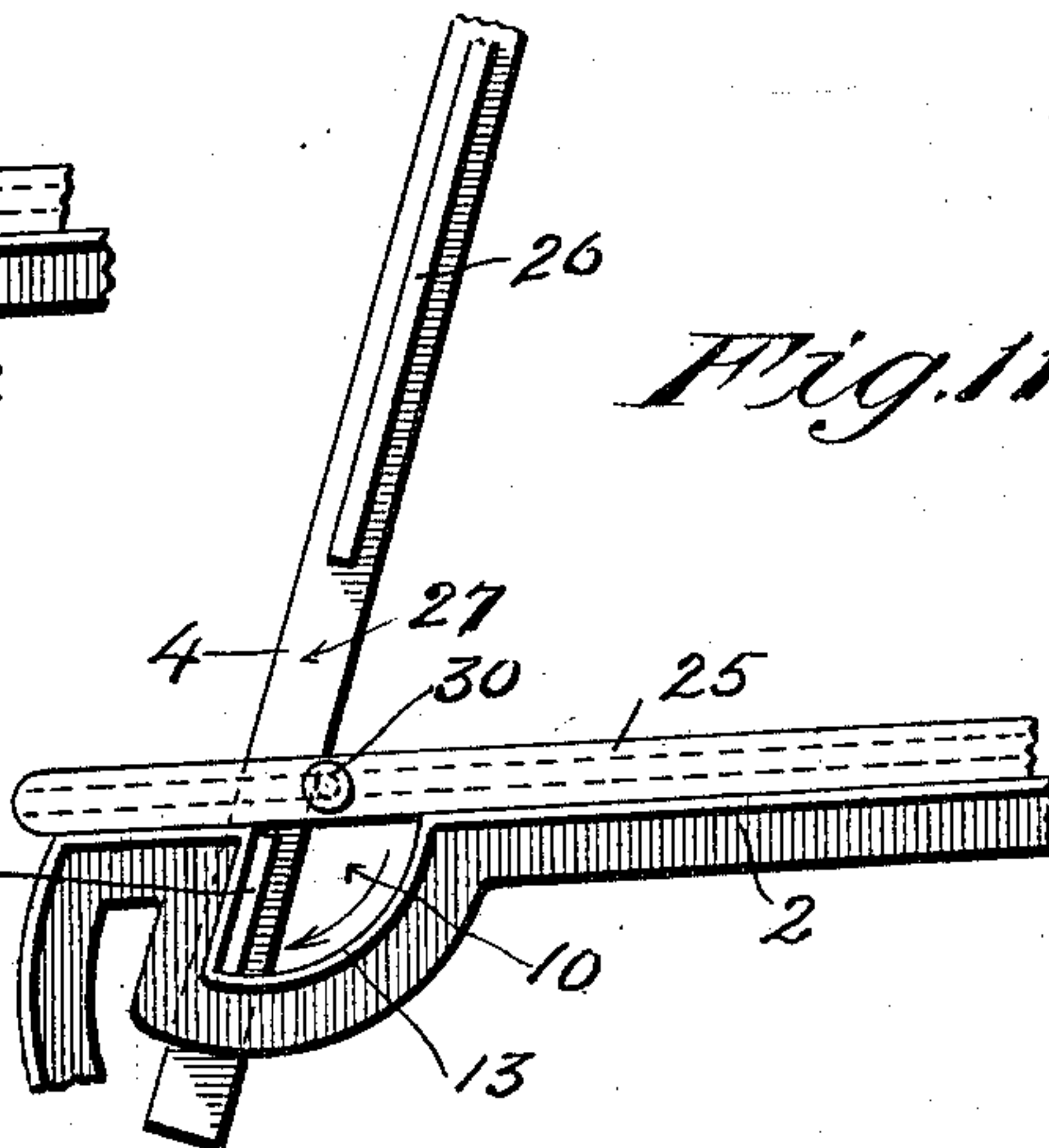
*Fig. 10.*



*Fig. 13.*



*Fig. 11.*



Witnesses:  
W. Keir  
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Inventor:  
Julius Karpen  
by Paul O'Hawley  
his Attys.





# UNITED STATES PATENT OFFICE.

JULIUS KARPEN, OF CHICAGO, ILLINOIS.

## SCHOOL-DESK.

SPECIFICATION forming part of Letters Patent No. 719,338, dated January 27, 1903.

Application filed October 18, 1900. Serial No. 33,510. (No model.)

*To all whom it may concern:*

Be it known that I, JULIUS KARPEN, of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in School-Desks, of which the following is a specification.

My invention relates to school-desks, and particularly to school-desks that may be adjusted and used as drawing-boards or easels.

The object of my invention is to provide a school-desk having a loose top capable of being turned into a vertical or substantially vertical position, in which position said top may be utilized as a board or easel for free-hand drawing or for painting.

It is a well-known fact that pupils seldom obtain or acquire an adequate conception or knowledge of free-hand drawing, painting, perspective, or proportion when their work is confined to a horizontal or nearly-horizontal surface. Furthermore, pupils in public and other schools where drawing is taught upon the ordinary flat desk rarely learn or acquire a proper arm movement and control, and this is true to such an extent as to practically negative the artwork attempted in schools. Such work should be performed upon an upright board or easel; but this, I believe, has never been attempted in public schools because of the expense of separate easels or drawing-boards; and the particular object of my invention is to provide a combination school-desk and easel the cost of which will be substantially the same as that of the ordinary school-desk.

My invention consists, primarily, in a school-desk provided with a top which normally occupies a flat or horizontal position, but which is so connected to or arranged upon the frame of the desk that said top may occupy a substantially vertical position, preferably near the front of the desk; and my invention further consists in a school-desk provided with a sliding and swinging top which when in a horizontal position serves as the ordinary desk-top and when in a vertical position constitutes an easel or drawing-board; and, further, my invention consists in various constructions and in combinations of parts, all as hereinafter described, and particularly pointed out in the claims.

My invention will be more readily under-

stood by reference to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a perspective view of a school-desk embodying my invention. Fig. 2 is a perspective detail taken therefrom. Fig. 3 is an enlarged vertical section of the desk-top. Fig. 4 is a similar section showing the desk-top drawn forward preparatory to the raising thereof. Fig. 5 is a similar view showing the top lifted or raised. Fig. 6 is a cross-section on the line *x x* of Fig. 5, showing also the dovetail groove 8 embracing rib 7. Fig. 7 is a detail illustrating a modified form of the desk-frame. Fig. 8 is a plan view illustrating a modified form of the desk. Fig. 9 is a similar view showing the desk-top drawn out. Fig. 10 is an enlarged sectional detail on the line *y y* of Fig. 9. Fig. 11 is a similar view showing the desk-top raised. Fig. 12 is an enlarged cross-section on the line *z z* of Fig. 8. Fig. 13 is a perspective view illustrating another modification of my invention. Figs. 14 and 15 illustrate a construction similar to that shown in Fig. 13 with means for holding the top when it is raised. Fig. 16 is a perspective view of a still further modification of my invention; and Fig. 17 is a detail taken from Fig. 16, showing the essential feature in side elevation.

As shown in Figs. 1 to 7, inclusive, 2 represent the desk-frames; 3, the desk-shelf; 4, the desk-top; 5, the desk-seat, and 6 the seat-back. The frames 2 2 are preferably of cast-iron and are each provided with a dovetailed rib 7 at the top. These ribs fit in dovetailed grooves 8, provided in or upon the under side of the desk-top 4. These grooves are preferably provided in the metal channels 8, which are recessed or mortised in the desk-top. The channels extend transversely of the desk-top and materially strengthen the same, serving as battens thereon. This construction renders the top sufficiently solid and rigid for use as a desk-top when the same is in the horizontal position illustrated in Fig. 3, in which position it is impossible to tip or tilt the top by bearing upon the forward edge thereof. At the same time the top may be readily drawn forward—that is, toward the person sitting before the desk—as shown in Fig. 4. Each rib 7 is provided with a pivoted



section or switch 9, adapted to swing in or above the recess 10 in the frame 2, and when the desk-top has been drawn back until the rear edge 11 thereof has passed the joint 12 between the two sections of the rib 7 the forward edge of said top may be raised, the rear edge dropping into said recesses until said top is swung into the vertical or substantially vertical position shown in Figs. 1 and 5. When the top 4 is thus drawn back and lifted, the rear edge 11 of the top drops into the recesses 10 of the desk-frames 2 and rests upon the curved sections or portions 13, which form the bottoms of the recesses 10. The top is thus raised and thrown back upon the pivots 14 of the rib-sections 9 until said sections meet the straight and slightly-inclined shoulders or portions 15 of the frames 2. It will be understood that the pivoted sections 9 are V-shaped or dovetailed in cross-section, and are consequently always in engagement with the desk-top, and hence as the sections 9 are positively attached to the frames 2 by their pivots said sections serve as stops and fastenings for the desk-top when it is in its raised position. The portions 16, whether the same be short, as shown in Figs. 3 to 5, or extended, as shown in Fig. 1, have straight sides and fit within the channels 8 of the top, but are not dovetailed to engage therewith. These parts therefore serve simply as guides for the top and are not depended upon to hold or lock the desk-top when in a horizontal position. I prefer to make the portions 16 of the frames 2 short, as shown in Figs. 3 to 5, in order that they may not interfere with the elbows of the pupil engaged in drawing upon the board. To prevent the top from being drawn entirely out of the frames, I preferably provide each of the channels 8 with an internal stop-shoulder 17, that will engage with the shoulder 18 upon the corresponding pivoted section 9, as illustrated in Figs. 1 and 2, when the top is drawn back.

It will be noticed that the bottom surface of the desk-top is presented to receive the drawing-paper when the desk-top is raised, as is shown in Fig. 1, and I prefer to build the desk-top from several sections or veneers of wood, making the bottom veneer of soft wood to receive the thumb-tacks which are used for holding the paper. In addition I may also arrange short corner-wires 19 upon the under side of the desk-top under which the corners of a sheet of paper may be slipped, as illustrated by dotted lines in Fig. 1. I prefer also to arrange either a fixed or a hinged book-rest 20 near the rear or lower edge of the top. After the desk has been used as a drawing-board or easel it is thrown forward until the pivoted switches or sections 9 register or are in line with the sections or ribs 7, and the top is then shoved back until it meets with the seat-back 6, which forms the rear stop therefor. To hold the top more rigidly when in its raised position, I may use sockets 21 at the bottoms of the recesses 10,

into which the lower edge of the top 4 will drop when the top has reached the proper inclination. These sockets are, however, objectionable, in that it is necessary for the child to lift the weight of the top before it may be turned down.

In my invention as shown in Figs. 8 to 11, inclusive, the frames 2 remain exactly the same as before described, with the exception that wooden rails or side pieces 25, attached to the tops of the frames 2, take the place of the V-shaped ribs 7. The top 4 is narrower than the space between the frames 2 and is provided with tenons 26, adapted to slide in grooves 26', provided in the inner edges of the end rails 25. The end rails are provided with notches 28 in their lower parts above the recesses 10 in frames 2, and the tenons 26 are provided with notches 27 near the rear edge of the top 4. The notches 27 are slightly longer than the distance between the forward ends 25' of the rails 25 and the notches 28 therein, and that portion 29 of the tenon upon each end of the top 4 lying between the rear edge of the top and the notch 27 is of substantially the same length as the notch 28 in the rail 25. It will be evident, therefore, that when the top is drawn forward, as shown in Figs. 9 and 10, it may then be raised, and the portions 29 of the tenons 26 will tilt or fall into the recesses 10 of the frames 2. As the top is tilted it snaps by one or more spring pins or bolts 30, preferably having a beveled end, Fig. 8, in the rails 25, and these prevent the board from falling backward. When it is desired to return the desk-top to its horizontal position, these bolts are pulled out and preferably do not spring back into place again until the top is pushed back into its normal position, as the end of the pin bears against the edge or tenons 26 of the top. The bolt then serves as a lock for the top. In place of sliding the top, as thus far described in connection with my invention, I may dispense with the grooves and tenons in the rails 25 and simply trunnion the top between said rails, as indicated in Fig. 13. In this case I prefer to provide a snap bolt or bolts 32 in a lower part of the desk-frame, the office thereof being to secure the desk-top in its upright inclined position. In place of the bolt or bolts 32 for supporting or holding the desk-top I may employ braces 33, as illustrated in Fig. 14, said braces being attached to the top 4 and extending through fasteners 34 upon the desk-frames, by which means the top may be secured at any desired inclination. It is desirable to avoid the employment of such fasteners or any additional securing means which require separate manipulation, and I therefore value that modification of my invention which is shown in Figs. 16 and 17. In this construction the side frames are provided with inclined slots or recesses 35, opening from shallow recesses 36 in the tops of the frames 2 and beneath the side or finishing rails 37 25. These slots are



adapted to receive the thin wide lugs 38, that project from the under side of the top 4 at points near the forward edge thereof. The lugs 38 may, if desired, be upon plates that are hidden between the veneers of the wooden top; but I prefer to simply attach such plates to the bottom of said desk-top 4, as shown. A ring or knob 39 may be provided at the rear edge of the top 4 for lifting the same, and when the top is thus lifted the flat lugs 38 will slide down into the narrow slots 35 and will hold the board or slot rigidly in place. In this form of my invention, as in the forms illustrated in Figs. 13, 14, and 15, the top surface of the desk is used at all times; but I prefer those embodiments of my invention wherein the board or top is reversed when it is used as a drawing-board or easel, as in the cases of Figs. 1 to 12, inclusive.

It is obvious that numerous modifications of my invention will readily suggest themselves to one skilled in the art, and I therefore do not confine my invention to the specific constructions herein shown and described.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A school-desk comprising a frame and a top, sliding engaging and direct locking connections between the frame and the top on which the latter may slide and move into horizontal or substantially vertical position and be held or locked when turned into said vertical position.

2. A school-desk comprising a frame, and a top slidable upon said frame, and means permitting the top to be turned into an upright position when moved forward upon said frame, said means automatically coacting with said frame to also lock the top in place when turned to the upright position.

3. A school-desk comprising the frame and a top, said top being movable upon said frame, guides therein, for said top, and recesses in said frame near the front thereof to receive and hold said top in an upright position, substantially as described.

4. The combination in a school-desk of the frame back and seat, with the desk-top slidably mounted upon said frame, and connections between the desk-top and the frame permitting the top to be reversed and turned to an upright position when moved forward near the front of the frame, said connections also holding the top in place when turned to said upright position.

5. The combination in a school-desk, of the frame, back and seat, with the desk-top as a whole slidably held upon said frame and adapted, when moved forward, to be reversed and assume a vertical position near the front of the desk-frame and means on and as a part of said frame for holding said top in said vertical position, substantially as described.

6. The combination in a school-desk, of the side frames, the back and seat, with the desk-top, guides upon said frame, whereon said top

is slidable, pivoted attachments upon said frame for said top and said frame being provided with recesses, substantially as described.

7. In a school-desk, the combination of the side frames and a desk-back, with the desk-top provided with channels, said frames provided with fastening-ribs for said top, the same fitting said channels, pivoted fasteners or sections upon said frames and within the channels of said top, and shoulders or stops for said top, substantially as described.

8. In a school-desk, the side frames and back, in combination, with the desk-top, said top provided with metal channels and said side frames having fastening-ribs fitting said channels, means upon said frames confined to said channels and whereon said top may be pivotally moved, and stops for said top upon said frames, substantially as described.

9. In a school-desk, the side frames and the back, in combination, with the desk-top, provided with metal channels or battens, dove-tailed ribs provided upon said frames and fitting said channels, said frames provided with curved portions 13 and fastening means whereby said top may be held in a vertical position, substantially as described.

10. In a school-desk, the side frames and back, in combination, with the slidable top provided with channels, securing-ribs upon said frames fitting channels in said top and whereon said top is slidable, and said frames being provided with recesses and pivoted sections 9, substantially as described.

11. A school-desk comprising side frames and back, in combination with a top provided with metal channels upon its under side, said frames being provided with securing-ribs fitting said channels and provisions in the channel-and-rib connection between the top and frames for permitting the former to be reversed upon the latter and for holding the top in position.

12. A school-desk comprising the side frames and back, in combination with a reversible top provided with metal channels upon its under side and said frames being provided with securing-ribs fitting said channels, and also provided with recesses and pivoted parts, whereby said top may be secured in its upright, reversed position, substantially as described.

13. A school-desk comprising a frame and back, in combination with a reversible whole top arranged upon said frame and said frame and top being provided with stop and fastening means near the front of said frame, whereby said top is held and supported in an upright position, substantially as described.

14. A school-desk comprising the side frames and back, in combination with the reversible top provided with metallic channels 8, said top provided with recesses and having dove-tailed ribs 7, for said channels, the pivoted sections 9, upon said frames and confined to said channels, said channels and said sec-



tions being provided with stops 17 and 18 respectively, substantially as described.

15. In a school-desk, the side frames and back in combination with the top 4, corresponding guides upon said top and said frames, said frames provided with recesses 10 and with sockets 21 and pivots upon said frames for said top, substantially as described.

16. A school-desk provided with a reversible top and having means as a part of said frame for supporting same as a whole in a vertical position near the front of the desk and said top being provided with paper-fasteners 19 upon its under side, substantially as described.

17. In a school-desk, the side frames and back in combination with the reversible top slidably held upon said frames, stops for said top upon said frames, pivots therefor also provided upon said frames and said frames being provided with the curved portions 13 and the inclined portions 15, substantially as described.

18. In a school-desk, the side frames and back in combination with the top movably arranged upon said frames and normally projecting forward over said frames and means at the forward upper corners of said frames for holding said top as a whole in a vertically-inclined position, small shoulders 16 only being exposed in front of said top, when the same is in its raised or vertical position, substantially as described.

19. A school-desk comprising the side frames

and back, in combination with, a desk-top normally occupying a horizontal position upon said side frames, said top being slidable upon said frames, guide means in said frames and means forming part of said frames for holding said top in a substantially vertical position, substantially as described.

20. In a school-desk the combination of the side frames and back, with the desk-top slidably held upon said side frames, stops provided upon said side frames and direct slidable pivotal connections between said top and said side frames permitting the movement of said top to a substantially vertical position and against said stops, substantially as described.

21. In a school-desk the combination of the side frames and the back with the top slidably connected with the said side frames and also pivotally connected therewith near the front of said frames, and stops upon said frames for holding said top in a substantially vertical position as described.

22. In a school-desk the combination of the side frames and back, with the desk-top slidably and pivotally held upon said side frames and holding-recesses provided in the tops of said frames, substantially as described.

In testimony whereof I have hereunto affixed my name this 13th day of October, 1900.

JULIUS KARPEN.

Witnesses:

C. G. HAWLEY,

T. D. BUTLER.