F. A. STRODEL.

DRAWING BOARD HOLDER.

APPLICATION FILED FEB. 8, 1916.

1,282,489.

Patented Oct. 22, 1918.

2 SHEETS—SHEET 1.

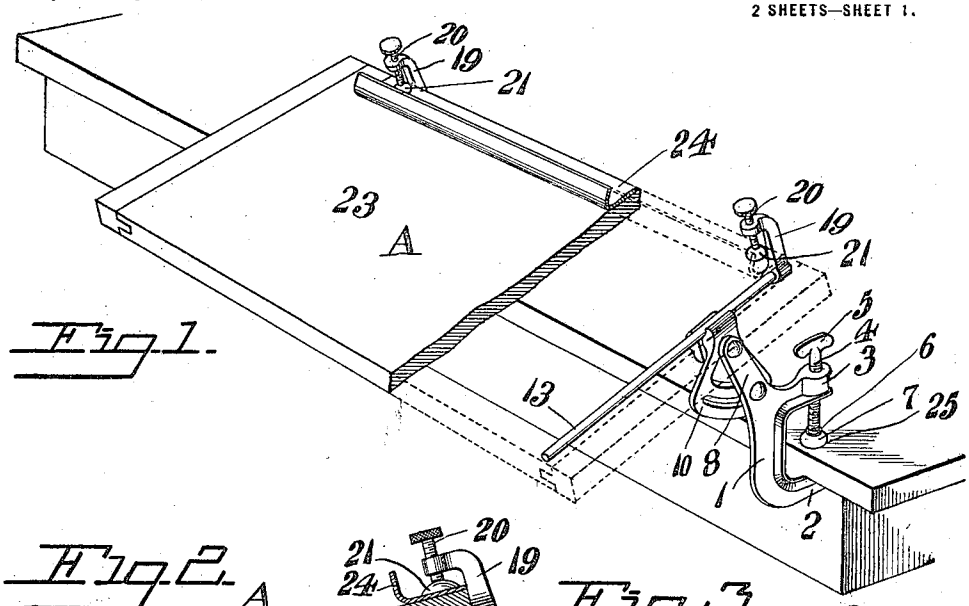


Fig. 1.

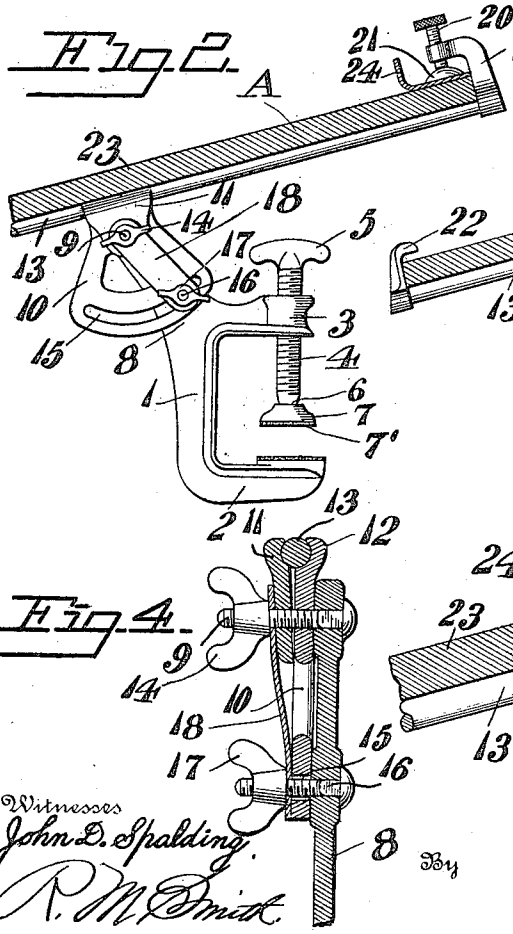


Fig. 2.

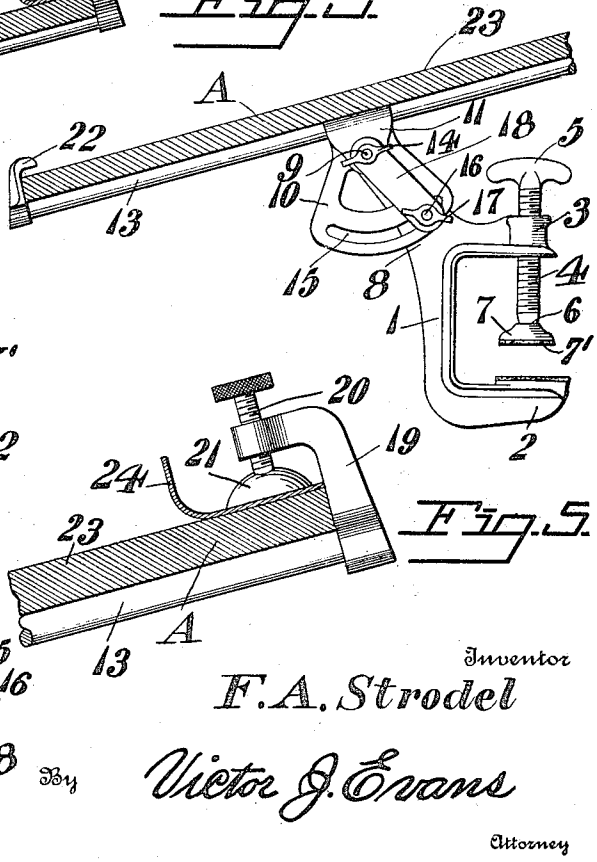


Fig. 3.




Fig. 4.




Fig. 5.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 6.

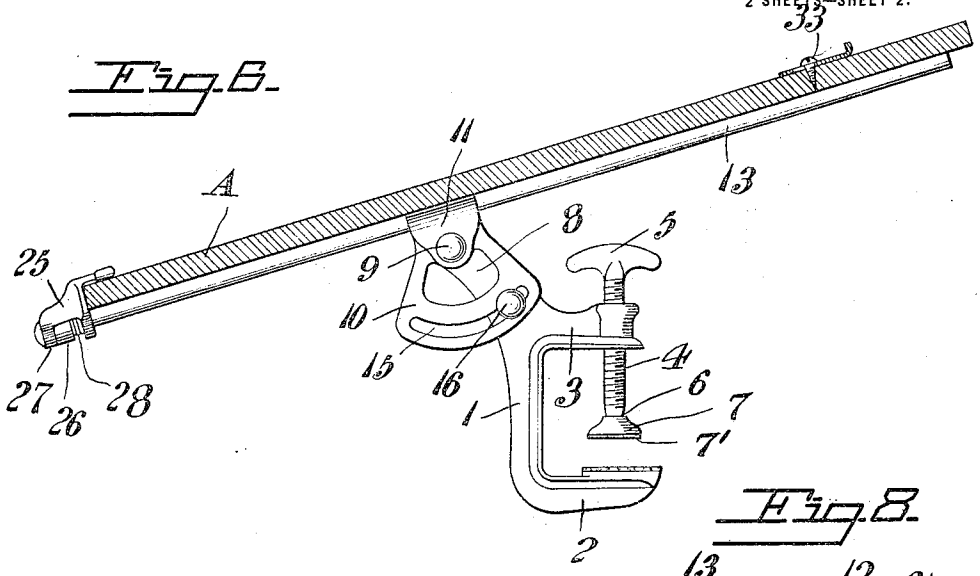



Fig. 8.

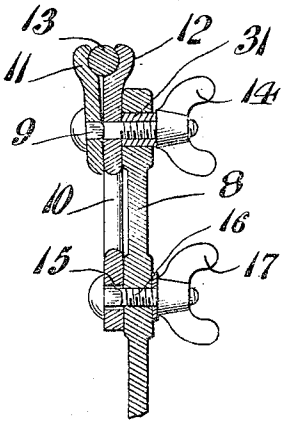
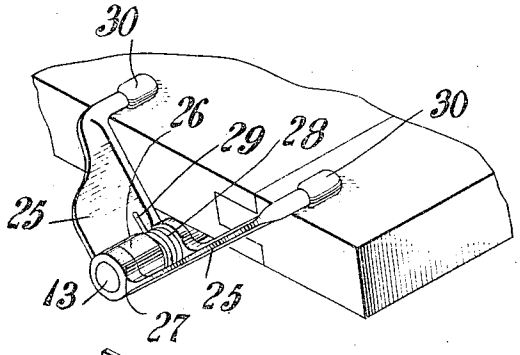



Fig. 7.



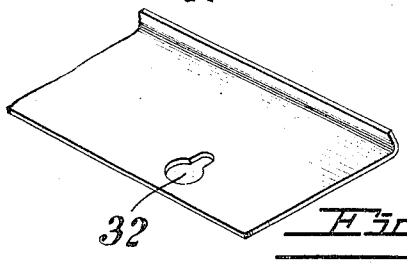
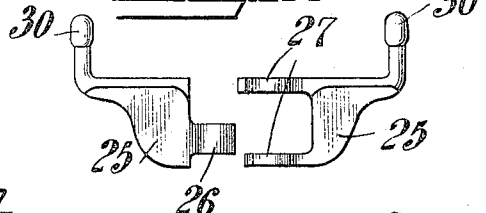




Fig. 9.

Fig. 10.




Witnesses

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# UNITED STATES PATENT OFFICE.

FRANK A. STRODEL, OF SYRACUSE, NEW YORK.

## DRAWING-BOARD HOLDER.

1,282,489. Specification of Letters Patent. Patented Oct. 22, 1918.

Application filed February 8, 1916. Serial No. 77,052.

*To all whom it may concern:*

Be it known that I, FRANK A. STRODEL, a citizen of the United States, residing at Syracuse, in the county of Onondaga and State of New York, have invented new and useful Improvements in Drawing-Board Holders, of which the following is a specification.

This invention relates to drawing board holders, the object in view being to provide a convenient and adjustable device whereby a drawing board may be supported or held in fixed relation to a table, desk, work bench or the like and adjusted as to its inclination or, in other words, tilted at any desired angle and also shifted so as to overlie the table, desk or the like more or less as may be desired.

A further object of the invention is to provide a holder adapted to drawing boards of different sizes and thicknesses and also adapted to table or desk tops and the like of varying thickness; also means for firmly clamping the drawing board to the holder; also an instrument holder to be used in conjunction with the drawing board and holder therefor.

With the above and other objects in view, the invention consists in the novel construction, combination and arrangement of parts, as herein described, illustrated and claimed.

In the accompanying drawings:—

Figure 1 is a perspective view showing a drawing board, partly broken away, and a pair of holders therefor.

Fig. 2 is a vertical section taken adjacent to one of the holders and showing the drawing board in section.

Fig. 3 is a similar view showing another form of board supporting rod.

Fig. 4 is a cross section in line with the thumb screws, showing the means for tilting and adjusting the supporting rods.

Fig. 5 is a fragmentary section showing the board and instrument rack clamped.

Fig. 6 is a view partly in side elevation and partly in section showing modified holding means for the drawing board and a modified form of implement holder.

Fig. 7 is an enlarged fragmentary perspective view showing the holding and clamping means for the drawing board embodying the same construction as shown in Fig. 6.

Fig. 8 is a fragmentary sectional view taken in line with the clamping bolts of the quadrant.

Fig. 9 is a fragmentary perspective view of the modified form of implement holder.

Fig. 10 is an elevation of the two clamping arms of Figs. 6 and 7.

Referring to the drawings, 1 designates the body of a bench clamp, comprising a lower arm 2 and an upper arm 3, one of said arms being equipped with a threaded clamping screw 4 having a thumb piece 5 at one end and having a ball and socket connection at 6 with a clamping head 7, enabling the clamp as a whole to be securely fastened to the top of a table, desk, bench or the like and to accommodate different thicknesses of such a top.

The clamp is provided with another arm 8 extending obliquely with relation to the main body of the clamp and formed at its extremity with a hole to receive a clamping bolt 9 which also passes through a quadrant 10 and forms a pivotal connection between the quadrant 10 and the arm 8. The bolt 9 also passes through a clamping jaw 11 which is movable in relation to another jaw 12 formed integrally with the quadrant, the inner faces of said jaws being concaved or grooved to receive a drawing board supporting rod 13 of any suitable length. A winged nut 14 is threaded on the bolt 9 and by loosening said nut the rod 10 may be adjusted in the direction of its length to give more or less overhang to the drawing board in relation to the table or bench to which the device is attached.

The quadrant is provided with an arcuate slot 15 which receives a clamping bolt 16 inserted through the arm 8 and provided with a winged nut 17 threaded thereon. A washer plate 18 is provided with holes to receive the two clamping bolts above referred to and to prevent the nuts on said bolts from turning when the quadrant is swung on its pivotal connection with the arm 8 of the clamp.

Under the preferred embodiment of this invention, the rod 13 is provided at the end farthest from the draftsman with an L-shaped arm 19 having a board clamping member in the form of a screw 20 threaded through the same, said screw being provided at its lower end with a cup-shaped clamping head 21 which is journaled on the end of the clamping screw. Under another em-

bodiment of the invention, the rod 13 is provided at the end next to the draftsman with an L-shaped arm or hook 22 against which the lower or adjacent edge of the drawing board rests, to prevent the drawing board from sliding off the rods 13 when the latter are inclined. The drawing board is indicated at 23, and the hooked end of the arm 22 forms a board clamping member by turning the rod 13.

24 designates an instrument rack shown in the form of a metal strip, L-shape in cross section and of sufficient length to reach between two holders in the manner illustrated in the drawings, said rack being clamped in position on the board by means of the same clamping screws which fasten the board to the supporting rods 13. It is preferred to provide the head 7 of the main clamping screw 4 with a felt facing 7′ so as not to injure or mar the surface of a table top or other horizontal support to which the main clamp is fastened.

From the foregoing description, taken in connection with the accompanying drawings, it will now be understood that two or more holders may be securely fastened to the top of a table, desk or bench or the like at a suitable distance apart to receive a drawing board of a given size. The board is then laid upon the supporting rods 13 and securely clamped thereon by the means described. At the same time the instrument rack or holder may be clamped upon the board so as to extend along the edge thereof farthest from the draftsman. By loosening the winged nuts above referred to, the quadrants 10 may be turned on their pivotal connection so as to give greater or less inclination to the drawing board and the supporting rods 13 and may be clamped at any desired inclination by again tightening said nuts. Furthermore, by the same means, the board may be given more or less overhang in relation to the supporting bench or table by adjusting the rods 13 in the direction of their length in relation to the jaws by which they are normally held in fixed relation to the quadrants.

Instead of employing the holding and clamping member or arm 22 hereinabove described and illustrated in Fig. 3, a pair of such arms may be employed, said arms being indicated at 25 in Figs. 6, 7 and 10. The arms 25 are provided with knuckles 26 and 27 which overlap each other and are bored to receive the adjacent end of the rod 13 on which the drawing board A is placed. A coiled spring 28 encircles the rod 13 between one of the knuckles 27 and the knuckle 26 and the opposite extremities of said spring, one of which is shown at 29, bear against the upper or adjacent sides of the arms 25 so as to force the free ends of the arms into engagement with the top surface of the drawing board as clearly shown in Figs. 6 and 7, said arms being L-shaped as shown and provided at their overhanging extremities with enlargements or knobs 30 forming board clamping members to impart better holding qualities thereto. Before placing the board on the rod 13, the free ends of the arms 25 are moved toward each other so as to admit the board beneath the knobs 30. The arms 25 are then released and the spring 28 forces the knobs 30 tightly against the board as well as any drawing paper or sheet placed thereon.

As shown in Fig. 8, the washer plate 18 may be dispensed with by reversing the bolts 9 and 16 so that the head of the bolt 9 will bear against the movable jaw 11 and the head of the bolt 16 will bear directly against the quadrant. The winged nuts 14 and 17 will then be arranged at the opposite side of the arm 8 and by placing a bushing 31 around the bolt 9, the quadrant 10 may be adjusted by merely loosening the thumb nut 17.

Instead of the implement holder 24 hereinabove described, I may employ the implement holder illustrated in Figs. 6 and 9, the same being L-shaped as previously indicated but being provided with key hole slots 32 to receive headed screws 33, enabling the implement holder to be readily attached to and detached from the drawing board without manipulating the clamping screws of the construction previously described.

Having thus described my invention, I claim:—

1. A drawing board holder embodying a clamp adapted to be fastened to a horizontal support, an arm extending from said clamp, a quadrant pivotally mounted on said arm, fixed and movable jaws on said quadrant, a board supporting rod adapted to be partially rotated and clamped between said jaws and adjustable in the direction of its length, a clamping bolt passing transversely through said jaws, means for clamping the quadrant at any point in the pivotal movement thereof, and board clamping means on the upper end of said rod.

2. A drawing board holder embodying a clamp adapted to be fastened to a horizontal support, an arm extending from said clamp, a quadrant pivotally mounted on said arm, fixed and movable jaws on said quadrant, a board supporting rod adapted to be partially rotated and clamped between said jaws and adjustable in the direction of its length, a clamping bolt passing transversely through said jaws, and means for clamping the quadrant at any point in the pivotal movement thereof, said supporting rod being provided at its upper end with an L-shaped board-holding arm and clamp.

3. A drawing board holder embodying a clamp adapted to be fastened to a horizontal support, an arm extending from said clamp,

a quadrant pivotally mounted on said arm, fixed and movable jaws on said quadrant, a board supporting rod adapted to be partially rotated and clamped between said jaws and adjustable in the direction of its length, a clamping bolt passing transversely through said jaws, means for clamping the quadrant at any point in the pivotal movement thereof, an L-shaped arm on one end of said rod to overhang the upper edge of the drawing board, and a board-clamping member carried by the last named arm.

In testimony wherof I affix my signature in presence of two witnesses.

FRANK A. STRODEL.

Witnesses:

WILLIAM A. LOEHR,

MARGARET L. GLISSON.