No. 839,511. PATENTED DEC. 25, 1906

E. K. REICHENBACH & G. V. WORTHINGTON.

DRAWING BOARD.

APPLICATION FILED MAY 8, 1905.

Fig. 1.

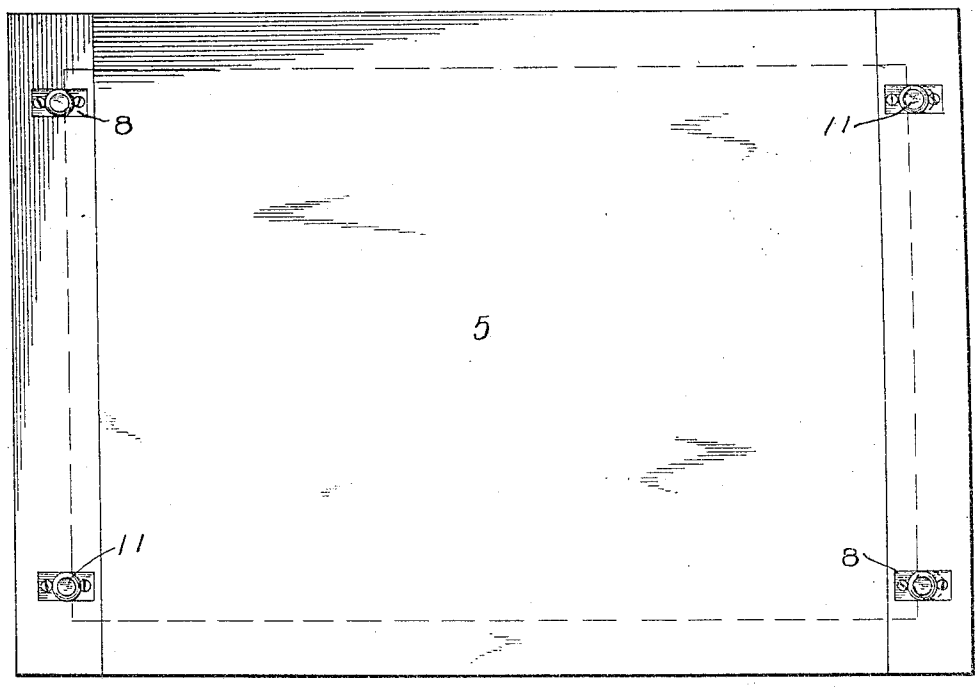


Fig. 2.

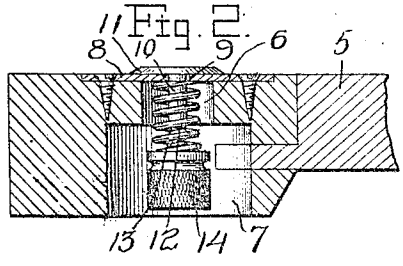


Fig. 3.

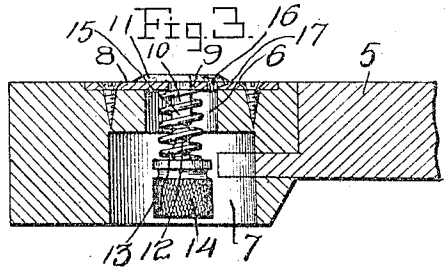


Fig. 4.

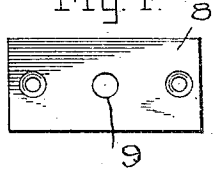


Fig. 6.

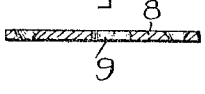
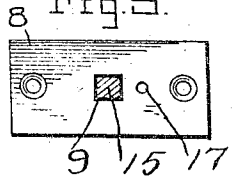


Fig. 5.



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UNITED STATES PATENT OFFICE.

ERNEST K. REICHENBACH AND GUY V. WORTHINGTON, OF WASHINGTON, DISTRICT OF COLUMBIA; SAID WORTHINGTON ASSIGNOR TO SAID REICHENBACH.

DRAWING-BOARD.

No. 839,511. Specification of Letters Patent. Patented Dec. 25, 1906.

Application filed May 8, 1905. Serial No. 259,406.

To all whom it may concern:

Be it known that we, ERNEST K. REICHENBACH and GUY V. WORTHINGTON, citizens of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Drawing-Boards; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to drafting appliances, and more particularly to drawing-boards, and has for its object to provide a drawing-board equipped with means for attaching paper thereto without puncturing or otherwise mutilating the sheets.

Another object is to provide a board of this kind in which the attaching devices will be adjustable to suit different conditions and which will be extremely simple in construction and operation.

Other objects and advantages will be apparent from the following description, and it will be understood that changes in the specific construction shown and described may be made within the scope of the claims and that any suitable materials may be used without departing from the spirit of the invention.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a plan view of the present board. Fig. 2 is a sectional view showing one form of fastener in detail. Fig. 3 is a sectional view showing another form of fastener. Fig. 4 is a plan view with one form of top plate. Fig. 5 is a plan view of a different form of top plate. Fig. 6 is a detail sectional view of one of the plates having the elongated openings.

Referring now to the drawings, the present invention is incorporated in a board 5, having vertical passages 6 formed therethrough and arranged in pairs adjacent to its ends, each pair of the passages alining transversely of the board. The passages 6 communicate with recesses 7, formed in the under surface of the board, and embedded in the upper surface of the board above the passages there are plates 8, having openings 9 therein located approximately at the centers of the passages. Pins 10 are engaged in the openings 9 for vertical movement, and these pins have flat heads 11 at their upper ends and have their lower portions threaded, as shown at 12. Helical springs 13 are engaged with the pins, resting at their upper ends against the upper surfaces of the plates 8 and at their lower ends against thumb-nuts 14, engaged with the threaded portions of the pins. The pins, with their heads, are thus held yieldably against upward movement, and it will be understood that the thumb-nuts 14 may be operated to vary the tension of the springs.

The openings 9 of the plates 8 at one end of the board are elongated longitudinally of the board for movement of the pins which are engaged therein toward and away from the pins at the other end of the board, these latter being arranged for vertical movement only. It will thus be apparent that the heads 11 may be raised by pressing upwardly upon the thumb-nut 14 and that a sheet of paper may be inserted beneath the heads and will be held thereby upon the board when pressure is removed from the thumb-nuts. By reason of the fact that the pins at one end of the board are movable toward and away from those of the other end sheets of paper of varying length may be engaged by the heads, and by reason of the fact that two of the pins are immovable other than vertically one end of a sheet of paper may be placed thereagainst to correctly position the paper upon the board, the pins lying in a line extending at right angles to the working edge of the board. The longitudinally-movable pins thus permit of the adjustment of the board to suit slight variation in the length of the paper used.

In Fig. 3 there is shown a form of the invention in which the openings 9 are rectangular, and in this form of the invention a rectangular pin 15 is used, the head being thus held against rotation, and the head carries a downwardly-extending point 16, which is adapted to enter an opening 17 in the plate 8, the object being to hold the paper positively against slipping by permitting the point to pass therethrough, though, as will be seen from Figs. 1 and 2, this point may be omitted.

The fasteners may be adjusted by removing the nuts 14 to permit of the insertion of papers of different thicknesses beneath the head, and the movable portions of the fasteners may be entirely removed by disengaging the nuts from the pin.

What is claimed is—

1. The combination with a drawing-board, of paper-engaging devices connected thereto in spaced relation, certain of said devices being arranged for movement toward and away from certain other devices in the plane of the board to compensate for variations in the size of the paper, said devices being provided with means which enable them to be moved into and out of operative position and which are capable of securing them in operative position.

2. The combination with a drawing-board, of paper-engaging devices carried thereby and movable into and out of operative position, means for holding said devices yieldably in operative position, certain of said devices being movable toward and away from other devices in the plane of the board, and means for holding the devices at times positively in operative position.

3. The combination with a drawing-board having recesses in opposite end portions thereof, plungers mounted in the recesses, each of said plungers having a clamping-head and having sufficient movement to permit of engagement of a sheet of paper between its head and the board, a spring for each plunger arranged to hold its head yieldably in engagement with the board, and means for varying the tension of the spring, the plungers at each end of the board being movable toward and away from the plungers of the opposite end whereby paper of various sizes may be engaged with the board.

4. The combination with a drawing-board having recesses in opposite end portions thereof, of plates provided with openings and engaged in the recesses, plungers mounted in the openings of the plates and movable longitudinally and also horizontally with respect to the length of the board, each of said plungers having a clamping-head and having longitudinal movement sufficient to permit of engagement of a sheet of paper between its head and the plate, a spring for each plunger arranged to hold it yieldably against movement with its head away from the plate, and a thumb-screw engaged with each plunger and adapted for operation to vary the tension of its spring.

In testimony whereof we affix our signatures in presence of two witnesses.

ERNEST K. REICHENBACH.
GUY V. WORTHINGTON

Witnesses:
CHARLES E. MARSH,
ARTHUR BRIDGETT.