No. 846,580. PATENTED MAR. 12, 1907.

J. B. LE VASSEUR.

ADJUSTABLE RULE.

APPLICATION FILED JUNE 18, 1906.

Fig. 4.

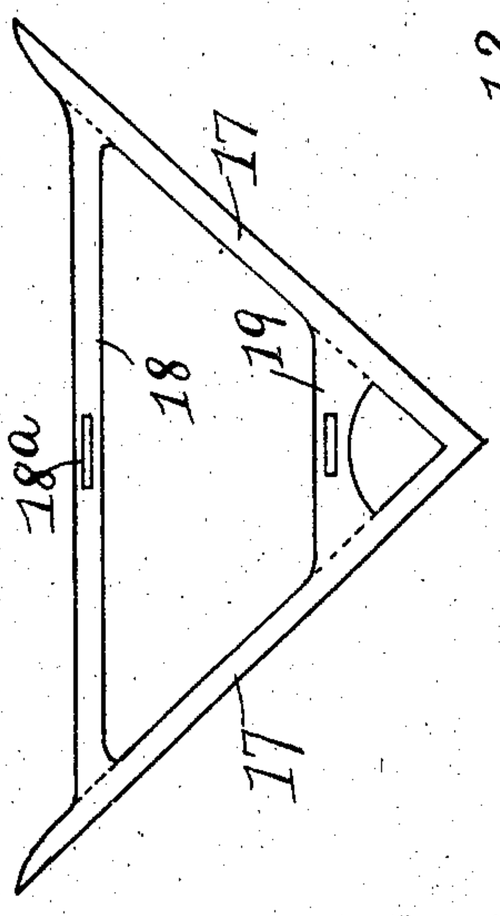


Fig. 5

Fig. 6

Fig. 3.

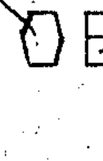


Fig. 1.

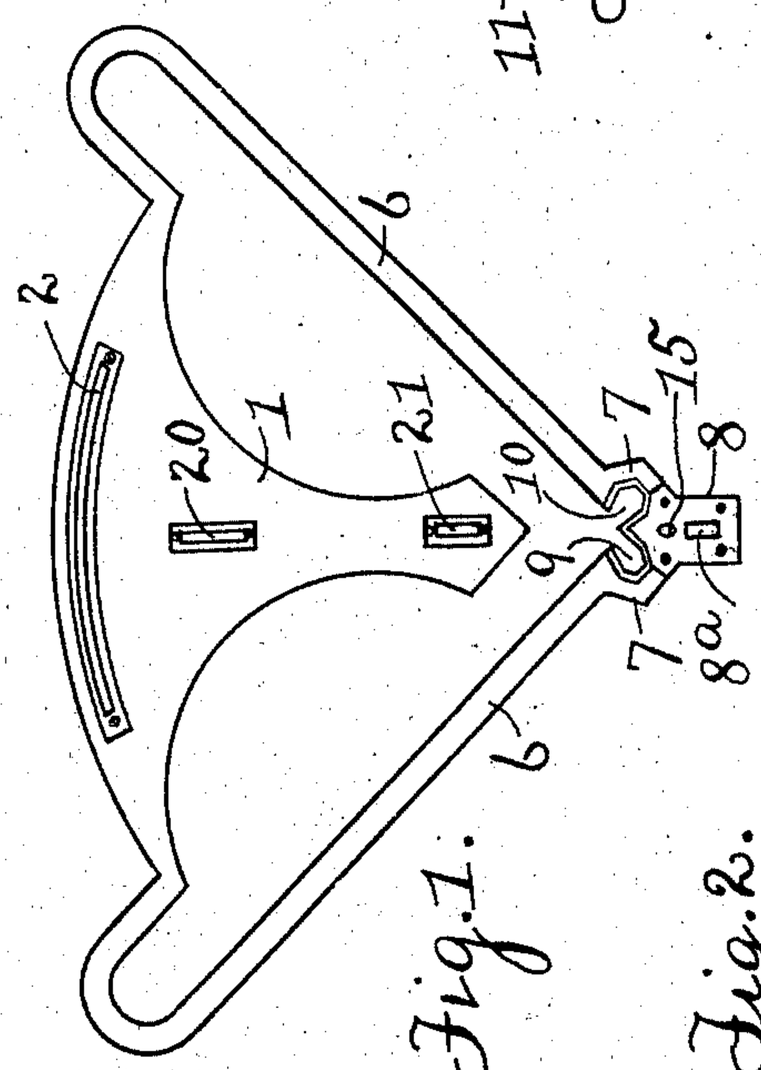


Fig. 2.

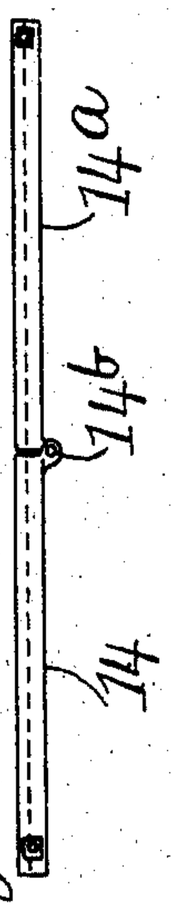
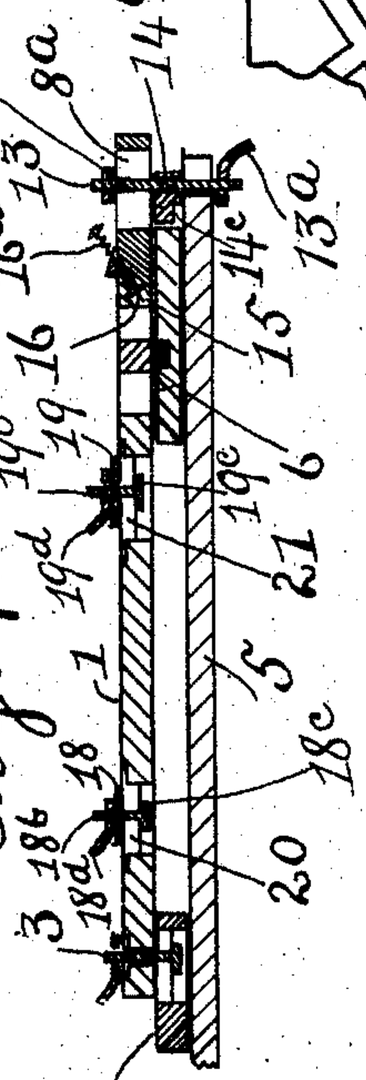


Fig. 7.



WITNESSES:

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ADJUSTABLE RULE.

No. 846,580. Specification of Letters Patent. Patented March 12, 1907.

Application filed June 18, 1906. Serial No. 322,177.

To all whom it may concern:

Be it known that I, JOHN B. LE VASSEUR, a citizen of the United States, residing at Duluth, in the county of St. Louis and State of Minnesota, have invented certain new and useful Improvements in Adjustable Rules; and I 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.

My invention relates to adjustable rule for marking step and riser notches or grooves on staircase string-boards, and has for its object the provision of means which may be fixed to a bench and rest upon or above the string-board, so that the string-board may be moved along beneath it and which may be readily adjusted so as to greatly facilitate the marking or cutting of the notches or grooves on or in said boards at one angle or another, as desired.

With this and other objects in view it consists of the constructions, combinations, and arrangements of parts hereinafter described and claimed.

In the drawings, Figure 1 is a plan view of the outer rule or body portion forming part of my invention and adapted to be adjustably mounted on a working-bench. Fig. 2 is a plan view of an adjustable straight-edge forming part of my said invention, and Fig. 3 is a plan view and side elevation of a removable block adapted to be inserted in the frame of said body portion. Fig. 4 is a plan view of an inner rule forming part of said invention and adapted to be adjustably mounted on said body portion. Fig. 5 is a plan view and side elevation of another removable block adapted to be inserted in the frame of said body portion. Fig. 6 is a plan view of said invention and a plan view of a fragment of a working-bench upon which the same is mounted and of a fragment of a string-board in connection with the marking or cutting of which my invention is used. Fig. 7 is a section of my said invention on the line 7 7 of Fig. 6.

In the drawings, 1 is a body portion of any suitable design provided with a suitable aperture or slot 2, through which a bolt 3 extends and passes through a suitable slot or aperture formed in a block 4, which is secured to a suitable support or working bench 5. Extending from said body portion and forming part thereof are the rule-bars 6, converging together or toward each other at their lower ends. Said rule-bars are at their said lower ends enlarged or offset to form the shoulders 7 and the tongue 8, and mortises 9 and 10 are formed in said enlarged portion to receive the blocks 11 and 12. The tongue 8 is suitably apertured or slotted, as at 8^a, for the passage of a bolt or hinge-pin 13, by which the arms 14 and 14^a of an adjustable folding straight-edge is secured to said tongue. The members 14 and 14^a are provided at their opposing ends with vertically-arranged hinge-plates 14^b, through which the bolt or pin 13 extends. Said bolt 13 also extends through or across the edge of the working bench and is provided at one end with a wing-nut 13^a and at the opposite end with any suitable nut or head 13^b, whereby said body portion may, at or near its apex, be clamped tightly to the work-bench. It is to be observed that the inner faces of the rule-bars 6 are the ruling-faces of said bars, and when the line is to be ruled along the right-hand bar the solid block 11 (shown in Fig. 3) is placed in the mortise 10, so that the exposed edge of said block forms a continuation across said mortise of the ruling-face of right-hand rule-bar. At such time the indented block 12 (shown in Fig. 4) is placed in the mortise 9, so that one side wall of the indentation will form a continuation of the ruling-face of the right-hand rule-bar 6, and the bottom or end of the indentation will continue the line to meet the prolongation of the line of the corresponding inside rule-bar, hereinafter described. When the line is to be ruled along the left-hand rule-bar, the position of these blocks is reversed, the solid block being placed in the mortise 9 and the indented block being placed in the mortise 10. An inclined passage 15 is also formed in said tongue for a pointer 16, which is preferably retracted by a spring 16^a interposed between said tongue and the head of the pointer, and said pointer is adapted to be thrust downward manually against the action of said spring. Adjustably mounted upon said body 1 is an inner rule comprising the rule-bars 17, arranged at an angle to each other and tied together by the cross-strips or top plates 18 and 19. Said plate 18 is suitably apertured or slotted, as at 18^a, for the passage of a bolt 18^b, which also passes through a slot or aperture 20 in said body portion 1. The bolt 18^b is provided with a

head 18^c, which overlaps the edges of said slot or aperture 20, beneath the upper face thereof, and said bolt is provided at its upper end with a wing-nut 18^d or equivalent, by means of which said plate 18 may be clamped tightly to said body portion 1. The plate 19 is similarly apertured or slotted, as at 19^a, for the passage of a bolt 19^b, which also passes through a slot or aperture 21, formed in said body portion 1. Said bolt 19^b is provided with a head 19^c, which overlaps the edges of said slot or aperture 21 beneath the upper face thereof, and said bolt is provided at its upper end with a wing-nut 19^d or equivalent, whereby said plate 19 may be tightly clamped to said body part 1.

The straight-edge bars 14 and 14^a are preferably undercut, as at 14^c, along their inner faces to provide a passage for the escape of dust or shavings from the string-board, so that such dust or shavings will not prevent the proper adjustment of the string-board against the straight-edge. Said bars 14 and 14^a are vertically apertured at their outer ends for the passage of clamping means 22, (similar to the bolt 13 and its attached nuts,) which extend down through slots 23, formed in the bench 5, whereby said straight edge may be clamped at any desired angle on the bench.

If desired, the plates 18 and 19 may be integral with each other and to that end embody connecting-strips overlying the upper face of the intermediate portions of the bars 17. It is further obvious that invention may be constructed wholly of metal or partly of metal and partly of wood or other suitable substance, or wholly of wood or other suitable substance, all within the spirit and scope of my invention; but I prefer to make it mainly of wood and to face the weaker parts and joints with metal—as, for example, to make the body 1 of wood and face the tongue thereof with metal on its upper face and frame the slots or apertures with metal and to construct the bars 17 of wood and the cross-plates 18 and 19 of metal extending over the bars 17. It is also obvious that the clamping bolts and nuts may be varied in structure without departing from the spirit and scope of my invention and also without such departure, that the intersecting slots may be transposed and the same general results obtained.

It will now be apparent that the invention is adjustable to various positions with relation to the bench or with relation to the string-board, or both, and that the rule-bars 17 are adjustable to various angles with relation to the bars 6 and so as to afford a wider or a narrower space between said bars 6 and 17. It is to be observed also that the outer faces of the bars 17 are the ruling-faces thereof. In practice the ruling-bars are not usually adjusted parallel with each other, for the reason that in cutting a groove in the string board for the reception of the end of the step or riser it is desirable to provide room for driving of a wedge in the groove beneath the step or behind the riser, or both. In cutting or marking an open notch in the string-board, so that the end of the step will extend over the string-board, only one rule-bar need be used; but in cutting or marking a groove in the inner face of the board for the reception of the end of the step two rule-bars are used.

In operation the points on the string-board for the commencement or inner end of the groove are first measured off and marked by calipers or in any other suitable manner. The ruling apparatus embodying my said invention is then adjusted at the angle to the straight-edge at which the step-groove in the string-board is to run, one of the bars 6 marking one edge of said groove and the parallel or nearly parallel bar 17 marking the opposite edge of said groove. The string-board is then moved along over said bench and beneath said rule-bars and against said straight-edge until the pointer 16 will touch the point laid off for the inside end of the groove. The groove may then be outlined with a pencil and cut out after removal of the string-board from beneath the rules, or a chisel may be introduced between the rule-bars, and the groove cut thereby at once. After marking or cutting the first groove the string-board is moved along until the pointer shows the place of commencement of the next groove, and so on. In cutting or marking a winder-step groove the rules or straight-edge will have to be readjusted. After the step-grooves are cut the apparatus will be swung over and adjusted so that the opposite rule-bars will mark the direction for the riser-grooves, which are then pencil-marked, or cut out in similar manner. By using this invention the labor and time required for accurately marking and cutting said grooves is greatly reduced.

What I claim is—

1. In a ruling device, the combination of a body member comprising a central portion and two rule-bars positioned at opposite sides of said central portion and in part spaced therefrom, two other rule-bars, said other rule-bars being directed at an angle to each other and extending into the space between the first said rule-bars and said central portion; and means for adjustably securing the second said rule-bars to said central portion.

2. In a ruling device, the combination of a body portion including two ruling-bars set at an angle to each other, said bars being enlarged at their lower ends to form a tongue at the apex of the angle formed by them, said bars having mortises formed in said enlarged portion, said mortises extending through the

inner or ruling faces of said bars, and means for closing the inwardly-opening mouth of one or the other of said mortises when necessary or desirable for operating said device.

3. In a ruling device, the combination of a body member comprising two rule-bars directed at an angle to each other and an intermediate inwardly-projecting portion meeting said rule-bars at their divergent ends, and projecting into the angle formed by said rule-bars; two other rule-bars directed at an angle to each other and extending into spaces between the first said rule-bars and said inwardly-projecting portion; means adjustably securing the said other rule-bars to said inwardly-projecting portion, adjustable means for supporting said body portion; an adjustable straight-edge, and means connecting said straight-edge to said body portion.

4. In ruling device, the combination with a suitable support having a block mounted thereon, of a body portion adjustably clamped at one end to said block, said body portion including two ruling-bars extending at an angle to each other, said body portion including a tongue extending outwardly from the apex of the angle described by said bars, means for raising said tongue above said support, and means for clamping said tongue to said support, said body portion being adapted to pivot on the latter said clamping means, and the parts of said body portion intermediate of the two said clamping means being clear of contact with said support or block or raising means.

5. In a ruling device, the combination with a suitable support having a block secured thereto, of a body portion adjustably secured to said block, said body portion including a pair of ruling-bars extending at an angle to each other, said body portion including a tongue extending outwardly from the apex of the angle formed by said bars, said bars having mortises formed therein at or near the apex of the angle formed by said bars, said mortises extending through the upper and lower and inner faces of said bars, means for temporarily closing the inwardly-opening mouth of either of said mortises, means for temporarily partly closing the other of said mortises, a second pair of ruling-bars extending at an angle to each other and adapted to lie in the spaces between the first said ruling-bars and the central part of said body portion, said second pair of ruling-bars being connected together by cross-pieces adapted to extend across the central part of the said body portion, means for clamping said cross-pieces to the central part of said body portion, a straight-edge adjustably secured to said tongue between said tongue and said support, means for clamping said tongue to said support, and a pointer carried by said tongue.

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

JOHN B. LE VASSEUR.

Witnesses:
JAMES T. WATSON,
J. C. HELM.