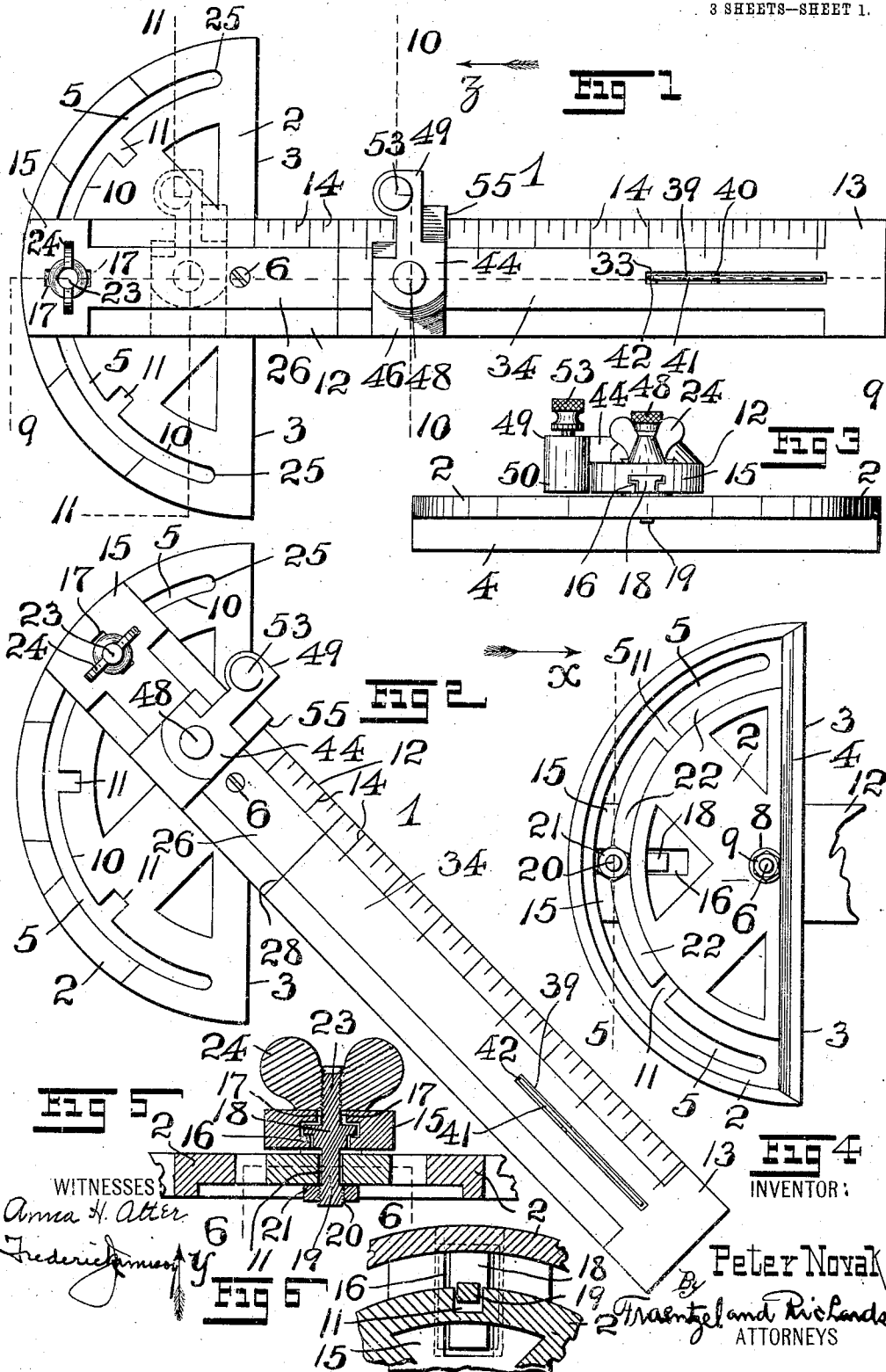


No. 845,009.

PATENTED FEB. 19, 1907.

P. NOVAK.
COMBINATION TOOL.
APPLICATION FILED DEC. 18, 1906.

3 SHEETS—SHEET 1.



No. 845,009.

PATENTED FEB. 19, 1907.

P. NOVAK.

COMBINATION TOOL.

APPLICATION FILED DEQ. 18, 1906

3 SHEETS—SHEET 2.

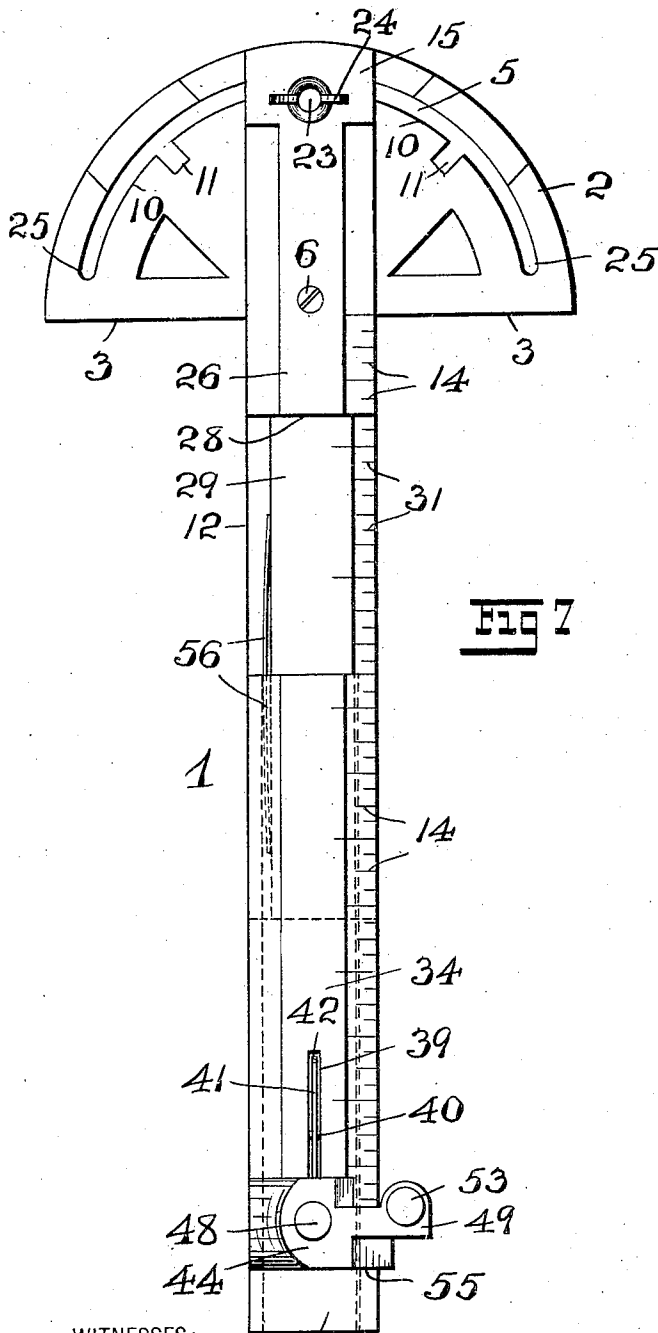


FIG 7

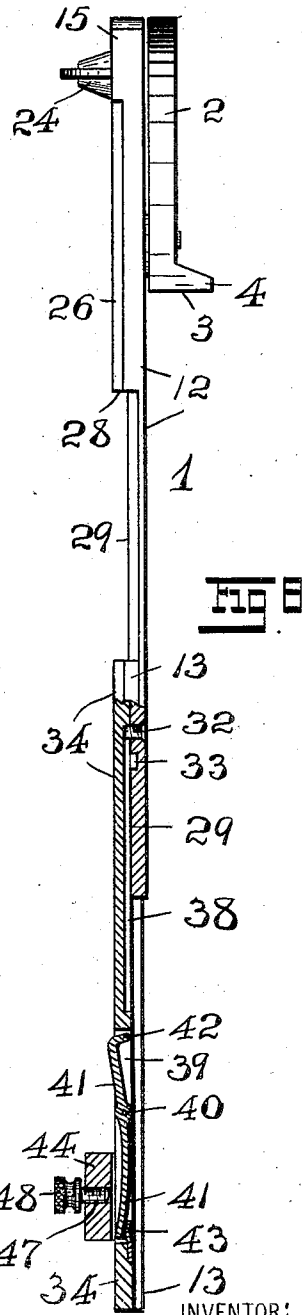


FIG 8

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3 SHEETS—SHEET 3.

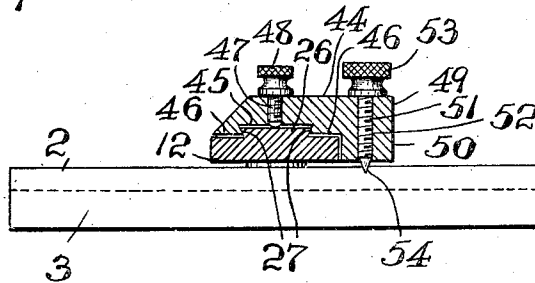
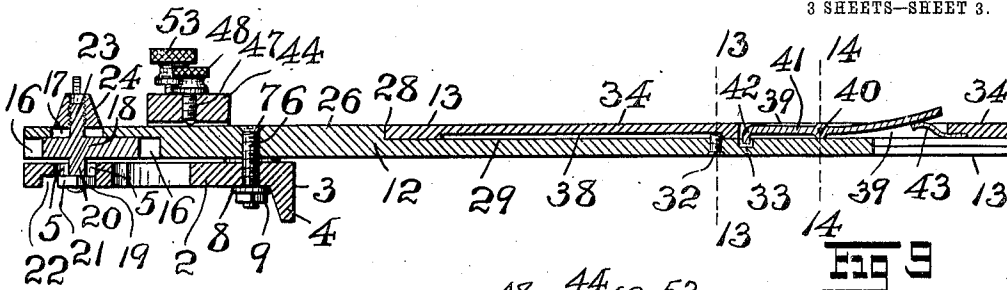
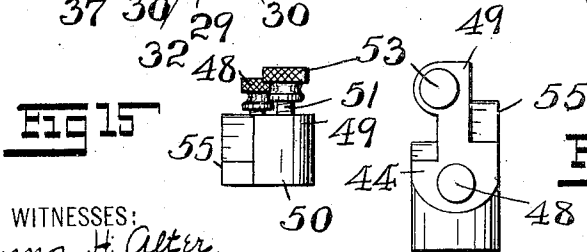
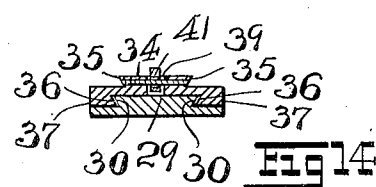
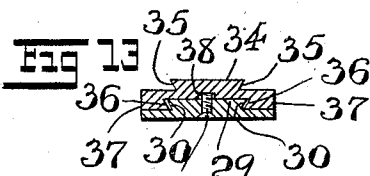
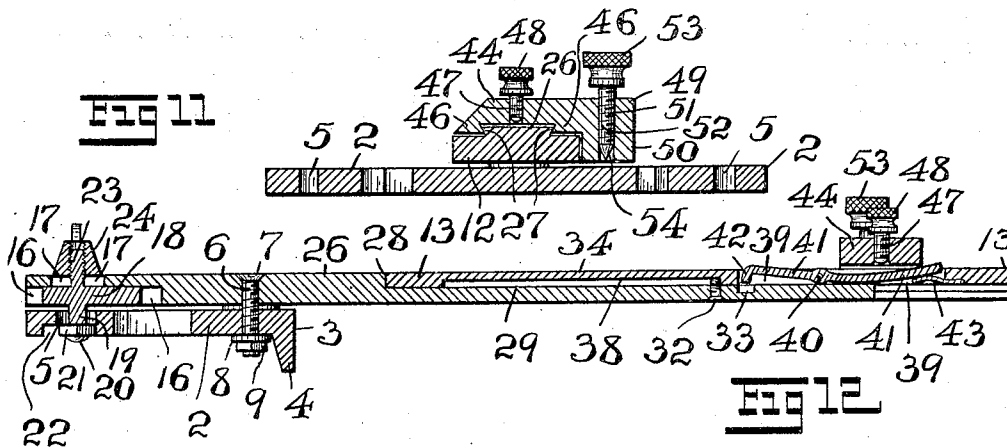


Fig 11



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UNITED STATES PATENT OFFICE.

PETER NOVAK, OF ELIZABETHPORT, NEW JERSEY.

COMBINATION-TOOL.

No. 845,009.

Specification of Letters Patent.

Patented Feb. 19, 1907.

Application filed December 18, 1906. Serial No. 348,377.

To all whom it may concern:

Be it known that I, PETER NOVAK, a subject of the Emperor of Austria, residing at Elizabethport, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Combination-Tools; 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention has reference generally to improvements in that class of tools which are designed for use as squares, bevels, or miters and marking-gages; and the invention relates more particularly to a novel combined rule and bevel provided with an adjustable marking-gage which is conveniently attached and is movably arranged upon a graduated scale or rule.

The invention therefore has for its principal object to provide a novel and simply constructed combination-tool of the general character hereinafter more fully set forth, all with a view of securing a quick and easy adjustment of the various parts, so as to be capable of use as a T-square, a try-square, a miter or bevel, or as a marking-gage.

Other objects and advantages of the present invention will be brought out and made clear in the following detailed description.

With the various objects of my present invention in view the same consists primarily in the novel combination-tool hereinafter more fully set forth; and, furthermore, this invention consists in the various arrangements and combinations of parts, as well as in the details of the construction of the same, all of which will be hereinafter more fully described and then finally embodied in the clauses of the claim which are appended to and which form an essential part of this specification.

The invention is clearly illustrated in the accompanying drawings, in which—

Figure 1 is a plan or top view of the combination-tool, showing the marking-gage set for marking and illustrating in connection therewith and in dotted outline the position of the marking-gage when the latter is not in use. Fig. 2 is a similar view of the tool, showing the parts set at an angle of forty-five degrees when the tool is to be used as a

miter. Fig. 3 is an end view of the tool, the parts being set as indicated in said Fig. 1; and Fig. 4 is a bottom view of the tool with the straight-edge or rule of the tool represented as being broken away. Fig. 5 is a transverse sectional representation in detail and on a slightly-enlarged scale, said section being taken on line 5 5 in said Fig. 4 looking in the direction of the arrow *x*; and Fig. 6 is a horizontal detail sectional representation, said section being taken on line 6 6 in said Fig. 5 looking in the direction of the arrow *y*. Fig. 7 is a plan or top view of the tool, showing the two slidably-connected sections or members of the straight-edge or rule drawn out to their full extent, with the marking-gage set at or near the extreme end portion of the straight-edge or rule; and Fig. 8 is a view of the parts shown in said Fig. 7, the tool being represented partly in side elevation and partly in longitudinal vertical section. Fig. 9 is a longitudinal vertical section of the tool, said section being taken on line 9 9 in said Fig. 1. Fig. 10 is a transverse vertical section taken on line 10 10 in said Fig. 1 looking in the direction of the arrow *z*, and Fig. 11 is a similar section taken on line 11 11 in said Fig. 1 with the marking-gage in its normal initial position when not in use. Fig. 12 is a longitudinal vertical section of the tool similar to that shown in Fig. 9 with the marking-gage shown in its releasing relation with a latch or lock device for permitting the extension of the members of the straight-edge or rule of the tool. Fig. 13 is a transverse section taken on line 13 13 in said Fig. 9; and Fig. 14 is a similar section taken on line 14 14 in the same figure. Fig. 15 is an end view, and Fig. 16 is a top view, of the marking device detached from the tool.

Similar characters of reference are employed in all of the above-described views to indicate corresponding parts.

Referring now to the said several figures of the drawings, the reference character 1 indicates the complete tool, the same comprising an end member or stock 2, preferably of a segmental or semicircular configuration, the said member or stock being provided with a straight-edge 3, which is usually formed with a rib 4 and having a semicircular slot or opening 5. The member or stock 2 is also provided with a pivotal post 6 near the edge 3, said post being usually a screw formed with a head 7 and provided upon its lower screw-threaded por-

tion with a washer 8 and a nut 9, all for the purposes hereinafter more fully described. Ordinarily the slot or opening 5 is formed in three places upon its inner marginal edge

10 with three recesses or receiving portions 11 for the purposes to be presently set forth; but while said recesses are preferable they are not an absolute necessity, as will be clearly understood.

15 Arranged in an oscillatory manner upon the upper face of the end member or stock is a straight-edge or rule, the same consisting of two slidably-connected members or elements 12 and 13, each of which is provided

20 with suitable graduations 14 in inches or otherwise. As shown, the member or element 13 is made to swing upon the post 6, the head 7 of the latter being preferably countersunk in the upper surface of the

25 member or element 12, substantially as shown. The end portion 15 of said member or element, which is movably disposed upon the upper surface of the member or stock 2, is provided in its under portion with a longi-

30 tudinally-extending channel 16, forming a suitable guide or box, and with an elongated opening 17, as clearly shown. A block 18 is movably arranged in said channel 16, said block being provided with a downwardly-

35 extending stud or post 19, preferably of an angular or square cross-section, said stud or post projecting into and through the semicircular opening or slot 5. The end of said

40 stud or post 19 which projects from said opening 5 is provided with a screw-thread 20, upon which is screwed a suitable nut 21, said nut being arranged in the recessed part 22, formed in the lower surface of the member or stock 2, substantially as illustrated.

45 Upon its upper surface the said block 18 is provided with a screw-threaded post or stud 23, which projects into and above the elongated opening 17, as shown, and is provided with a suitable tightening-nut or thumb-

50 screw 24, all arranged for tightening the member or element 12 in any one of its adjusted relations upon said member or stock 2, as will be clearly evident from an inspection of the several figures of the drawings.

55 The previously-mentioned recesses or receiving portions 11 are for the purpose of sliding the squared or angular portion of the stud or post 19 into any one of said recesses 11 when the nut or thumb-screw 24 is slightly

60 loosened, whereby the member or element 12 can be secured at right angles or at forty-five degrees to the straight-edge 3 of the stock 2, as will be clearly understood. Thus while it is advantageous to have the

65 recesses 11 for readily and exactly adjusting the member or element 12 in its right-angled or forty-five degree relation to the edge 3 it will also be clearly understood that any other angular relation of the element or

curing or tightening the parts in any other positions intermediate of any two of said recesses 11 or between the end recesses and the end portions 25 of the semicircular opening or slot 5 of the member or stock 2.

Referring now more particularly to Figs. 7, 8, 10, and 11 of the drawings, it will be seen that that portion of the rule member or element 12 which is movably arranged upon the member or stock 2 is made with a centrally-disposed and longitudinally-extending raised portion 26, formed with the undercut marginal edges 27. At a suitable point, as at 28, the remaining portion of said member or element 12 is reduced in thickness, said reduced portion being provided with a centrally-disposed and longitudinally-extending raised portion or rib 29, formed with the undercut marginal edges 30, substantially as shown in Figs. 13 and 14 of the drawings.

85 One of the marginal edge portions of said reduced portion, as will be seen from Fig. 7, is also provided with scale graduations 31 in inches or otherwise. At a suitable point the said reduced portion is also provided with an upwardly-extending stud or projection 32, which may be a screw, as here shown, and with a receiving depression or socket 33. The previously-mentioned rule member or element 13, as will be seen from the drawings, is made with a centrally-disposed and longitudinally-extending raised portion or rib 34, formed with the undercut marginal edges 35. Upon its under face the said member or element 13 is made with a longitudinally-extending depression or channel 36, formed by the marginal edge portions 37, the parts being made to dovetail over the raised portion or rib 29 of the reduced portion of the member or element 12, so that the element 13 is slidably arranged upon said reduced portion of the element 12, as will be clearly understood. To limit this sliding movement and to prevent the separation or pulling apart of the two elements 12 and 13, a longitudinally-extending groove or channel 38 is formed in the bottom of the member 13, into which the stud or projection 32 of the member 12 extends, as shown in Figs. 8, 12, and 13 of the drawings, and operates in a manner which will be fully understood from an inspection of the figures of the drawings. The said member or element 13 is also preferably provided with a slot 39, across which extends a pin 40 and upon which is fulcrumed, so as to be capable of oscillation in said slot, a locking or holding lever 41. This lever is provided at its one end with a holding portion or nosing 42, which is normally forced into the receiving depression or socket 33 by means of a suitable spring, as 43, which engages with the under portion of the opposite end of said lever and forces said end of the lever also normally above the upper face of the member or element 13, substantially as

shown in Fig. 9 of the drawings, and the two rule members or elements 12 and 13 are held against any movement until the nosing 42 of the lever 41 is withdrawn from the socket 33 by means of the scratch-gage in the manner to be presently described.

The scratch-gage consists, essentially, of a suitably-formed body 44, formed in its under face with a channel or depression 45 and the two depending portions 46, the parts being dovetailed over the centrally-disposed and longitudinally-extending raised portions 26 and 34 of the respective elements or members 12 and 13 in such a manner that when the members 12 and 13 are in their closed relation the said body 44 can be slid from one element upon the other for the various purposes for which the device is intended. To lock or retain said body 44 in any one of its adjusted positions, a suitable set-screw 47, provided with a suitable finger-piece 48, is provided, the operation of which will be clearly evident from the drawings. The said body 44 is also made with a laterally-extending arm or member 49, formed with a downwardly-extending portion 50. In a screw-threaded hole 51 of said arm 49 and its portion 50 is a screw-threaded shank 52, provided with a suitable finger-piece 53 for screwing said shank down and bringing a scratch-point 54 on said shank below the lower surface of the portion 50 after the body has been moved into any one of its adjusted positions and secured in such position for the purposes of marking or scratching. The body 44 is made with the edge 55 for setting the gage to any one of the graduations with which the rule members or elements are provided. When it is desired to draw out or extend the two members or elements 12 and 13, all that is then necessary is to slip the scratch-gage over the projecting end portion of the lever 41, substantially as indicated in Fig. 12 of the drawings, whereby the nosing 42 is withdrawn from the socket 33, and the parts can be drawn out or extended. When extended in this manner, the scratch-gage may be moved into any other position upon said member or element and secured in its adjusted position by means of the binding or set screw previously mentioned.

To produce a slight binding or holding relation between the two rule members or elements 12 and 13 when they are drawn out and to overcome any loose fit, which might render the device useless and inoperative, a very thin and slightly-bowed spring-plate 56 may be secured upon one of the undercut marginal edges of the reduced part of the member or element 12, substantially in the manner illustrated in Fig. 7 of the drawings, the bowed part of said spring being in frictional binding relation or engagement with the inner surface of one of the downwardly-

projecting portions which provide the channel 38 of the element or member 13, as will be clearly understood from an inspection of said Fig. 7.

From the foregoing description of the present invention it will be clearly evident that a very simple and easily-manipulated tool has been produced and one which may be used for various purposes.

The adjustable feature of the two-rule elements or members 12 and 13 also has this advantage that the tool can be shortened to at least one-half its length for use on small work or when it is to be stored away in the tool-chest, so as to take up but very little room.

I claim—

1. A tool of the character specified comprising a member or stock provided with a semicircular slot, and a pivotal post, a straight-edge pivoted upon said post, said straight-edge having a portion movably arranged upon said stock, said portion being provided with a longitudinally-extending channel and an elongated opening, a block slidably arranged in said channel, said block having a downwardly-extending stud provided with a screw-threaded portion and a nut thereon, an upwardly-extending and screw-threaded post on said block, and a tightening-nut, all of said parts being arranged for operatively connecting said stock and the straight-edge and securing said straight-edge in any one of its adjusted positions against movement, substantially as and for the purposes set forth.

2. A tool of the character specified comprising a member or stock provided with a semicircular slot, and receiving portions 11, a pivotal post on said stock, a straight-edge pivoted upon said post, said straight-edge having a portion movably arranged upon said stock, said portion being provided with a longitudinally-extending channel and an elongated opening, a block slidably arranged in said channel, a downwardly-extending stud on said block, said stud having a squared portion movably arranged in the semicircular slot of the stock and adapted to be moved into any one of the receiving portions 11, a screw-threaded portion connected with the square portion of said stud, and a nut thereon, an upwardly-extending and screw-threaded post on said block, and a tightening-nut, all of said parts being arranged for operatively connecting said stock and the straight-edge and securing said straight-edge in any one of its adjusted positions against movement, substantially as and for the purposes set forth.

3. A tool of the character specified comprising a member or stock provided with a semicircular slot, and a pivotal post, a straight-edge consisting of a pair of slidably-connected rule elements, means for limiting

the movements of said elements, one of said elements being pivoted upon said post and having a portion movably arranged upon said stock, said portion being provided with a longitudinally-extending channel and an elongated opening, a block slidably arranged in said channel, said block having a downwardly-extending stud provided with a screw-threaded portion and a nut thereon, an upwardly-extending and screw-threaded post on said block, and a tightening-nut, all of said parts being arranged for operatively connecting said stock and the straight-edge and securing said straight-edge in any one of its adjusted positions against movement, substantially as and for the purposes set forth.

4. A tool of the character specified comprising a member or stock provided with a semicircular slot, and receiving portions 11, a pivotal post on said stock, a straight-edge consisting of a pair of slidably-connected rule elements, means for limiting the movements of the said elements, one of said elements being pivoted upon said post and having a portion movably arranged upon said stock, said portion being provided with a longitudinally-extending channel and an elongated opening, a block slidably arranged in said channel, said stud having a squared portion movably arranged in the semicircular slot of the stock and adapted to be moved into any one of the receiving portions 11, a screw-threaded portion connected with the square portion of said stud, and a nut thereon, an upwardly-extending and screw-threaded post on said block, and a tightening-nut, all of said parts being arranged for operatively connecting said stock and the straight-edge and securing said straight-edge in any one of its adjusted positions against movement, substantially as and for the purposes set forth.

5. A tool of the character specified comprising a member or stock, a straight-edge pivotally connected with said stock, means for securing said straight-edge in any one of its adjusted positions with relation to said stock, a centrally-disposed raised portion on said straight-edge, said raised portion being formed with under cut marginal edges, a scratch-gage dovetailed over said raised portion and slidably arranged thereon, and a scratch device movably connected with said gage, substantially as and for the purposes set forth.

6. A tool of the character specified comprising a member or stock, a straight-edge pivotally connected with said stock, means for securing said straight-edge in any one of its adjusted positions with relation to said stock, a centrally-disposed raised portion on said straight-edge, said raised portion being formed with under cut marginal edges, a scratch-gage dovetailed over said raised

portion and slidably arranged thereon, said gage being provided with a screw-threaded hole, a screw-threaded shank in said hole, a finger-piece on said shank, and a scratch-point upon the lower end of said shank, substantially as and for the purposes set forth.

7. A tool of the character specified comprising a member or stock, a straight-edge consisting of a pair of slidably-connected and normally locked rule elements, one of said elements being pivotally connected with said stock, and a scratch-gage slidably arranged upon said normally locked elements, and means adapted to be actuated by said scratch-gage for releasing said normally locked elements, substantially as and for the purposes set forth.

8. A tool of the character specified comprising a member or stock, a straight-edge consisting of a pair of slidably-connected and normally locked rule elements, one of said elements being pivotally connected with said stock, each element having a centrally-disposed raised portion provided with undercut marginal edges; a dovetailed scratch-gage slidably arranged upon the raised portions of said normally locked elements, means adapted to be actuated by said scratch-gage for releasing said normally locked elements, and a scratch device movably connected with said gage, substantially as and for the purposes set forth.

9. A tool of the character specified comprising a member or stock, a straight-edge consisting of a pair of slidably-connected and normally locked rule elements, one of said elements being pivotally connected with said stock, each element having a centrally-disposed raised portion provided with undercut marginal edges, a dovetailed scratch-gage slidably arranged upon the raised portions of said normally locked elements, means adapted to be actuated by said scratch-gage for releasing said normally locked elements, said gage being provided with a screw-threaded hole, a screw-threaded shank in said hole, a finger-piece on said shank, and a scratch-point upon the lower end of said shank, substantially as and for the purposes set forth.

10. A tool of the character specified comprising a member or stock, a straight-edge consisting of a pair of slidably-connected rule elements, one of said elements being pivotally connected with said stock, and having a receiving depression 33, the other element being provided with a slot 39, and a locking-lever in said slot, said locking-lever being provided with a nosing normally in locked engagement with said receiving depression 33, substantially as and for the purposes set forth.

11. A tool of the character specified comprising a member or stock, a straight-edge consisting of a pair of slidably-connected rule elements, one of said elements being pivot-

ally connected with said stock, and having a receiving depression 33, the other element being provided with a slot 39, and a locking-lever in said slot, said locking-lever being provided with a nosing normally in locked engagement with said receiving depression 33, and said lever having a portion extending above the slot in said element, and a scratch-gage slidably arranged upon said rule elements adapted to be brought in engagement with said upwardly-extending portion of said lever to withdraw said nosing from said depression 33, substantially as and for the purposes set forth.

12. A tool of the character specified comprising a member or stock, a straight-edge consisting of a pair of slidably-connected rule elements, one of said elements being pivotally connected with said stock, and having a receiving depression 33, the other element being provided with a slot 39, and a locking-lever in said slot, said locking-lever being provided with a nosing normally in locked engagement with said receiving depression 33, and said lever having a portion extending above the slot in said element, each element having a centrally-disposed raised portion provided with undercut marginal edges, a dovetailed scratch-gage slidably arranged upon the raised portions of said elements, said scratch-gage being adapted to be brought in engagement with said upwardly-extending portion of said lever to withdraw said nosing from said depression 33, and a scratch device movably connected with said gage, substantially as and for the purposes set forth.

13. A tool of the character specified comprising a member or stock, a straight-edge consisting of a pair of slidably-connected rule elements, one of said elements being pivotally connected with said stock, and having a receiving depression 33, the other element being provided with a slot 39, and a locking-lever in said slot, said locking-lever being provided with a nosing normally in locked engagement with said receiving depression 33, and said lever having a portion extending above the slot in said element, each element having a centrally-disposed raised portion provided with undercut marginal edges, a dovetailed scratch-gage slidably arranged upon the raised portions of said elements, said scratch-gage being adapted to be brought in engagement with said upwardly-extending portion of said lever to withdraw said nosing from said depression 33, said gage being provided with a screw-threaded hole, a screw-threaded shank in said hole, a finger-piece on said shank, and a scratch-point upon the lower end of said shank, substantially as and for the purposes set forth.

14. The herein-described tool comprising a member or stock, a straight-edge consisting of a pair of slidably-connected rule elements, one of said elements being pivotally con-

nected with said stock, said element having a centrally-disposed raised portion 26 provided with undercut marginal edges, said element being made also with a reduced part provided with a centrally-disposed raised portion 29 formed with undercut marginal edges, an upwardly-extending projection on said element providing a stop, said other element being provided with a longitudinally-extending depression dovetailing with said raised portion 29, and formed also with a longitudinally-extending groove into which said stop projection projects to limit the sliding movements of said elements, said other element being provided also with a centrally-disposed and upwardly-extending portion 34 having undercut marginal edges, said first-mentioned element being provided with a receiving depression 33, and said second-mentioned element being provided with a slot 39, a locking-lever in said slot, said lever being provided with a nosing normally in locked engagement with said depression 33, and said lever having a portion extending above the slot in said element, and a scratch-gage slidably mounted upon the raised portions 26 and 34 of said two-rule elements, said scratch-gage being adapted to be brought in engagement with said upwardly-extending portion of said lever to withdraw said nosing from said depression 33, substantially as and for the purposes set forth.

15. The herein-described tool comprising a member or stock, a straight-edge consisting of a pair of slidably-connected rule elements, one of said elements being pivotally connected with said stock, said element having a centrally-disposed raised portion 26 provided with undercut marginal edges, said element being made also with a reduced part provided with a centrally-disposed raised portion 29 formed with undercut marginal edges, an upwardly-extending projection on said element providing a stop, said other element being provided with a longitudinally-extending depression dovetailing with said raised portion 29, and formed also with a longitudinally-extending groove into which said stop projection projects to limit the sliding movements of said elements, said other element being provided also with a centrally-disposed and upwardly-extending portion 34 having undercut marginal edges, said first-mentioned element being provided with a receiving depression 33, and said second-mentioned element being provided with a slot 39, a locking-lever in said slot, said lever being provided with a nosing normally in locked engagement with said depression 33, and said lever having a portion extending above the slot in said element, and a scratch-gage slidably mounted upon the raised portions 26 and 34 of said two-rule elements, said scratch-gage being adapted to be

brought in engagement with said upwardly-extending portion of said lever to withdraw said nosing from said depression 33, and a scratch device movably connected with said gage, substantially as and for the purposes set forth.

16. The herein-described tool comprising a member or stock, a straight-edge consisting of a pair of slidably-connected rule elements, one of said elements being pivotally connected with said stock, said element having a centrally-disposed raised portion 26 provided with undercut marginal edges, said element being made also with a reduced part provided with a centrally-disposed raised portion 29 formed with undercut marginal edges, an upwardly-extending projection on said element providing a stop, said other element being provided with a longitudinally-extending depression dovetailing with said raised portion 29, and formed also with a longitudinally-extending groove into which said stop projection projects to limit the sliding movements of said elements, said other element being provided also with a centrally-disposed and upwardly-extending portion 34 having undercut marginal edges, said first-mentioned

element being provided with a receiving depression 33, and said second-mentioned element being provided with a slot 39, a locking-lever in said slot, said lever being provided with a nosing normally in locked engagement with said depression 33, and said lever having a portion extending above the slot in said element, and a scratch-gage slidably mounted upon the raised portions 26 and 34 of said two-rule elements, said scratch-gage being adapted to be brought in engagement with said upwardly-extending portion of said lever to withdraw said nosing from said depression 33, said gage being provided with a screw-threaded hole, a screw-threaded shank in said hole, a finger-piece on said shank, and a scratch-point upon the lower end of said shank, substantially as and for the purposes set forth.

In testimony that I claim the invention set forth above I have hereunto set my hand this 15th day of December, 1906.

PETER NOVAK.

Witnesses:

FREDK. C. FRAENTZEL,
ANNA H. ALTER.