

No. 725,621.

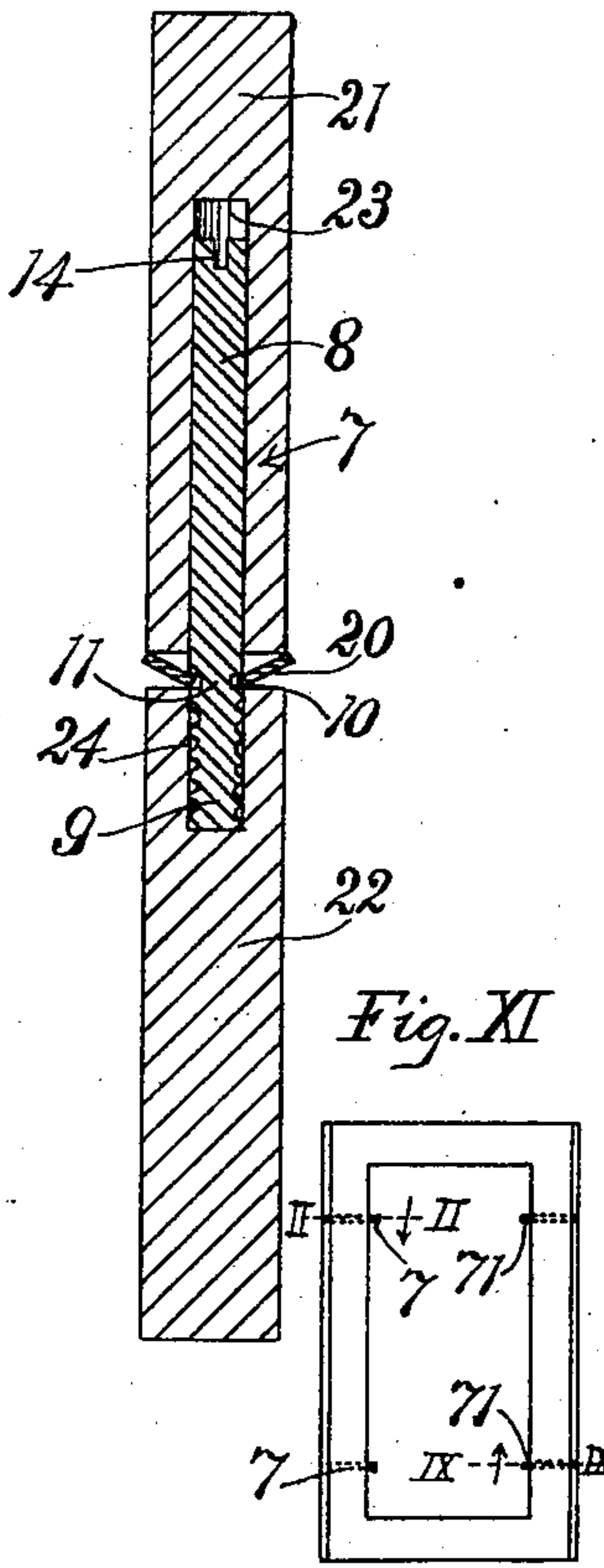
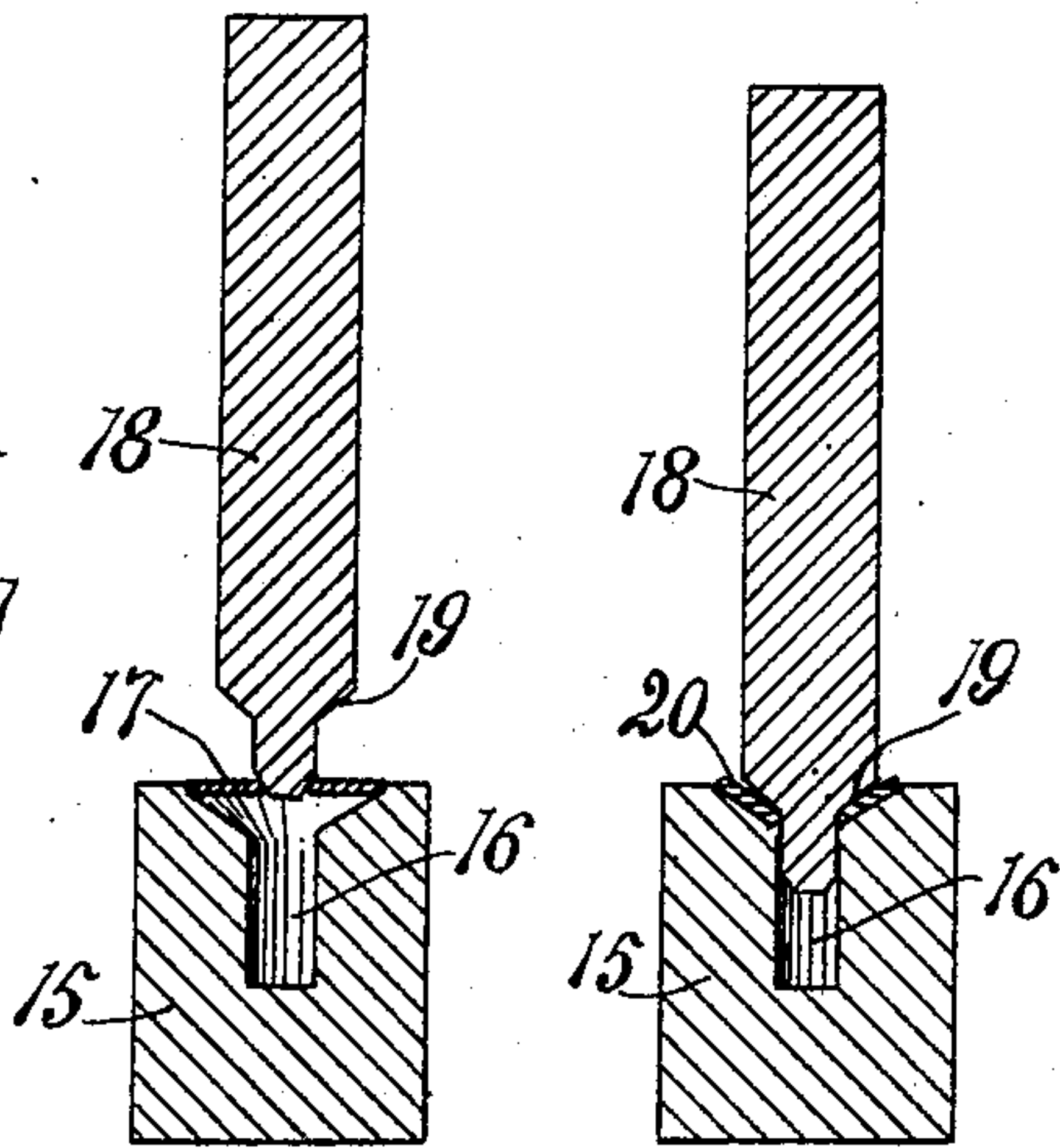
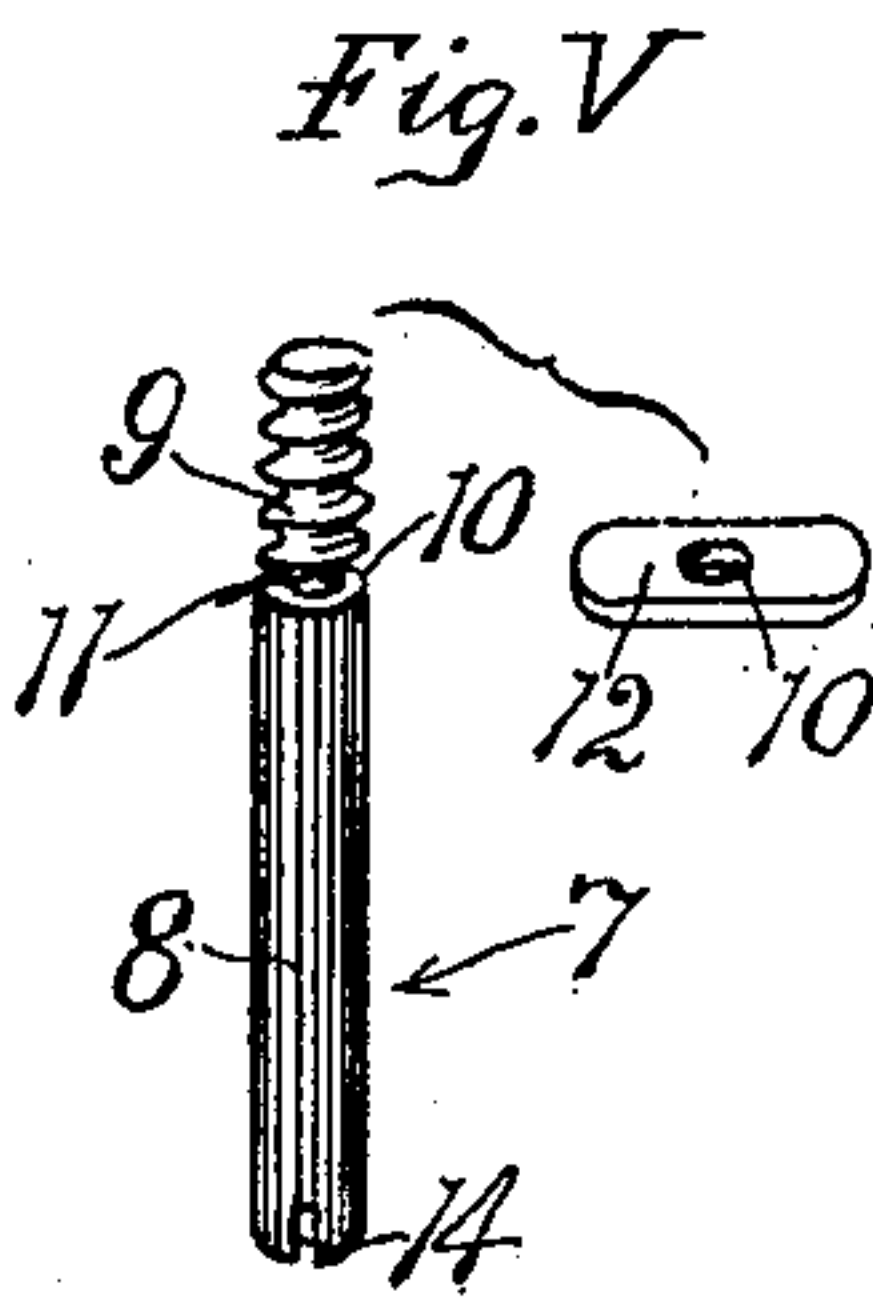
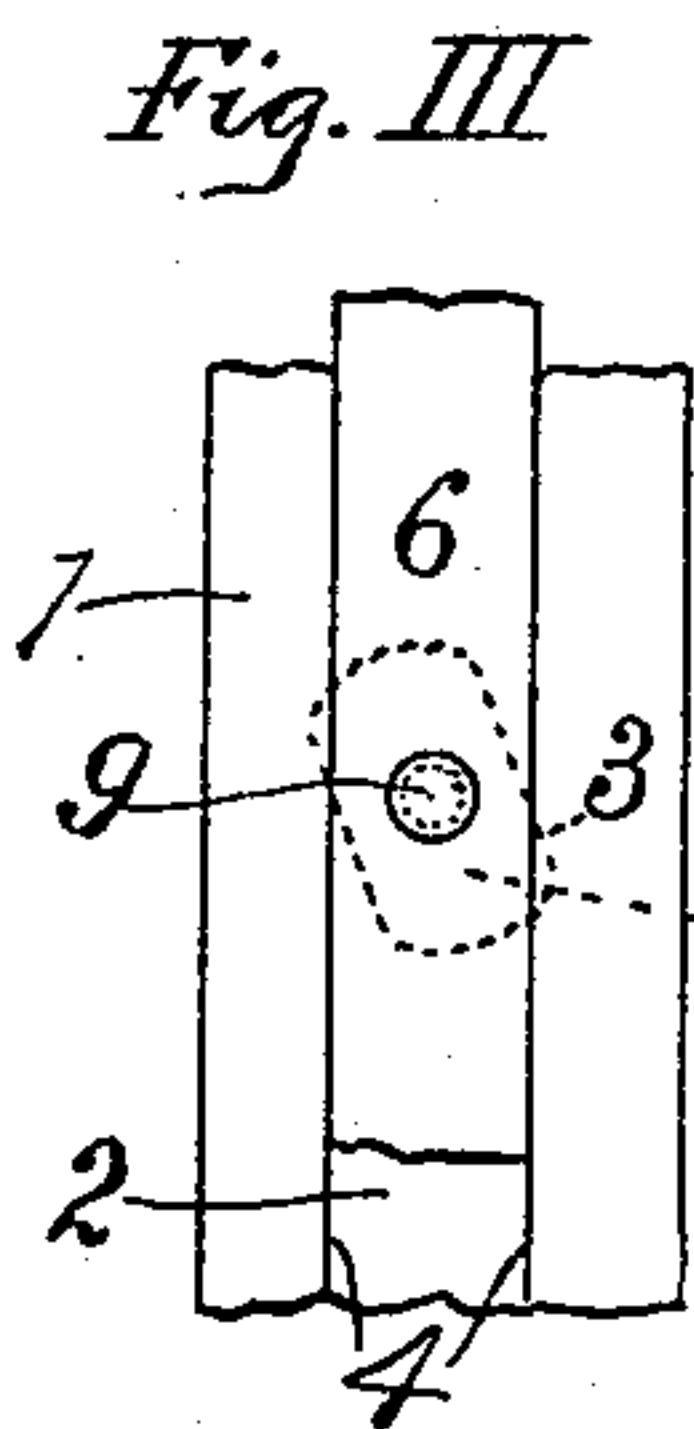
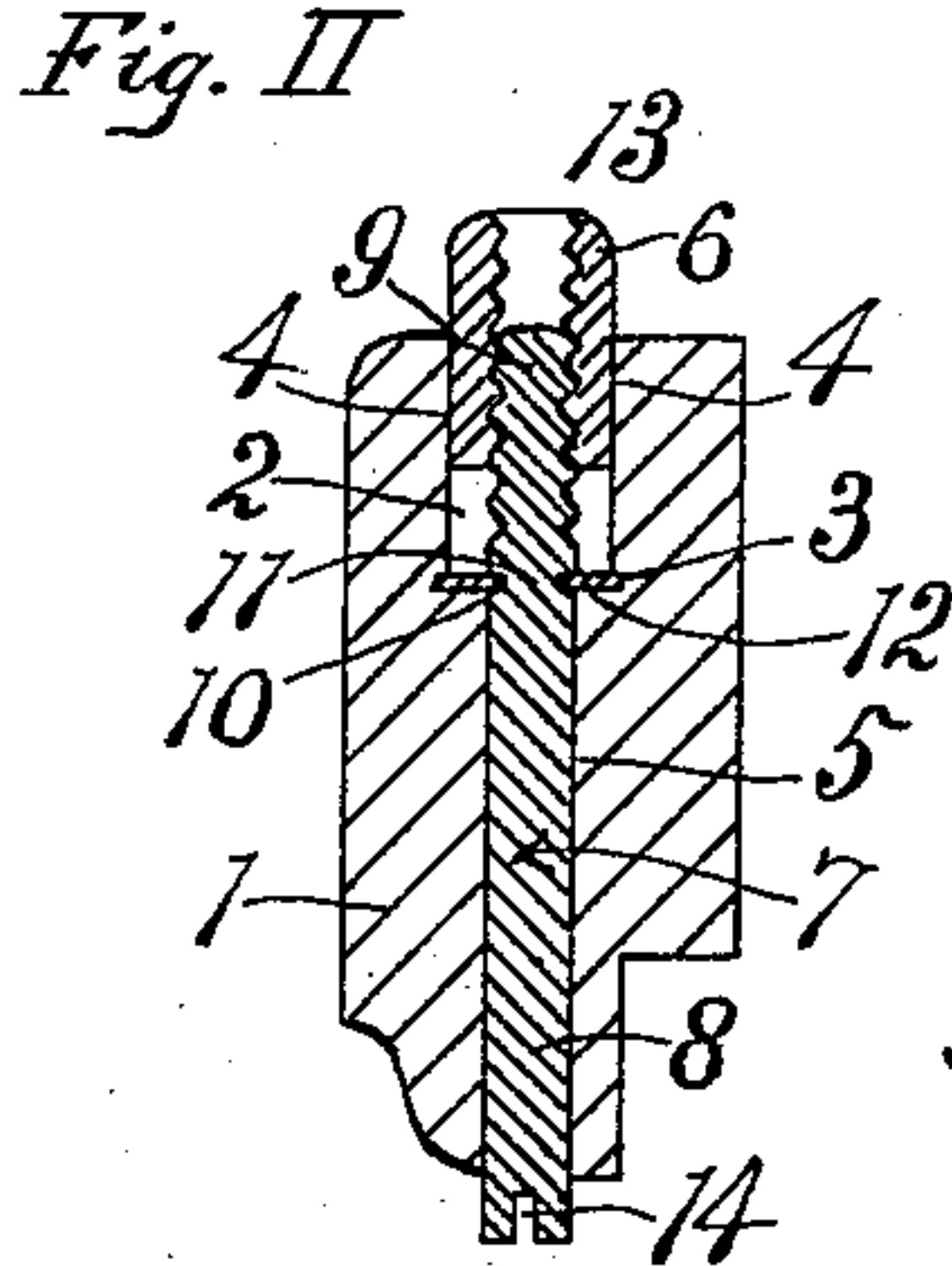
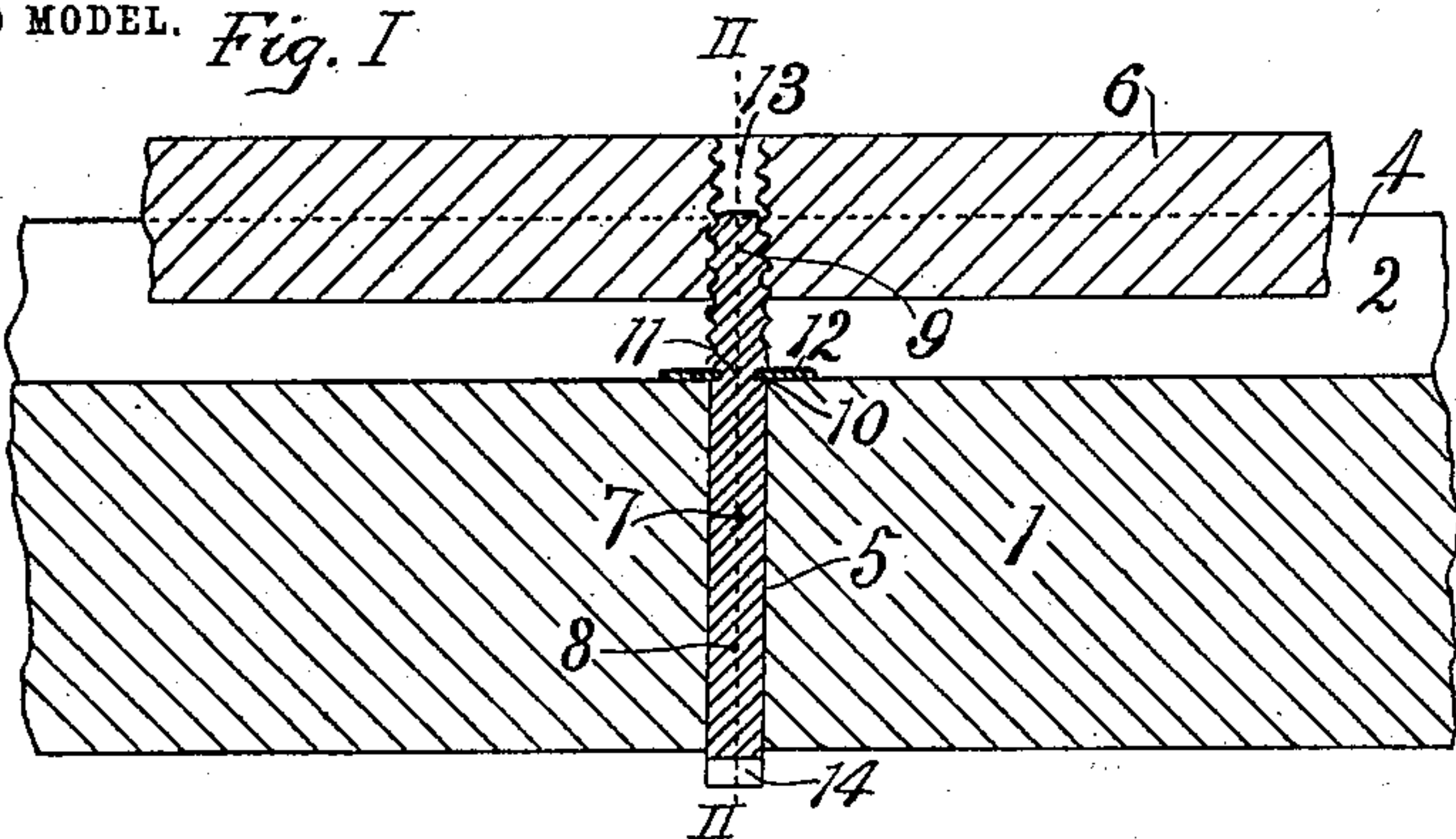
PATENTED APR. 14, 1903.

E. HIPOLITO.

ADJUSTABLE TONGUE AND GROOVE MEMBER FOR WINDOW OR SCREEN
SASHES OR THE LIKE.

APPLICATION FILED JUNE 20, 1901. RENEWED MAR. 23, 1903.

NO MODEL.



Witnesses

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UNITED STATES PATENT OFFICE.

ESPIRIDION HIPOLITO, OF LOS ANGELES, CALIFORNIA.

ADJUSTABLE TONGUE-AND-GROOVE MEMBER FOR WINDOW OR SCREEN SASHES OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 725,621, dated April 14, 1903.

Application filed June 20, 1901. Renewed March 23, 1903. Serial No. 149,204. (No model.)

To all whom it may concern:

Be it known that I, ESPIRIDION HIPOLITO, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Adjustable Tongue-and-Groove Members for Window or Screen Sashes or the Like, of which the following is a specification.

10 The object of this invention is to provide a very cheap and simple tongue-and-groove device in which the tongue is positively adjustable within the groove.

15 My invention comprises an adjuster for the tongue comprising a pin having a shank and a screw and an annular groove or seat and a catch caught in said annular groove or seat to engage with the grooved member in which the tongue is applied to prevent the tongue
20 from withdrawing from the groove.

This invention is adapted for application in various ways. The catch may be applied within the groove, and thus hold the pin from any endwise movement in either direction, or
25 it may be applied outside the grooved member to allow endwise movement of the pin in only one direction and the pin be yieldingly held in place by a spring operating against the tongue into which the pin is screwed. In
30 the drawings I have shown both these arrangements, for the reason that in a window-sash or a screen-sash one form will be applied at one edge of the sash and the other form will be applied at the other edge of the sash,
35 thus furnishing the sash with two adjustable tongues, one of which is outwardly spring-pressed.

40 The accompanying drawings illustrate my invention and the means for putting the same into effect.

Figure I is a longitudinal mid-section of a grooved member with tongue adjustably mounted therein in accordance with my invention. Parts are broken away to contract
45 the view. Fig. II is a cross-section of the same on line II II, Figs. I and XI, looking down in Fig. XI. Fig. III is a fragmental plan of a tongue-and-groove member embodying this invention in the form shown in Fig.
50 I. Fig. IV is a detached view of the tongue-adjusting mechanism shown in the preceding view. Fig. V is a view of the tongue-op-

erating screw and the catch or stop for said screw detached from each other. Fig. VI is an axial section showing the perforated stop
55 in place between dies for swaging the perforated stop preparatory to applying the same upon the pin. Fig. VII is a like view showing the top swaged ready to be applied to the adjuster-pin. Fig. VIII is an axial section
60 of the dies for swaging the stop to fit it into the annular seat of the tongue-adjusting pin to complete the adjuster. The pin and stop are shown ready for the operation of the dies. Fig. IX is a section on line IX IX, Fig. XI,
65 looking up and showing the invention applied for holding the tongue spring-pressed against the sliding strip or frame on which the screen slides. Fig. X is an axial section of a handle for turning the pin to extend and
70 retract the tongue. Fig. XI is a view of a sash for a window or window-screen embodying my invention.

1 indicates a grooved member furnished with a groove 2, having a lateral extension 3
75 beneath one or both walls 4 of the groove 2 and also furnished with a perforation 5, opening into the bottom of the groove 2.

6 indicates a tongue in the groove.

7 indicates a pin in the perforation 5, comprising a body 8 and a screw 9, screwed into
80 the tongue 6, and an annular seat 10 between the body 8 and screw 9 at the bottom of the groove.

11 indicates a cylindrical neck of the pin
85 and around which the annular seat extends. 12 indicates a catch-piece caught in said annular seat 10 and extending into said lateral extensions 3 of the groove 2. Preferably the stop or catch 12 is oblong, being of the same
90 or less width than the width of the groove and of greater length than the width of the groove, so that the body 8 of the adjuster or tongue-adjusting pin 7 can be passed through the
95 groove and inserted through the perforation which opens into the bottom of the groove and be brought into position with the catch or stop 12 at the bottom of the groove, and said catch can thereupon be turned in its
100 annular seat 10 in the stem at the end of the screw, and thus be brought into the undercut or lateral extension 3 in the wall of the groove. When the catch has thus been turned to catch in the recess 3, the adjuster-stem is thereby

fixed against endwise movement. Then the tongue 6, which is furnished with a hole 13, into which the screw-threaded portion 9 of the adjuster-pin is to be screwed, will be brought
 5 into position for insertion into the groove and the adjuster-pin 7 will be turned to screw the screw into the tongue. As the screw is screwed into the tongue the tongue will be thereby drawn into the groove, in which
 10 it is firmly and adjustably held by the screw. By turning the stem in one and the other direction the tongue can be adjusted toward and from the bottom of the groove. By this means a window or screen sash can be ex-
 15 panded or contracted laterally with great ease, rapidity, and accuracy.

The outer end of the pin-body 8 is preferably formed to receive an instrument by which it can be turned. It is preferably furnished
 20 with a slot 14 to receive an instrument to adjust the tongue in the groove. The body and the neck of the adjuster-pin are preferably circular in cross-section, so that the pin fits tightly within and rotates in its bearings and
 25 the neck fits snugly in the hole in the catch-plate.

15 indicates a die furnished with a hole 16, conically dished at its upper end to receive and hold the catch-plate for swaging the same,
 30 so that the catch-plate can be brought into position to be entered into the annular groove or seat 10.

17 indicates the catch-plate blank before the first swaging.

35 18 indicates a punch or die having a diameter larger than the diameter of the hole through the catch. This punch or die is furnished with a tapering shoulder 19 to shape the swaged blank for forming the catch. 20
 40 indicates said blank after the first swaging.

21 and 22 indicate two hollow dies having flat ends. The holes in said dies are adapted to substantially fit, respectively, upon the body and upon the screw of the stem. The
 45 hole 23 in one of these dies is sufficiently deep to seat the body 8 of the stem. The hole 24 in the other die is deep enough to seat the screw 9 at the other end of the stem.

In practice to form the adjuster the ad-
 50 juster-pin will first be formed with the body portion 8 and the screw portion 9, the annular seat 10, and cylindrical neck 11. The perforated stop or catch 12 is then placed upon the die 15 and is swaged with the punch 19
 55 to give the catch a frusto-conical form, with the hole 18 through said catch at the apex of the frustum. Then the stop is placed upon one of the hollow dies 22, and the screw is inserted through the hole 24 in the catch to
 60 bring the margins of the annular seat 10 into the plane of the margins of the hole 24. Then the other hollow die 21 is placed over the stem and brought against the catch. Force is then applied to bring the two hollow dies toward
 65 each other to flatten the stop, thus to cause it to enter the annular seat, thus to fasten the stop in said seat. The margins of the

perforation of the catch-plate are concealed within the annular plate, and the pin is thus firmly held against endwise movement 7c
 through the plate. Then the adjuster is ready to be placed in the grooved member, as shown in Figs. I and II. In placing the ad-
 juster in position the stop will be arranged to extend longitudinally of the groove until 75
 fully seated, when a screw-driver or other instrument will be inserted into the groove and the stop thereby turned to project into the lateral extensions of the groove under the walls 4 of the groove. In practice the edges 80
 of the stop-plate may be forced into the wall, thus forming the extensions 3 of the groove at the time the adjuster is first applied. The stop is thus prevented from withdrawal. The tongue is then brought into position to 85
 receive the screw-threaded portion of the adjuster-pin, and the pin is then ready to screw the screw-threaded portion into the tongue, thus to draw the tongue into the groove, whereupon the sash or other grooved body 90
 with adjustable tongue is ready for use.

In Fig. IX the side of the sash-frame opposite that shown in Figs. I, II, and III is illustrated in cross-section. In this form the pin 71 is furnished outside of the grooved mem- 95
 ber 91 with the annular seat 82, in which a plate 83, corresponding to the plate 12, is swaged in the same manner as that hereinbefore described. 84 indicates a spring in the grooved member to force outward the 100
 tongue 61. In this form the tongue is held outpressed by the spring 84 and indrawn by the screw 85 of the pin against the pressure of the spring 84, which spring maintains a constant pressure on the tongue 61 for sup- 105
 porting the screen-frame by friction against the window-casing.

In Fig. X a handle for turning the pins 7 and 71 is shown. This handle consists in a tubular body *v*, a handle *w*, set into the same 110
 and fastened by a pin *x*, and a thin cross-bar *y*, which is fastened in holes *z* in said tubular body. In practice the handle will be applied over a slotted end of the pin 7 or 71 and turned to bring the cross-bar *y* into the 115
 slot 14. Then the handle will be turned to screw the screw into or out of the tongue 6 or 61, as the case may be. By these means the tongues can be forced outward to produce any required pressure between the tongues 120
 and the window-frame to allow the sash to stand at any position required. In order to remove the sash from the window-frame, the sash will be pressed toward the side in which the spring-pressed stops are mounted, thus 125
 to force the spring-pressed stops back into the sash and allow the other stop to be withdrawn from the side of the window-frame. (Not shown.)

It is to be understood that the window-frame 130
 is preferably grooved to receive the edges of the tongues 6.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. The adjusting device substantially set forth comprising a pin furnished with a body to be journaled in a member and provided at one end with a screw and at the other end with means for turning the pin, and between said ends an annular channel and a neck formed within said channel; and a stop-plate in said channel furnished with a perforation of less diameter than the body of the pin, the margins of said perforation being inclosed in said channel.

2. The combination of a member furnished with a groove and a perforation opening into the bottom of the groove; a perforated tongue in the groove; a pin in the perforation and having a body journaled in the grooved member and a screw screwed into the tongue and an annular seat between the body and the screw of the pin; and a catch caught in said annular seat and engaging with the grooved member.

3. The combination of a grooved member furnished with a perforation opening into the bottom of the groove; a tongue in the groove; a pin journaled in the perforation and furnished with an annular seat and with a screw screwed into the tongue; a spring to force the tongue away from the bottom of the groove;

and a catch-piece caught in the annular seat and engaging the grooved member to resist the action of said spring.

4. The tongue-adjuster comprising a pin furnished with a cylindrical body; a screw-threaded portion at one end and a slot at the other end, and between the slotted end and the screw-threaded end an annular seat and a neck surrounded thereby; and a catch-piece furnished with a perforation of less diameter than the screw and cylindrical body, surrounding the neck and the margins of the perforation concealed within the annular seat.

5. The combination of a member having an undercut groove; a tongue in the groove; a pin journaled in the groove and furnished with an annular channel and with a screw screwed into the tongue; and a catch-piece in the channel and caught in the undercut of the groove.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, at Los Angeles, California, this 14th day of June, 1901.

E. HIPOLITO.

Witnesses:

JAMES R. TOWNSEND,
H. H. KUCKHOFF.