

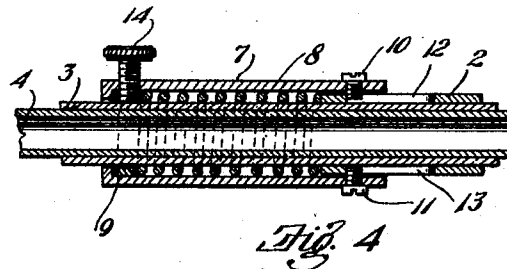
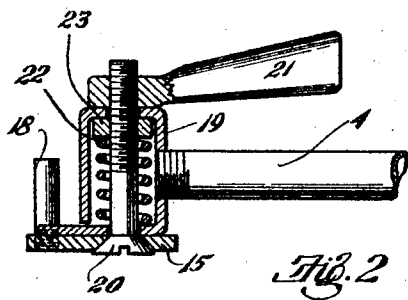
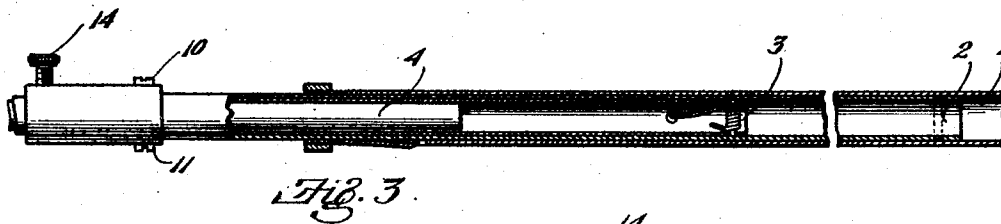
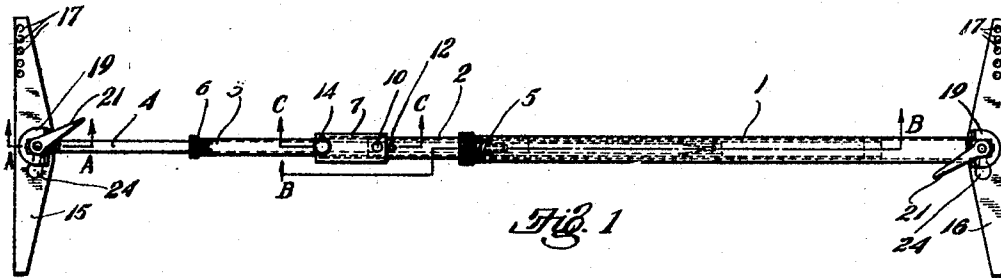
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H. C. CATTELL

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ADJUSTABLE JOINER

Filed March 5, 1928



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UNITED STATES PATENT OFFICE

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ADJUSTABLE JOINER

Application filed March 5, 1928. Serial No. 259,333.

This invention relates to an improvement in a tool or implement for use by carpenters or other mechanics, known as an adjustable joiner.

5 The purpose of this invention is to provide an extension tool particularly useful in taking lengths and bevels to assist in fitting a closure into an opening. A further object and purpose of the invention is to produce
10 a tool which can be readily fitted into an opening and then withdrawn, and provided with means so that it can be retracted and removed from the opening and when released will immediately assume the form in which it
15 held when in the opening.

The accompanying drawings show an embodiment of my invention and in these drawings—

20 Figure 1 is an elevation of the complete tool.

Figure 2 is a section taken on line A—A of Fig. 1.

Figure 3 is an enlarged section taken on line B—B of Fig. 1.

25 Figure 4 is an enlarged section of the adjustable spring device shown in Fig. 1.

In the construction of my device I provide preferably four telescoping numbers 1, 2, 3, and 4. These members are preferably of
30 round tubular form but may be square or any other convenient form. Part 1 is largest in diameter and part 4 is smallest. I have in mind, however, I may use a greater or smaller number of telescoping parts depending upon the length of the device required.
35 The outer ends of parts 1 and 3 are fitted with knurled sleeves 5 and 6 which are threaded and operate on bevel threads to compress the end of the tube which is slotted, securing it in position on the part sliding
40 within it. These knurled sleeves are for the purpose of approximately setting the tool in position.

45 Between parts 2 and 3 I provide sleeve 7 which contains coil spring 8 which travels on the smaller tube 3 and rests against bushing 9 in one end of the sleeve and against the end of tube 2 at the other. This is arranged so that the sleeve can move freely
50 endwise allowing the spring to be com-

pressed. The sleeve 7 is provided with two screws 10 and 11 threaded through the sleeve and projecting into slots 12 and 13 in the larger tube which slots are long enough to allow for proper spring action and determine the distance which the joiner can be shortened to withdraw the tool from an opening. The bushing end of the sleeve has a small thumb-wheel set screw 14 threaded through the sleeve 7 and clamps bushing 9
60 securing the sleeve to smaller tube 3. It will thus be seen that after the tool is set to a definite length, the operator by means of this spring joint can contract the length of the tool for the purpose of easy removal and the
65 spring will act to return the tool to the predetermined length when released.

At the outer ends of parts 1 and 4 I provide metal tongues or straight edges 15 and 16, which may be made in varying lengths
70 and shapes to suit the class of work required. The ones which I have shown are especially adapted for cutting stair risers and are fitted up in pairs and provided with series of holes 17 into which short stud 18 may be threaded
75 at right angles to the plane, making it possible to rest the tool by these studs 18 on the rough stair horse then hook the same over the top jointed edge of the riser ready to mark the length for cutting. I provide the
80 ends of parts 1 and 4 with pressed metal brackets 19 through which beveled headed bolt 20 is passed, being secured by thumb lever nut 21. This bevel head is countersunk into the aforementioned metal tongue
85 15. Compression spring 22 is located within the metal bracket 19 and serves to prevent the screw 20 from dropping out in case the plumb lever nut 21 is removed from the
90 screw.

Spring 22 abuts against nut 23 which is threaded onto screw 20. By means of this arrangement the tongue may be quickly removed by partly loosening the thumb lever nut 21 allowing the head of the screw to come
95 out of the countersunk in the tongue, then shifting the body of the bolt through a short slot 24 to a hole large enough to release the bolt head.

It will thus been seen that the metal tongues 100

15 and 16 can be adjusted in parallel or otherwise for openings for shelving, stair-risers, and treads, casements, sash, counters, doors, porch columns, railings, panels, siding, and many other uses. It is especially adapted to building box stairs, winding stairs, etc.

Having fully described my invention, what I claim as new and desire to cover by Letters Patent is:

1. A tool of the class described comprising an extension member composed of telescoping sections, a sleeve adjustably secured to one section, a bushing within the sleeve, a slot in the next larger adjoining section, a projection on the sleeve adapted to extend within the slot, a spring within the said sleeve interposed between the bushing and the end of the said adjoining section, a bracket secured to each end of said extension member and a tongue pivotally mounted on said bracket.

2. A tool of the class described comprising an extension member composed of telescoping sections, a sleeve adjustably secured to one section, a bushing within the sleeve, a slot in the next larger adjoining section, a projection on the sleeve adapted to extend within the slot, a spring within the said sleeve interposed between the bushing and the end of the said adjoining section, a bracket secured to one end of said extension member, a bolt passing through the said bracket, a tongue pivotally mounted on said bolt, a lock nut threaded on said bolt, a spring interposed between the bracket and the said locknut and a binding nut threaded on said bolt adapted to bind the tongue against movement with respect to the extension member.

In testimony whereof, I have signed this specification.

HERMAN C. CATTELL.