J. S. DUFFY.

COMBINED CUTTING TOOL AND GAGE.

APPLICATION FILED JULY 8, 1909.

972,757. Patented Oct. 11, 1910.

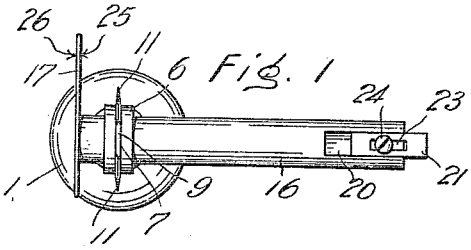

Fig. 1

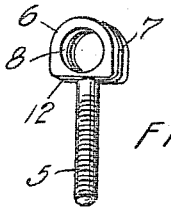

Fig. 4

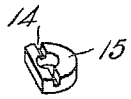

Fig. 5

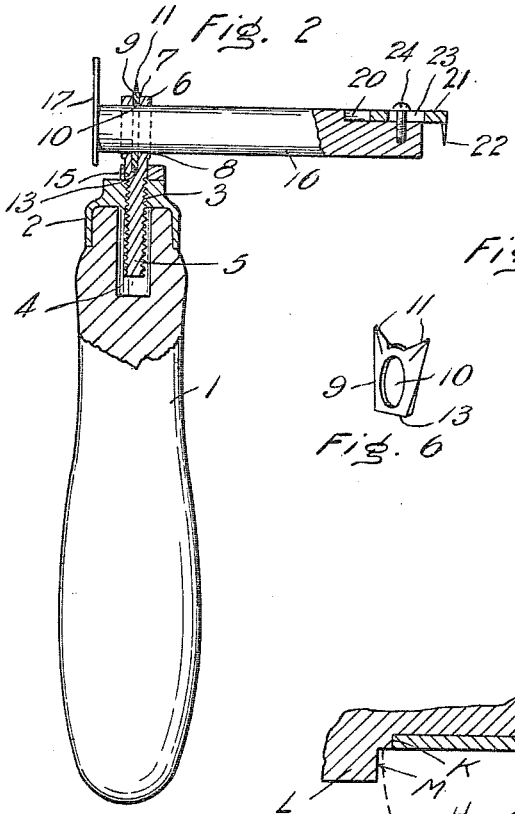

Fig. 2

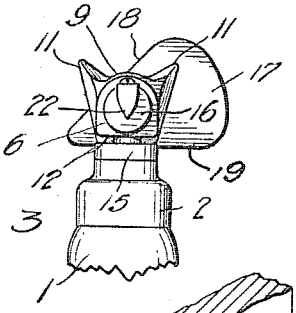

Fig. 3

Fig. 6

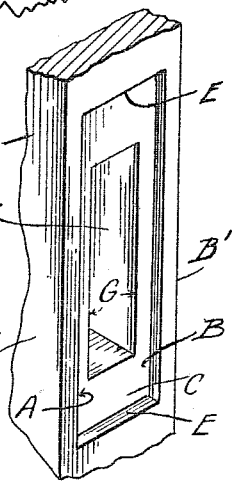

Fig. 8

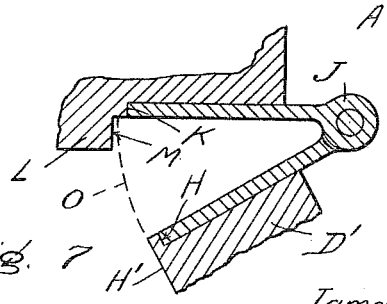

Fig. 7

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COMBINED CUTTING-TOOL AND GAGE.

972,757. Specification of Letters Patent. Patented Oct. 11, 1910.

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To all whom it may concern:

Be it known that I, JAMES S. DUFFY, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in a Combined Cutting-Tool and Gage, of which the following is a specification.

The object of this invention is the provision of a carpenter's tool which is to be employed in fitting hinges and locks to doors.

The invention consists in a cutting blade which is carried by an operating handle and coöperates with an adjustable gage whereby the cutting operations of the implement are accomplished coincidently with the gaging of the work.

The invention further consists in the novel construction, adaptation and combination of parts, as will be hereinafter described and claimed.

In the accompanying drawings, where corresponding parts are denoted by similar reference characters throughout the several views, Figure 1 is a top plan view of an implement embodying the invention. Fig. 2 is a view partly in front elevation and partly in section of the same. Fig. 3 is an elevation taken from the right hand side of Fig. 2. Figs. 4, 5 and 6 are detached perspective views of parts of the implement. Fig. 7 is a fragmentary horizontal section of a door and the jamb therefor which are connected by a hinge. Fig. 8 is a perspective view of a portion of a door.

The reference numeral 1 designates a handle suitable for being grasped in the hand of the operator, and at its outer end is provided with a ferrule 2 having a screw-threaded axial bore 3. Extending through the ferrule and into a cavity 4 of the handle is a stem 5 which is threaded for adjustable engagement within said ferrule. Exteriorly of said ferrule the stem is provided with a head 6 which is bifurcated by a transversely arranged slot 7 passing through the plane of the stem axis and extended for a distance into the stem. Rectangularly to the plane of said slot the head is bored, as at 8. Fitted within said slot is a steel plate, or cutter-blade, 9 having an aperture 10 of approximately the diameter of the bore 8 in the head. This blade is equipped at its outer side with two obliquely arranged extensions 11 which constitute the cutting knives of the tool. The depth of the blade from the center of its aperture 10 to its lower edge 13 is somewhat greater than the distance between the center of the bore of the head and the underside 12 thereof. The lower edge 13 of the blade in operation is seated in a groove 14 provided in a collar 15 which is loosely fitted about the stem 5 and positioned between said head and the ferrule.

16 represents a rod extended through the bore 8 of the head and also through the blade aperture 10. Upon one end of the rod is a gage-plate 17 having two of its sides 18 and 19 advantageously disposed in angular relation to each other. A way 20 is provided in the periphery of the rod at the end opposite to the gage-plate for the reception of a block 21 which extends beyond the rod end and terminated in a downwardly directed sharpened scratch-point 22. For adjustably positioning the latter, a longitudinal slot 23 is provided in the block to accommodate movement with respect to a set screw 24 which extends through the slot into a screw-threaded hole 25 in the rod.

To adjust the position of the gage-plate 17 to predetermined distances from the plane of the cutting-blade the bar 16 is held in one hand of the operator while with the other hand the handle 1 is rotated to unscrew the handle-ferrule from the stem 5; whereupon the rod 16 may be moved to one side or the other, as required. After the gage-plate is suitably set by manipulating the rod, the handle is properly turned to cause the inter-engaging screw threads of the ferrule and stem to draw the stem inwardly with respect to the handle and by reason of the lower edge 13 of the blade 9 being stopped against the bottom of the washer groove 14 the head 6 is drawn inwardly with the stem 5 to effect the clamping of the rod 16 between the peripheral surfaces of the head-bore 8 and the blade aperture 10 from diametrically opposite sides of the rod.

The operation of the invention is as follows: To employ the device for cutting the sides A or B of a lock recess, as C in Fig. 8, the tool is held by the handle in the right hand of the operator and with the inner face 25 of the gage-plate 17 bearing against the adjacent surfaces A′ or B′ of the door D and then moving the tool toward or away from the operator one or the other of the blade-knives 11 will make the desired cut, if sufficient pressure is put upon the handle

to cause the necessary penetration of the operative knife. The ends E of the recess would be made with an ordinary chisel which would also be used for the removal of the block of wood bounded by the cuts at the ends E and the aforesaid sides A and B. The mortise F extending from the bottom of the recess for the reception of the lock-casing may have its sides G scribed by the scratch-marker 22 when operated with the adjacent end of the bar 16 contacting with the door surfaces A′ or B′ as a guide for its being cut with a chisel.

For making the cut which affords the longitudinal wall H of the recess in the door D′, Fig. 7, to receive a hinge J, the tool is used in the manner above explained for the lock recess, that is to say, with the face 25 of the gage-plate bearing against the adjacent face H′ of the door. For cutting the corresponding wall K of the recess in the door-jamb L the outer face 26 of the gage-plate is held against the rabbet-wall M while the tool is manipulated to make the cut. The thickness of the gage-plate affords sufficient offset of the jamb-recess from the rabbet-wall M to give ample clearance for the door to obviate any interference between the door and jamb in opening and closing of the door, as will be understood from the broken lines O in the view which indicates, diagrammatically, the track of the outer corner of the door. When the grain of the wood in the work has a tendency to lead the cutting-blade in a traverse direction while operating with a drawing cut, or vice versa, the tool may be used by being moved away from the operator, or vice versa; hence the provision of two knives for the cutting blade instead of one which, however, may be used.

The invention furnishes an exceedingly convenient tool to manipulate and not only saves considerable time over devices hitherto in use in the performance of its functions, but likewise insures greater accuracy.

Having described my invention, what I claim, is:

1. In a device of the character described, a cutter-blade, a gage-rod arranged rectangularly to said cutter-blade, a gage-plate on said rod in parallel with said cutter-blade, a handle having a screw-threaded socket, and means engageable in said socket for securing the cutter-blade and said rod to the handle.

2. In a device of the character described, a cutter-blade formed with two obliquely arranged cutting-knives, a gage-rod arranged rectangularly to said cutter-blade, a gage-plate on said rod in parallel with said cutter-blade, a handle, and means for securing the cutter-blade and said rod with the handle.

3. In a device of the character described, the combination of a head provided with a screw-threaded stem and formed with a slot extending through the head and into said stem, a handle having a screw-threaded socket at one end adapted to receive said stem, a cutter-blade seated within the slot of said head, said head and cutter-blade being each provided with an aperture, a rod extending through said apertures of the head and blade, and a gage-plate secured to one end of the rod.

4. In a device of the character described, the combination of a head provided with a screw-threaded stem and formed with a slot extending through the head and into said stem, a handle having a screw-threaded socket at one end adapted to receive said stem, a collar loose upon said stem intermediate the head and handle, a cutter-blade seated within the slot of said head and having one of its edges bear against said collar, said head and cutter-blade being each provided with an aperture, a rod extending through said apertures of the head and blade, and a gage-plate secured to one end of the rod.

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