

Nov. 20, 1923.

1,475,104

J. H. YORK

COMBINATION TOOL

Filed Nov. 22, 1920

2 Sheets-Sheet 1

Fig. 1.

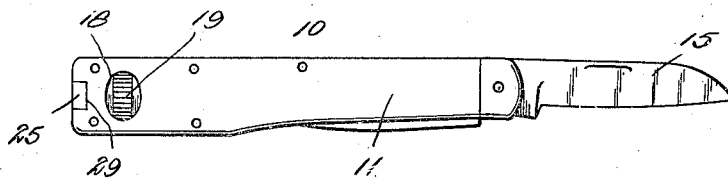


Fig. 2.

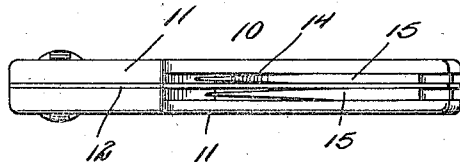


Fig. 3.

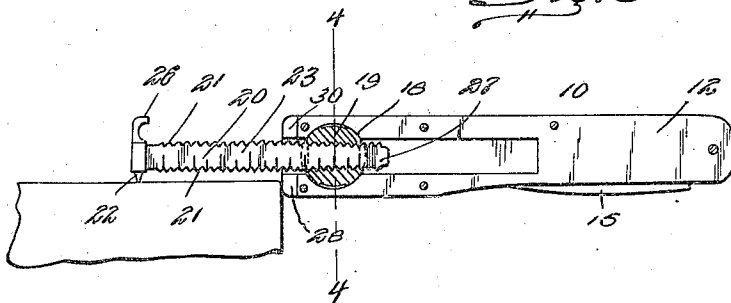
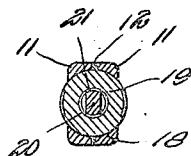


Fig. 4.



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2 Sheets-Sheet 2

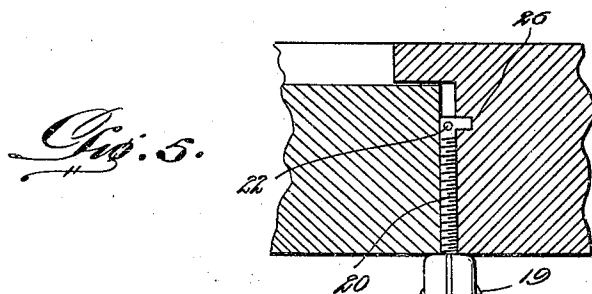


Fig. 6.

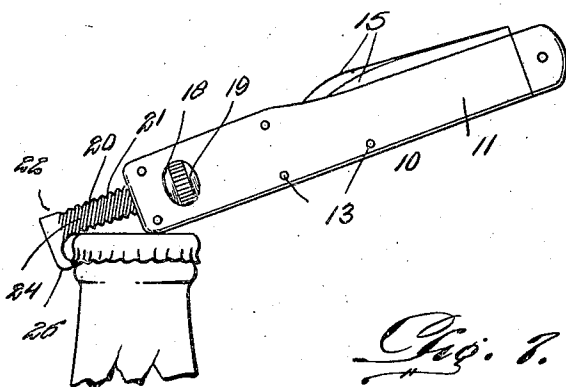


Fig. 7.

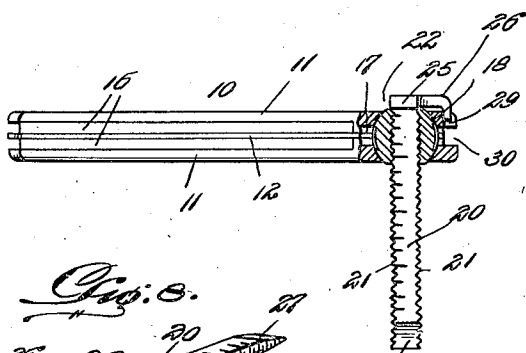


Fig. 8.

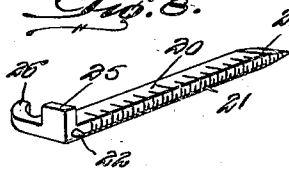


Fig. 10.

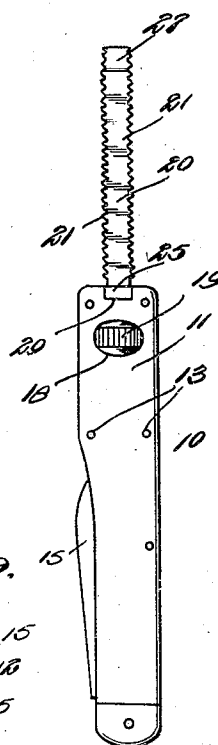
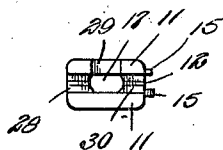


Fig. 9.



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UNITED STATES PATENT OFFICE.

JAMES H. YORK, OF ETOWAH, TENNESSEE.

COMBINATION TOOL.

Application filed November 22, 1920. Serial No. 425,871.

To all whom it may concern:

Be it known that I, JAMES H. YORK, a citizen of the United States, residing at Etowah, in the county of McMinn and State of Tennessee, have invented new and useful Improvements in Combination Tools, of which the following is a specification.

This invention relates to combination tools, and has for its object the provision of a knife having its handle carrying a screw-operated extensible member graduated for measuring purposes and provided at its free end with a small point extending from one side so that the device will be adapted for use as a gage for marking the lay-out of certain work.

An important object is the provision of a device of this character in which the extensible member is also formed on one side with a hook-like projection adapted to be forced into a door jamb by the free edge of a door so that when the screw-actuated means of the extensible member is subsequently operated to draw the handle portion of the knife against the door, the device will operate as a door-securing means.

Another object is the provision of a device of this character in which the extensible member is formed on another side with a hook adapted to serve as an opener for bottles having crown caps, the extensible member being further more roughened on one side to constitute a file.

Still another object is the provision of a device of this character in which the nut member for operating the extensible member is spherical and is rotatable within a corresponding recess in the knife handle, opposite sides of the nut member projecting through openings in the handle so that when the extensible member is removed the nut member may be turned through an arc of ninety degrees and the extensible member be reinserted so as to extend at right angles to the handle in which position it may be readily used as a door-securing member for doors having unusually large cracks at the jamb and in which position the device is also capable of use as a screw-driver, the normally inner end of the extensible member having a screw-driver blade formed thereon.

An additional object is the provision of a device of this character which will be simple and inexpensive in construction,

which will be readily convertible from one tool into another, which will be highly efficient and durable in use, and a general improvement in the art.

With the above and other objects and advantages in view, the invention consists in the details of construction to be hereinafter more fully described and claimed and illustrated in the accompanying drawings in which—

Figure 1 is a side elevation showing my device in normal position ready for use as a knife,

Fig. 2 is an elevation at right angles to Fig. 1, showing the knife blades in closed position,

Fig. 3 is a longitudinal sectional view showing the extensible member partly extended and illustrating the use of the device as a marking gage or a measuring rule,

Fig. 4 is a cross-sectional view through the nut member taken on the line 4—4 of Fig. 3,

Fig. 5 is a detail sectional view through a door jamb and the adjacent edge of a door showing my device in use as a door-securing device,

Fig. 6 is a side elevation showing the device in use as a bottle opener,

Fig. 7 is a longitudinal sectional view showing the nut member turned with its bore at right angles to the longitudinal axis of the handle and showing the extensible member at right angles to the handle,

Fig. 8 is a detail perspective view of the extensible member,

Fig. 9 is an end view of the handle,

Fig. 10 is a side elevation showing the extensible member reversed for use as a screw-driver.

Referring more particularly to the drawings, the numeral 10 designates broadly the handle which may be of ordinary construction including side plates 11 having the usual metal liner 12 disposed therebetween and secured together at their end and edge portions by rivets 13. These side plates 11 are recessed, as at 14, for the accommodation of the usual blades 15, any desired number of which may be employed, and these blades have shouldered butt ends engaged by the usual leaf-spring members 16 for holding the blades in open position when desired. To this extent my device is like any knife of this type.

In carrying out my invention I provide the handle 10 with a longitudinally extending passage 17 and near the outer end of this is provided a substantially spherical recess 18 within which is rotatably mounted a nut member 19 of spherical shape and having a knurled or milled surface. The numeral 20 designates an extensible bar which is slidable within the passage 17 and which has threaded edges 21 engaging threads within the nut member 19. By rotating the nut member it will be seen that the extensible member may be moved in or out with respect to the handle. At one rounded edge the free end of the extension is formed with a point 22 adapted to scratch and mark a surface so that the device may be used as a gage, as shown in Fig. 3. Two opposite sides of the bar 20 are flattened, and one flattened side 23 is inscribed with suitable graduations designed to be used in cooperation with the marking point and also designed to be used simply for measuring purposes similar to any ruler. The opposite flattened side 24 of the extension is roughened or transversely ribbed to constitute a file for manicuring or other purposes.

The device is capable of use as door-securing means, and when its use is desired in this capacity the nut member 19 is turned to move the bar to extended position. The flattened side 23 of the extension has formed upon its end a hook-like projection 25 designed to be inserted between the free edge of a door and its jamb and adapted to be forced into penetrating engagement with the jamb when the door is closed. With the device in such position subsequent to the closing of the door the nut member 19 is turned to bring the end of the handle in engagement with the door, as shown in Fig. 5, whereupon the device will operate efficiently to prevent the door from being opened from the opposite side.

Also formed upon the free end of the extension opposite the point 22 is a hook 26 designed for engagement with the edge of a crown bottle cap so that the device may be used for opening bottles. This detail is shown in Fig. 6.

The innermost end of the extension bar is formed with a screw-driver blade 27, so that if desired the extension bar may be removed entirely from the handle and be used as a screw-driver (see Fig. 8).

In some instances it may be found preferable to turn the nut member 19 until the extension bar 20 may be removed entirely from association with the handle. The nut member may then be turned to bring its bore into co-axial relation with the openings in the sides of the handle, after which the extension bar is reengaged within the nut 19 so that it will be held in a right-angular position with respect to the handle. In

this position the device may be readily used as a screw-driver. The device may also be used for securing doors, this use being illustrated in Figure 5. When the employment of the device in this capacity is desired, the bar 20 is unscrewed as far, or nearly as far as possible from the handle, and is then disposed against a door jamb with the lug 25 disposed against the jamb. The door is then closed and as it engages the bar 20 it will force the lug 25 into penetrating engagement with the jamb. The handle 11 is then screwed onto the bar 20 until its end engages the door and the jamb.

The end of the handle provided with the extension bar is recessed or partly cut away, as indicated at 28, 29, and 30, for the reception of the point 22, hook 25, and hook 26 when the extension bar is fully retracted so that the end of the knife handle will be flush and smooth.

When desired, the extensible member may be removed from the handle and reversed with the end opposite the screw-driver blade engaged within the recesses 28, 29 and 30 so that the device will then be an efficient screw-driver (see Fig. 10).

From the foregoing description and a study of the drawings it will be apparent that I have thus provided a combination tool which is adapted for use for a wide variety of purposes and which may be readily converted from one tool to another and which will perform all its functions in a very efficient, thorough, and reliable manner.

While I have shown and described the preferred embodiment of my invention, it is of course to be understood that I reserve the right to make such changes in the form, construction, and arrangement of parts as will not depart from the spirit of the invention or the scope of the subjoined claims.

Having thus described my invention, I claim:—

1. A device of the character described comprising a handle formed in one end with a longitudinal slot intersected by a spherical recess opening out through the sides of the handle, a spherical nut member rotatably positioned within said spherical recess, an extension bar slidable within said longitudinal recess and threaded through said nut member, and a marking point formed on one side of said extension bar at the free end thereof, one side of the extension being graduated.

2. A device of the character described comprising a handle formed in one end with a longitudinal slot intersected by a spherical recess opening out through the sides of the handle, said end of the handle being formed with a notch, a spherical nut member rotatably mounted within said spherical recess, an extension bar slidable within said longi-

tudinal slot and threaded through said nut member, and a marking member carried by the free end of said extension bar, said extension bar extending normally co-axially of the handle and said nut member being rotatable whereby to receive the extension bar in a position at right angles to the handle, the free end of the extension bar being formed with a hook shaped extension engageable within said notch whereby to hold the extension bar in said right angular position. 10

In testimony whereof I affix my signature.
JAMES H. YORK.