(No Model.)

J. P. DALY.

COMBINED CAN OPENER, SCREW DRIVER, TACK PULLER, AND HAMMER.

No. 574,197. Patented Dec. 29, 1896.

Fig. 1.

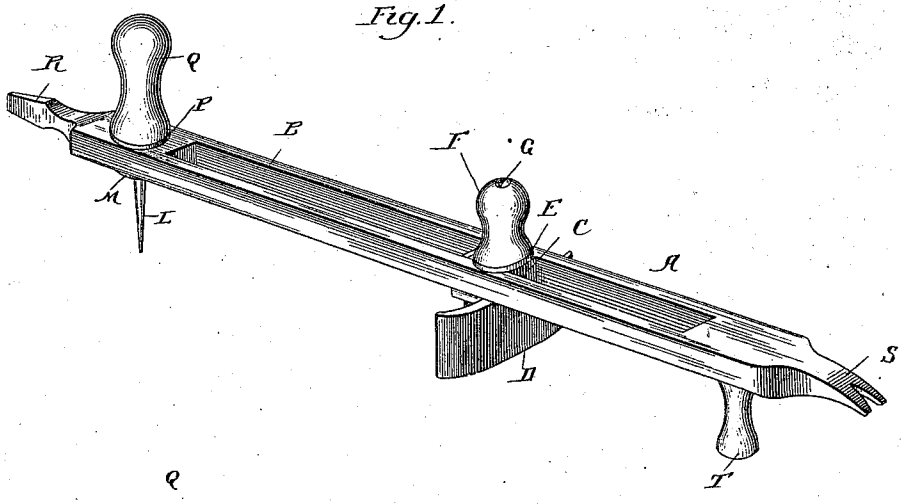


Fig. 2.

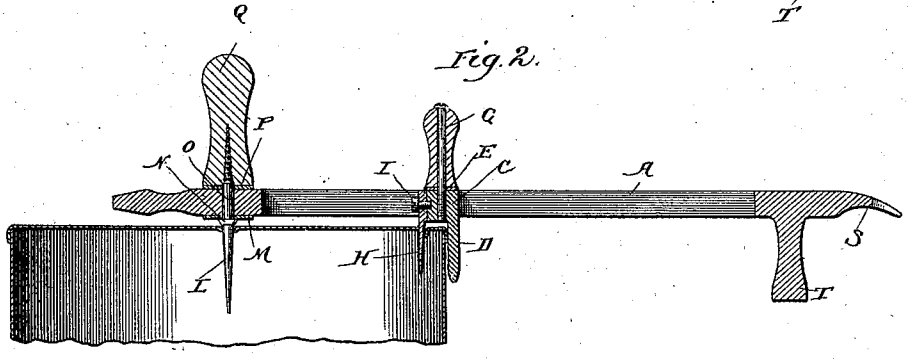


Fig. 3.

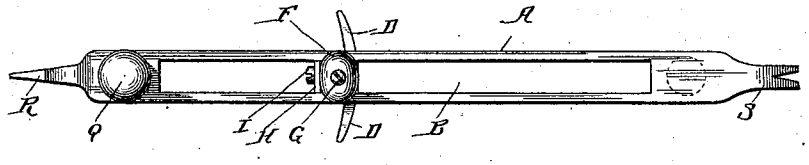
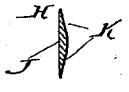


Fig. 4.



Witnesses:
H. B. Hallock.
C. C. Williamson

Inventor.
John P. Daly.
By Geo. H. Holgate
Attorney.

UNITED STATES PATENT OFFICE.

JOHN P. DALY, OF SAVANNAH, GEORGIA.

COMBINED CAN-OPENER, SCREW-DRIVER, TACK-PULLER, AND HAMMER.

SPECIFICATION forming part of Letters Patent No. 574,197, dated December 29, 1896.

Application filed June 6, 1896. Serial No. 594,467. (No model.)

To all whom it may concern:

Be it known that I, JOHN P. DALY, a citizen of the United States, residing at Savannah, in the county of Chatham and State of Georgia, have invented certain new and useful Improvements in a Combined Can-Opener, Screw-Driver, Tack-Puller, and Hammer, of which the following is a specification.

This invention relates to a new and useful improvement in a combined can-opener, screw-driver, tack-puller, and hammer, and has for its object to so construct such a device as to render it simple and effective of operation and cheap of manufacture. Heretofore devices of this class, when used for opening cans, have consisted of single handles operating a cutting-blade by an up-and-down motion of the arm and wrist, the opener resting on the rim of the can and making irregular rough cuts or clips of the can-top, the cutter being liable to slip out of place and injure the hands, the top when thus cut having a rough and unsightly appearance. Another form of can-opener of this class consists of two rectangular slotted arms crossing each other, with a movable point and set-screw on one of the slots to center the can and a stationary cutter on the outer end of one of the arms, with a finger-grip to work the cutter. Openers of this last-named class are defective in several important principles, namely, they are slow in centering the can-top, liable to slip from the central position, require extra exertion to make the cut, are also liable to bruise or strain the fingers in bringing about the operation, cannot expeditiously and easily cut cans of varying sizes, and the absence of the lever-handle makes the act of cutting comparatively slow, necessitating the maximum of exertion to do the work, and, further, this construction allows only the use of the thumb or forefinger in its operation, thereby requiring extra strain upon the fingers and risk of injuring the same. In addition to this it is only a can-opener, having embodied therewith no other feature of practical utility.

The improvement in my invention consists of a single straight slotted lever-arm, at the end of which is a firmly-fixed puncturing-point, whereby the can is easily centered, and when this point is placed into position it will remain firm and steady, keeping the lever-arm plumb and true in position, and, in conjunction with the rim-check and finger-guard of the movable sliding cutter-head, keeps the cutting-knife firmly in place; a cutter-head moving in the slot of the lever-arm, with a flange one ach side, upon which the arms of the lever-arm rests, keeping the cutter-head steady and true, and a rim-check and finger-guard on a part of the cutter-head to quickly adjust the cutter-knife to any sized can and protect the fingers; a cutting-knife affixed to the forward or inner end of the cutter-head having a distinctive and peculiar lance-like shape, that is, the forward face of knife flat and back side a double bevel, by means of which a smooth cut of top is made on the inner side or edge of the can-top and the edge of the portion of the top which is left upon the can turned down and under, round and smooth, by means of which an easy, rapid, round, smooth, and neat cutting of can-top from two to fourteen inches in diameter is made at a minimum of physical effort and in the shortest time, at the same time affording to the operator the greatest measure of protection or immunity from injury to the hands while using, and by which the obvious defects of can-openers as heretofore constructed are overcome, and, furthermore, providing a complete combination implement capable of being used as a screw-driver, tack-puller, or hammer in such manner that each of the elements of the combination will be as effective in operation as though no other element were combined therewith.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a perspective of my improvement, illustrating the arrangement of the several elements thereof in combination; Fig. 2, a central longitudinal section of the device,

illustrating the method of applying the same to a can to cut the top therefrom; Fig. 3, a plan view of the device when not in use; and Fig. 4, a detailed cross-section of the cutting-blade, showing the relative arrangement of the flat side and beveled sides for a clean cutting of the portion of the top which is to be removed and the turning under of the edge of the portion which is not to be removed.

Referring to the drawings in detail, A represents the arm, which when in use serves as a lever of the second class, and this arm is slotted longitudinally at B, which slot serves as a guide for the cutter-head C. The head C has formed therewith or secured thereto a curved shield D, which serves as a rim-check and finger-guard, and also acts to prevent the displacement of the head upward within the slot, and the head is prevented from being displaced downward within said slot by means of the washer E and operating-handle F, the latter being held in place by the threaded screw-rod G or in any other convenient manner. A blade H is secured by means of the screw I to the inner face of the cutter-head, so as to project downward parallel with the shield D, as clearly shown in Fig. 2, and this blade in cross-section is of the shape indicated in Fig. 4, having a flat face J and beveled back K, the latter being beveled in two directions. The object of this arrangement is to cause the face which lies next to the portion of the top of the can which is to be removed after being cut to leave the edge of said portion smooth, as though cut with a pair of shears; but the edge of that portion of the top which is not to be removed, but which forms a flange around the top of the can after the latter has been opened, will be turned downward and under after the manner of beading by the beveled rear walls of the cutting-blade. Near the forward end of the arm A is secured the centering-prong or puncture-point L, which is preferably of the general shape of a brad-awl, in order that it may be easily forced through the center of the can-top, after which it will act as a fulcrum for the arm A, the latter then serving as a lever of the second class, as before described, to cause the blade H to perform its function of cutting the central portion of the top from the can. An annular washer M serves as an abutment for the shoulder N, formed upon the prong, and the shank O of said prong is passed through a suitable hole formed in the arm, and this shank is secured in place against downward removal by a washer P and a retaining-handle Q. Thus to open a can by the use of my improvement it is only necessary to thrust the prong L through the center of the top, slide the cutter-head within the longitudinal slot until the shield D comes in contact with the periphery of the can, when by bearing upon the retaining-handle Q with sufficient force to prevent the prong from being withdrawn from the top and exerting sufficient pressure upon the outer end of the arm the cutting-blade will be forced through the top of the can, as clearly shown in Fig. 2. Now it is only necessary to hold the can against rotation and revolve the arm when the blade will cut away the center portion of the top and at the same time turn down the edge of that portion of the top which is not cut away. During this operation the shield will serve as a check to prevent the blade from drawing in, and the rear wall of the blade being beveled will prevent said blade from running out. The shield D also serves as a finger-guard to prevent injury to the hand of the operator during the process of opening the can.

Thus it will be seen that any-sized can may be opened the diameter of the top of which is not greater than the length of the slot B multiplied by two, since the opener works from the center of the can, and therefore deals with the radius of the top and not the diameter.

Formed upon the arm A is a screw-driver R and a tack or nail puller S, each of which is capable of being used in the same manner as ordinary articles of this description. Also formed upon the arm A is a hammer-head T, which may be of any design or size and adapted for the same purpose as the ordinary hammer.

From the foregoing description it will be seen that a very useful combination-tool is provided by my improvement, the principal feature of which is the can-opener, the latter being readily adapted to various sizes of cans within the capacity of the implements without loss of time or the requirement of skill upon the part of the operator, and which will so open a can as to leave an inturned edge with but little physical exertion upon the part of the operator.

The sizes and dimensions of the several parts of this device may be varied, and I do not wish to be understood as laying claim or limiting myself to any particular size or dimension, the only requirement being that each element will be in proper proportion to the remainder of the implements. If care be had in the opening of a can and a proper top be provided therefor, the can may be used the second time by soldering this top thereto after the can has been filled, and this makes my improvement of great importance to housekeepers and the like, in that the necessity of buying new cans for every canning season will be obviated.

Having thus fully described this invention, what is claimed as new and useful is—

1. In a combination-tool an arm having an elongated slot, a cutter-head adapted to slide in said slot, a curved shield secured to said cutter-head, a blade removably secured to said head and extending downwardly parallel to the shield, said blade having a flat face and a back beveled in two directions, a handle secured to said cutter-head on the opposite side to the shield, a prong extending through the arm near one end, a handle secured to the shank of said prong, a screw-driver projecting from one end of the arm, a tack-puller

projecting from the other end and a hammer-head formed with said arm as and for the purpose described.

2. In a combination-tool an arm having an elongated slot therein, a cutter-head adapted to slide in said slot, a curved shield secured to said cutter-head, to act as a finger-guard and prevent an upward displacement of the head, said head being prevented from a downward displacement by a washer, a handle secured to said head on the opposite side of the arm to the shield, a blade secured to the inner face of the cutter-head parallel with said shield, said blade having a flat face and a back beveled from the center line of the blade to the cutting edges, a prong secured near one end of the arm, said prong having a shoulder adapted to abut against the under side of said arm, the shank of said prong extending through the arm, a handle adapted to be attached to said shank, a screw-driver projecting from one end of the arm, a tack-puller projecting from the other and a hammer-head formed with said arm, as and for the purpose described.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

JOHN P. DALY.

Witnesses:
S. S. WILLIAMSON,
WARING RUSSELL.