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2,536,852

TOBACCO PIPE COMBINATION TOOL

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Fig. 1.

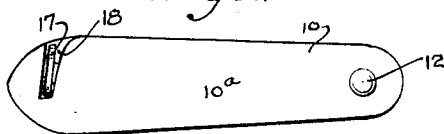


Fig. 2.

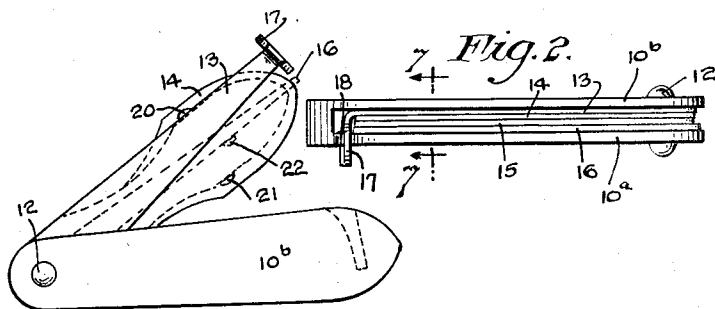


Fig. 3A

Fig. 3.

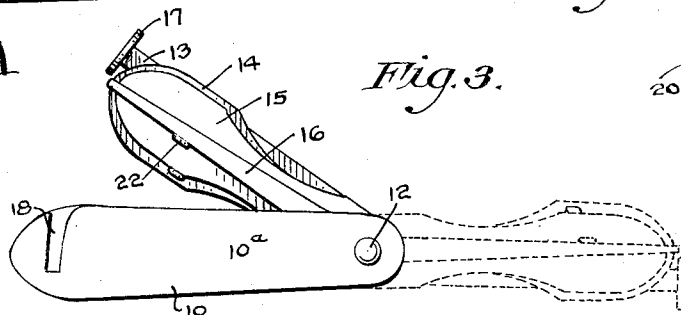


Fig. 5.

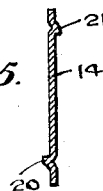


Fig. 4

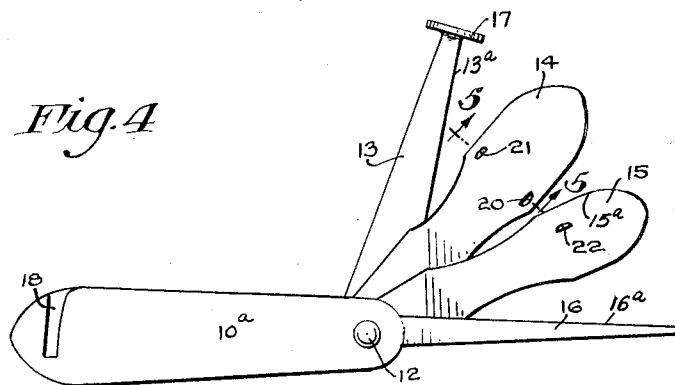
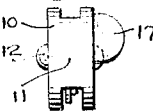
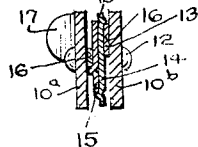
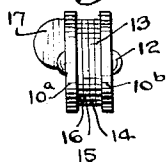


Fig. 6.

Fig. 7.

Fig. 8.



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TOBACCO PIPE COMBINATION TOOL

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2 Claims. (Cl. 131-243)

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This invention relates generally to an appliance for use by pipe smokers and more particularly to a combination tool, the several elements of which may be compactly folded and housed within a casing therefor to provide a unit which is adapted to be conveniently carried in the pocket. More specifically, the present invention comprises a tool having a handle simulating in appearance the handle of a pocket knife, said handle serving as the casing for a variety of implements, such as a set of reamers for cleaning the pipe bowl, a needle for cleaning the bore of the pipe stem and a combination pipe bowl scraper and tobacco tamper.

While in the combination tool of the present invention the several elements thereof are pivoted within a casing for selective use of any one element as desired, the tool is principally characterized by the fact that it is entirely devoid of springs or the like for retaining the elements in operative or inoperative position, the several elements being provided instead with interengaging means so arranged that upon swinging one element outwardly of its handle casing the other elements are commonly swung with it into position for selective use of any one of the several elements.

Essentially, the device of the present invention includes a plurality of tools which are generally in the form of flat blades having interengaging means of such character as to provide for a most compact assembly of the tools within their casing, said interengaging means, however, being designed so that they do not interfere with the fanning out of these tools relatively to each other for individual use thereof.

Other objects and advantages of the invention will appear more fully hereinafter, it being understood that the same consists in the combination, construction, location and relative arrangement of parts, all as described in detail hereinafter, as shown in the accompanying drawings and as finally pointed out in the appended claims.

In the accompanying drawings, which illustrate a preferred construction embodying the principles of the present invention:

Figure 1 is a side elevational view of the combination tool;

Figure 2 is a top edge view thereof;

Figure 3 is a side view similar to Figure 1 showing the tools shifted out of the handle in which they are normally housed when not in use;

Figure 3A is an opposite side view of the device as shown in Figure 3;

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Figure 4 is a view similar to Figure 3 showing the several tools in separated relation;

Figure 5 is a sectional view on a somewhat enlarged scale taken on the line 5-5 of Figure 4;

Figure 6 is an elevational view of the pivotal end of the device;

Figure 7 is a sectional view taken on the line 7-7 of Figure 2; and

Figure 8 is an elevational view of the closed end of the device.

Referring now to the drawings, it will be observed that in its preferred form as shown, the combination tool of the present invention includes a bifurcated handle 10 which may be formed of plastic, metal, bone, wood or any other suitable material, this handle being thus provided with a pair of parallel side parts 10^a and 10^b arranged to provide a space therebetween for accommodation of the several tool elements hereinafter referred to. These side parts are integrally connected together at one end of the handle by an intermediate part 11 and at the opposite end by a suitable pivot pin 12 upon which the several tool elements are commonly pivoted.

While the present invention is not limited to the use of the specific types of tools shown herein, and is not limited to the specific number of tools employed in the embodiment shown herein, such tools preferably comprise a tobacco tamper 13, a relatively broad pipe bowl scraper or borer 14, a relatively narrow pipe bowl scraper or borer 15, and a more or less slender needle 16 adapted for insertion into the pipe stem for loosening any accumulation of tobacco therein. All of these tools are of flat blade-like form and are adapted for flat-wise engagement with each other, as shown, the tamper 13 being provided at its free outer end with a laterally extending disc-like part 17 formed integral with the body of the tamper.

As most clearly appears in Figures 1, 3 and 4, one of the side walls of the handle 10 is provided adjacent an end thereof with a notch 18 which receives the disc portion 17 of the tamper when the tamper is moved into the handle or casing 10 about its supporting pivot pin 12, it being noted in this connection that all of the tool elements are pivoted upon said pin for movement into and out of the space provided between the side walls of the handle 10.

In the present invention, the several tools 13 to 16 inclusive are provided with interengaging means which are relatively so operative that upon withdrawal of one of the tools from within the handle all of the remaining tool elements are

also withdrawn therefrom commonly with the first tool element. Preferably, the tool element employed for effecting such conjoint removal of all of the tool elements from within the handle is the tamper 13, the disc-like part 17 of which projects laterally of the handle notch 18 sufficiently to permit it to be readily engaged by the thumb of the user of the device to swing the tamper outwardly of the handle about its pivot pin 12.

In order to effect the common shifting of the several tool elements from their handle-enclosed positions shown in Figures 1 and 2 into their outwardly extended positions shown in Figures 3 and 4, the element 14 is provided with a teat or projection 20 on the outer face thereof which is in flat-wise engagement with the body of the tamper 13, this projection being located adjacent one edge of said element for engagement by an edge 13^a of the tamper body when the latter is moved relatively to the element 14. This element 14 is also provided adjacent its opposite edge with a second teat or projection 21 presenting oppositely from the teat 20 for engagement with an edge 15^a of the element 15, while the latter is in turn also provided with a teat 22 presenting in the same direction as the teat 21 of the element 14, the said teat 22 of the element 15 being adapted to engage an edge 16^a of the needle 16. It will thus be apparent that upon swinging the tamper in one direction outwardly of the handle about the pivot pin, it engages the teat 20 of the element 14 to cause the latter to swing therewith about the pivot pin. The element 14 in turn engages the element 15 to effect corresponding shifting of the latter, whereupon said element 15 engages and shifts the needle 16. Thus, upon shifting of the tamper 13 in the said one direction, all of the several elements are commonly moved out of the handle recess into positions as shown in Figures 3 and 3A wherein they may be conveniently fanned out or separated, as shown in Figure 4, for selective use as desired of any one of the tool elements.

By means of the interengaging relationship of the several tool elements as just described, their flat-wise nesting within the handle recess is accomplished without any portions thereof projecting beyond either longitudinal edge of the handle, the housing of the several elements within said recess being readily effected by the simple expedient of shifting them into their closely assembled relation shown in Figures 3 and 3A and then pressing the assembly into the handle recess wherein they are retained by their frictional engagement with one another and with the inner surfaces of the side walls of the handle recess.

It will be understood, of course, that the present invention is susceptible of various changes and modifications which may be made from time to time without departing from the real spirit or general principles of the invention, and it is accordingly intended to claim the same broadly as well as specifically as indicated in the appended claims.

What is claimed as new and useful is:

1. A compound tool of the character described comprising an elongated bifurcated handle having a pair of side walls to provide a free space therebetween, a pivot pin extending transversely through both side walls adjacent the one end of the handle, and a plurality of tool elements pivoted on said pin and adapted to be swung into and out of said space in the handle, said tool elements being provided with interengaging means operative to effect common movement of all of said tool elements outwardly of the handle space upon movement of one of said tool elements about its pivot pin, all of said tool elements being in the form of substantially flat members adapted to be assembled in flatwise engagement with each other, said interengaging means comprising surface projections on certain of said elements and the peripheral side edges of adjoining other of said elements and one of said elements being provided at its outer extremity with a finger-engaging part extending laterally across the corresponding outer extremities of the other elements.

2. A combination tool of the character described comprising an elongated handle having a recess therein for receiving a plurality of flat blade-like tools disposed in flatwise engagement with each other, said tools being commonly pivoted at one end of the handle for movement into and out of said recess, each of said tools being engageable with an adjacent tool whereby upon movement of one of said tools outwardly of said recess, its next adjoining tool is engaged thereby and also moved outwardly of the recess, the interengaging means between the several tools being in the form of surface projections on certain of said tools, each of which projections is engageable with only one peripheral edge of the tool next adjoining the tool having one of said projections, said interengaging means being relatively so arranged as to permit each of the several tools to be shifted relatively to its next adjoining tool in one direction, and the outermost one of said tools being provided with a finger-engaging part at its outer free extremity to effect conjoint movement of the interengaged tools outwardly of said handle recess in an opposite direction.

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