

UNITED STATES PATENT OFFICE.

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MULTIPLE TOOL AND HANDLE THEREFOR.

SPECIFICATION forming part of Letters Patent No. 510,775, dated December 12, 1893.

Application filed April 10, 1893. Serial No. 469,728. (No model.)

To all whom it may concern:

Be it known that I, RUSS J. CHRISTY, residing at Fremont, in the county of Sandusky and State of Ohio, have invented certain new and useful Improvements in Multiple Tools and Handles Therefor, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a multiple tool for various purposes, which may be used as a pocket or desk tool.

The tool illustrated is intended for use as a screw-driver, paper-knife and eraser, and a toilet utensil, and a spatula.

Figure 1 is a plan of the tool closed, so as to go in the pocket. Fig. 2 is a plan of the tool with the blade in reverse position from Fig. 1, and projected from the handle. Fig. 3 is a plan with the blade entirely removed from the handle. Fig. 4 is a longitudinal central section of the tool handle with tool detached. Fig. 5 is a section on the line $x-x$ Fig. 2. Fig. 6 is an edge view of the tool or blade; Fig. 7 a broken plan of one end of the tool, slightly modified, the end being shown as angular instead of curved.

A indicates the handle of the tool. This handle is of metal, preferably iron or steel, or other metal possessed of a fair amount of elasticity. The handle is constructed from a piece of wire, which may be of any of the usual shapes of wire in cross section. The wire composing the handle is slotted, or grooved, as at B, the slot or groove extending along the side of the wire which forms the inside of the completed handle.

The piece of wire which forms the handle is bent into an ox bow or U form. The groove then extends along the inside of the limbs of the bow or U, so that the edges of a tool may enter said slot or groove, one edge being in the groove in each limb, and if the tool be entered far enough between the limbs, the end of the tool will enter the groove in the bow, and be protected thereby while the edges of the tool will be inclosed in and protected by the grooves in the limbs. The ends of the limbs of the bow are naturally or normally a little closer together than are these members near the bow, so that there is a slight tendency to bind a tool in the handle, but the

metal of the handle should be sufficiently elastic to admit of the longitudinal movement of a tool, when entered in the grooves, with tolerable ease. The blade C, preferably of steel, is preferably about as long as the handle, and wide enough so that the edges enter the grooves in the limbs of the handle, as may be seen in Figs. 1, 2, and 5. Either end of the blade or tool may be turned toward the bow or loop of the handle. The tool or blade shown is thickest at the end D, which end projects slightly from the handle when the tool is closed, as in Fig. 1, if the proportions be about as shown. When so closed the tool takes up but little space, and can easily be carried in the pocket. Even in this position the tool may be long enough for use as a screw driver, but preferably it will be projected about as indicated in dotted lines. The grasp of the fingers on the handle will hold the handle firmly to the tool, so that the tool will keep its position during ordinary usage. The sides of the tool shown are concaved, as shown at $c c$, and this concaved edge may be sufficiently sharp to serve as a paper cutter. The blade or tool, from the concaved portion $c c$ to the end E, is reduced in thickness, so that such portion of the blade forms a flexible mixing tool or spatula, as well as a paper cutter and eraser. In fact, the tool may have a great number of functions, as each end is adapted for different uses. The groove B may be cut continuously in the wire while the wire is in continuous length, before the pieces which form the handle are cut therefrom, or milled into the handle after the bending. The ends $a a$ of the handle are by preference neatly rounded, to give a smooth finish, and both handle and tool may be nickel plated, or otherwise plated, polished, or finished. The groove near the bend of the handle may be reduced in area as by a slight compression of the metal, (b, Fig. 4) so that the thick end of the blade will be prevented from sliding back to the bow, and so that the thin end of the tool will be held in extended position. See Fig. 2.

What I claim is—

1. A tool handle consisting of a bent piece of elastic metal having limbs nearly parallel and grooved in their proximate sides, and a

removable blade of such width that its edges enter said grooves and are covered and protected by said limbs throughout the part which enters the handle, substantially as described.

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2. The tool handle consisting of a bent wire substantially the form of an ox bow, and having a groove on the interior faces of the limbs and extending round the bow, substantially as described.

3. The tool handle consisting of a bent wire, having limbs nearly parallel and grooved on their inner faces to receive the edges of the tool, the groove being of reduced area in

part, so as to clamp a tool when inserted in said groove, substantially as described. 15

4. The combination with the elastic bent wire handle having a groove along the inner faces of its limbs, of the movable blade having a sharpened edge which enters one of said grooves when the blade is inserted in the handle, substantially as described. 20

In testimony whereof I affix my signature in presence of two witnesses.

RUSS J. CHRISTY.

Witnesses:

BIRT S. GARVER,
M. M. BARRINGER.