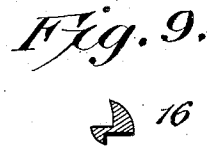
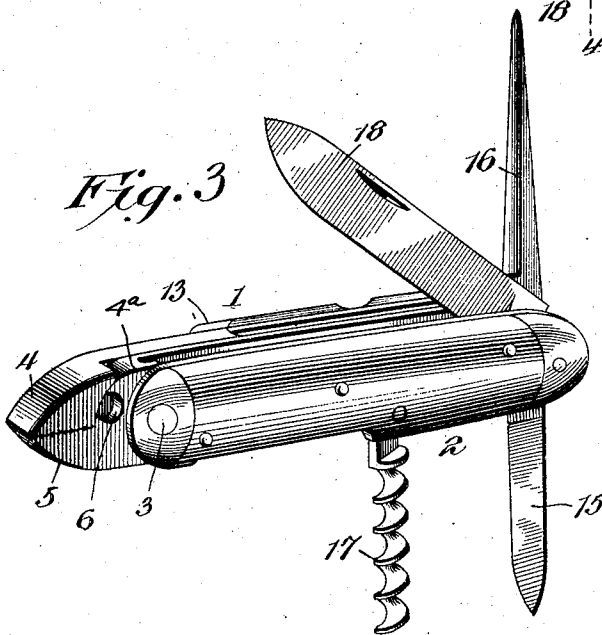
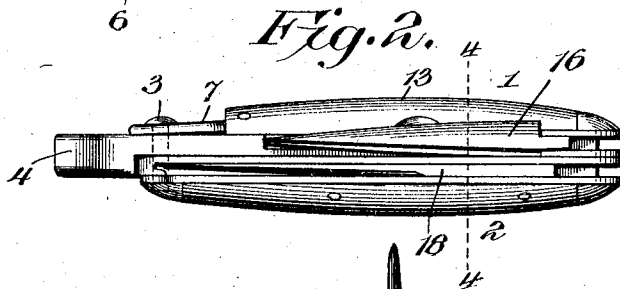
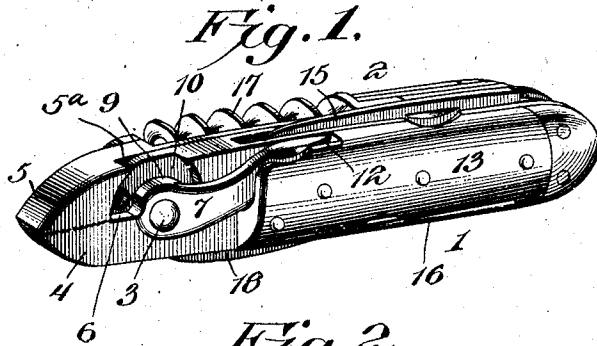


C. HEILRATH.
COMBINATION TOOL.
APPLICATION FILED AUG. 14, 1903.

2 SHEETS—SHEET 1.



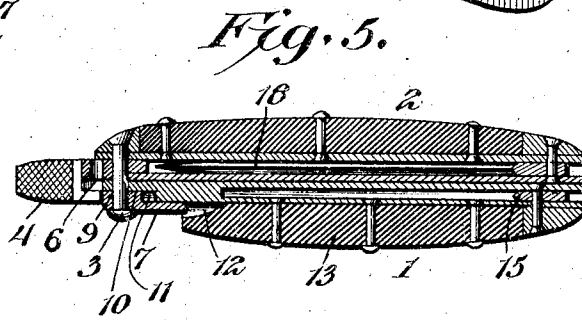
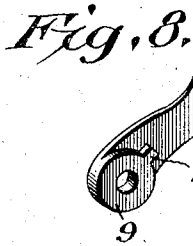
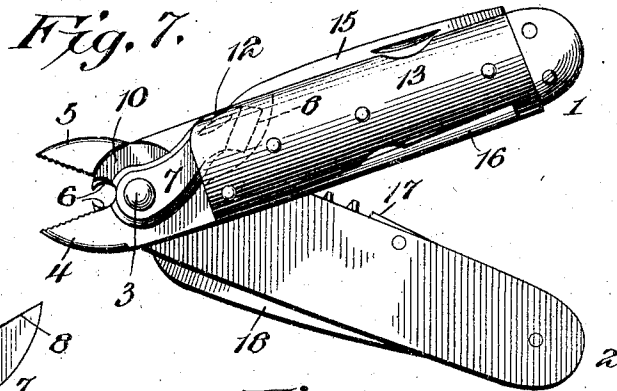
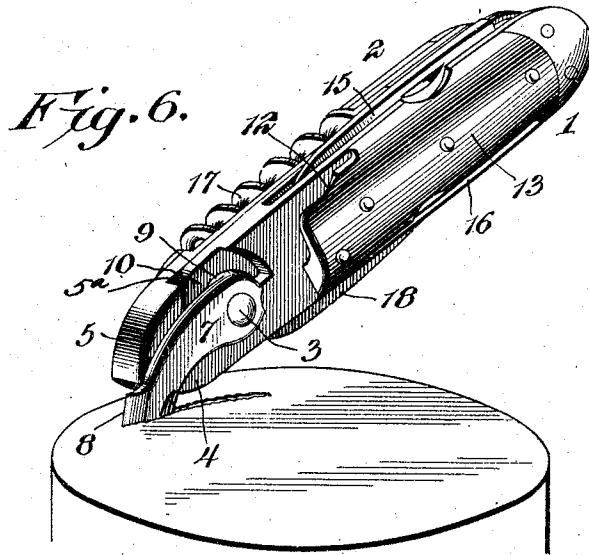
Christian Heilrath, Inventor,

Witnesses
Howard W. Orr
J. J. Piley

By *E. J. Siggers*
Attorney

C. HEILRATH.
COMBINATION TOOL.
APPLICATION FILED AUG. 14, 1903.

2 SHEETS—SHEET 2.



Christian Heilrath, Inventor,

By

E. J. Siggers

Attorney

Witnesses

Howard W. Orr
J. F. Piley

UNITED STATES PATENT OFFICE.

CHRISTIAN HEILRATH, OF SACRAMENTO, CALIFORNIA.

COMBINATION-TOOL.

SPECIFICATION forming part of Letters Patent No. 790,432, dated May 23, 1905.

Application filed August 14, 1903. Serial No. 169,507.

To all whom it may concern:

Be it known that I, CHRISTIAN HEILRATH, a citizen of the United States, residing at Sacramento, in the county of Sacramento and State of California, have invented a new and useful Combination-Tool, of which the following is a specification.

The invention relates to improvements in combination-tools.

The object of the present invention is to improve the construction of combination-tools, more especially pocket-knives, and to provide a simple and comparatively inexpensive one having a plurality of blades and provided with a corkscrew and leather-punch and capable of being used as a pair of pliers and as a wire-cutter.

A further object of the invention is to provide a pocket-knife of this character which may also be conveniently employed as a can-opener and which will enable cans to be rapidly and conveniently operated on for removing the tops of the same.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in the form, proportion, size, and minor details of construction within the scope of the claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a perspective view of a pocket-knife constructed in accordance with this invention. Fig. 2 is a plan view showing the opposite edge of the same. Fig. 3 is a perspective view of the pocket-knife, illustrating the arrangement of the blades, the corkscrew, and the leather-punch. Fig. 4 is a transverse sectional view on the line 4 4 of Fig. 2. Fig. 5 is a longitudinal sectional view of the knife, the parts being arranged as shown in Fig. 1. Fig. 6 is a perspective view, the knife being arranged as a can-opener. Fig. 7 is a side elevation illustrating the arrangement of the parts when the pocket-knife is used as a pair of pliers or wire-cutter. Fig. 8 is a detail perspective view of

the can-engaging blade. Fig. 9 is a sectional view of the leather-punch.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 and 2 designate sections of a pocket-knife handle which is divided longitudinally in a plane parallel with the planes of the blades, and the said sections 1 and 2 are connected at one end of the pocket-knife by a transverse rivet 3, which is arranged in a plane parallel with the pivots of the blades. The sections 1 and 2 of the handle are provided at one end of the pocket-knife with jaws 4 and 5, projecting outwardly beyond the pivot of the handle-sections and forming with the same a pair of pliers. The inner engaging faces of the jaws are preferably serrated, as shown in Fig. 7, and wire-cutting notches 6 are provided at the inner ends of the engaging faces of the jaws. These notches 6 are adapted to register when the jaws are open, as shown in Fig. 7, and when the jaws are closed the edges at the notches sever the wire, as will be readily understood. The jaw of each section is projected laterally to overlie the other section, and it is arranged to slide thereon. The sections have rounded edges 4^a and 5^a to receive the laterally-projecting portions of the jaws. The rivet which constitutes the pivot of the jaws also forms the pivot of a can-opening blade 7, which has a cutting edge 8 at one end and which has an annular boss or enlargement 9 at its other end. The enlarged end of the can-opening blade is provided with a perforation for the reception of the pivot 3, and the enlargement 9 is arranged in a recess 10 of the adjacent section and is provided with a lug 11. The recess 10 has a segmental extension forming opposite shoulders and adapted to limit the movement of the lug 11, which operates in the recess, whereby the movement of the can-opening blade is limited. The outer edges of the jaws are beveled or rounded, as shown, and the beveled or rounded edge of the jaw 4 is adapted to rest upon the top of a can, as illustrated in Fig. 6 of the drawings, when the can-engaging blade is swung outward longitudinally of the knife-handle. When the parts are ar-

ranged as shown in Fig. 6 of the drawings, the cutting edge of the blade or tool 7 may be readily operated to sever the top of the can by oscillating the knife-handle, the rounded or beveled edge of the jaw 4 forming a fulcrum and being adapted to rock or oscillate on the can. The knife-handle is provided at its section 1 with a recess 12 for the reception of the engaging or cutting edge of the can-opening blade. The recess 12 is formed between the side piece 13 of the section 1 and the body portion thereof, the side piece being cut away, as shown, to afford access to the nail-receiving groove or notch of the can-opening blade. The sections 1 and 2, which are provided with smooth flat inner faces, as shown, do not require any means for locking them in their closed position, as the rivet 3 holds the sections in frictional engagement. When the sections are closed, their opposing flat faces fit closely together in flush relation throughout the contour of the knife. The sections are provided at each of their longitudinal edges with pockets or chambers for the reception of pivoted blades and tools, which may be of any desired character, as will be readily understood. The section 1 is provided at one edge with a knife-blade 15 and at the opposite longitudinal edge with a punch 16. The other section is provided with a corkscrew 17 and a knife-blade 18. When the sections are closed, the blades and tools, which are pivoted in the pockets or chambers by rivets, as shown, may be used by opening them like the blades of an ordinary pocket-knife. The blade of the leather-punch is longitudinally grooved, as indicated in Figs. 4 and 9, and when the same is closed it presents a smooth outer face. The blades 15, 16, and 18 are pivoted at one end of the knife-handle, as shown, and the corkscrew is pivoted centrally of the knife, which forms a convenient handle for the corkscrew. The blades, however, may be arranged in any other desired manner in the pockets or chambers of the sections of the knife-handle, and springs of the ordinary construction are provided for holding. It will be apparent that it forms an efficient pair of pliers and that the pliers and the pivoted end blade cooperate to form an efficient and convenient can-opener.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A pocket-knife having its handle divided longitudinally to form two sections, said sections having smooth flat opposing faces to permit them to fit closely together in flush relation throughout the contour of the knife when closed, each section being equipped on the outside with blades or other analogous devices, which are exposed for operation at all times, a rivet constituting the pivot and passing through and secured to the sections at one end of the pocket-knife and arranged

at right angles to the plane of movement of the sections in opening and closing, said rivet holding the flat inner faces of the sections in frictional engagement and obviating the use of supplemental fastening devices, and cooperating rigid jaw extensions formed on each section beyond the rivet connection, the jaw of each section being projected laterally to overlie the other section and arranged to slide thereon, substantially as described.

2. A pocket-knife provided with blades and having a sectional handle divided longitudinally in a plane parallel with the plane of the blades and having its sections pivotally connected at one end of the knife, the pivot being arranged in a plane at right angles to the inner side faces of the sections, whereby the said sections are adapted to slide on and bind against each other, and the said extensions being extended beyond the pivot to form cooperating jaws, and one of the sections having a can-opening blade arranged to cooperate with the jaws to form a can-opener, substantially as described.

3. A tool consisting of pivoted handle-sections having in one a transverse recess forming an abutting surface, and a can-opening blade carried by the pintle of the handle-sections and having a stud adapted to move in the said transverse recess and engage the abutting surface of the recessed handle-section, whereby the latter supports the blade and acts as a fulcrum therefor, as set forth.

4. A pocket-knife provided with a handle divided longitudinally to form two sections, said sections being pivoted together and extended beyond the pivot to form jaws, and a can-opening blade pivoted adjacent to the jaws and cooperating with the same, when closed, to form a can-opener, said blade being extended beyond the jaws and having its outward movement limited by one of them, substantially as described.

5. A pocket-knife having blades, and provided with a handle divided longitudinally to form two sections, the latter being provided with jaws, a pivot connecting the sections at the inner ends of the jaws, and a can-opening blade connected with the handle by the said pivot and extending beyond one of the jaws and cooperating with the same when the handle is closed to form a can-opener, said blade having its outward movement limited by the jaws, substantially as described.

6. A pocket-knife comprising a handle provided with blades and divided longitudinally in a plane parallel with the blades to form two sections, the latter being provided at one end of the handle with jaws, a pivot connecting the sections, and a can-opening blade secured to the handle by the said pivot and extending beyond and cooperating with one of the jaws to form a can-opener when the handle is closed, substantially as described.

7. A pocket-knife comprising a handle com-

posed of sections pivoted together and provided with jaws, one of the sections being provided with an exterior recess at one side, and a can-opening blade pivotally mounted on the handle and having a lug operating in the said recess to limit the outward movement of the blade, substantially as described.

8. A pocket-knife comprising a handle composed of pivoted sections and provided with jaws, one of the sections being provided at one side with opposite shoulders and having a recess, and a can-opening blade pivoted to the

handle and extending when closed into the recess and provided with a lug operating between the shoulders, said blade, when opened, extending beyond and cooperating with one of the jaws, substantially as described. 15

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CHRISTIAN HEILRATH.

Witnesses:

LOUIS HEILBRAU,
J. G. MURPHY.