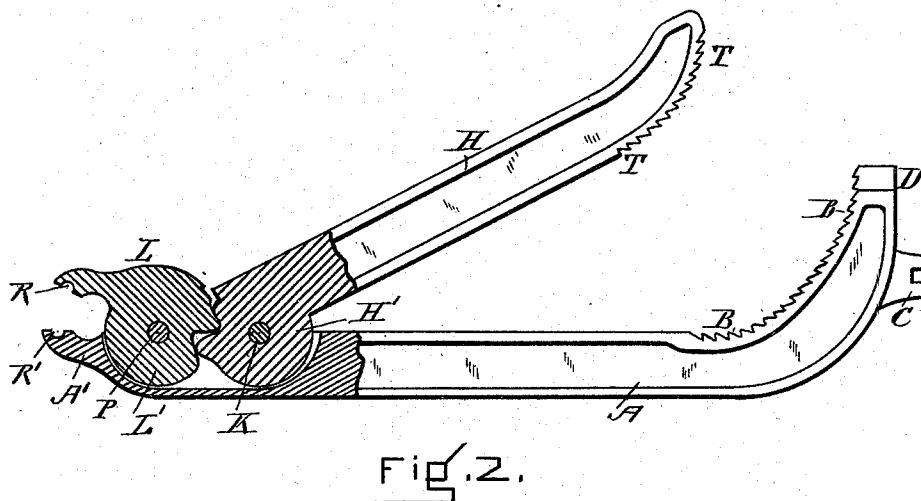
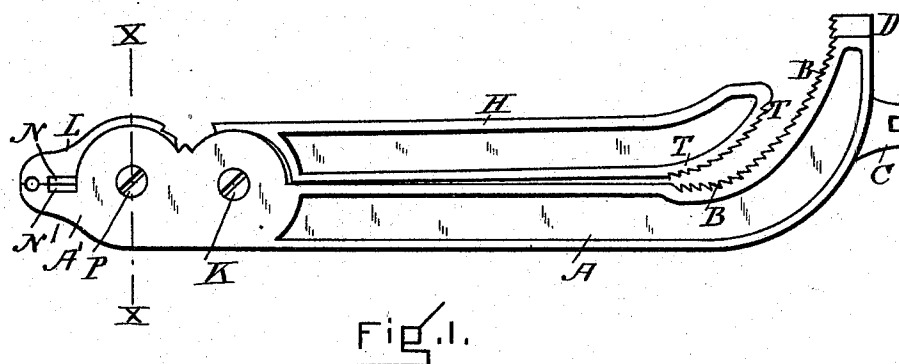


(No Model.)

J. F. RYDER.
COMBINATION TOOL.

No. 571,287.

Patented Nov. 10, 1896.



WITNESSES
Frank H. Parker
William H. Parry.

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JOSIAH F. RYDER, OF ATTLEBOROUGH, MASSACHUSETTS.

COMBINATION-TOOL.

SPECIFICATION forming part of Letters Patent No. 571,287, dated November 10, 1896.

Application filed April 8, 1896. Serial No. 586,749. (No model.)

To all whom it may concern:

Be it known that I, JOSIAH F. RYDER, of Attleborough, in the county of Bristol and State of Massachusetts, have invented a new and useful Improvement in Combined Tools, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to a device to be used more particularly as a pocket instrument, and is adapted to be used as a wrench, pliers, cutting-off nippers, or a screw-driver, the object being to make a compact instrument that can be used for a number of kindred purposes and be easily carried in the pocket. This object I attain by the mechanism shown in the accompanying drawings, in which—

Figure 1 is a view showing my instrument in side elevation, closed. Fig. 2 is a view, partly in side elevation and partly in section, open. Fig. 3 is a cross-section taken on line X X of Fig. 1.

In the drawings, A represents the principal member of the instrument. This part has at one end a series of teeth B B and a projection C, which serves as a bit of a screw-driver. The termination D also serves as the bit of a screw-driver. At the opposite end of the principal member a recess is made to receive the hinge part H' of the lever member H, which is pivoted on the pivot K. This recess also receives the hinge part L' of the jaw L. The said jaw is pivoted at P. The extreme end of the principal member A is formed into a jaw A'. The hinge parts H' and L' are so

formed as to work together like two gears, so that any movement of the lever member H in relation to the principal member A will cause a corresponding movement of the jaw L.

N and N' are cutters placed in the jaws L and A' and serve to cut any small article that is placed between them. The small semicircular recesses R and R' in the jaws L and A' are adapted to firmly grasp small rods, like the spokes of a bicycle-wheel, for instance, and hold them while being worked upon.

The end of the lever member H is provided with teeth T, so that the two parts H and A may be used together to form a wrench.

I claim—

In a tool the combination of a principal member and a lever member pivotally connected to each other, one end of the principal member being curved and having teeth and adapted to form, with the lever member, which is also curved and having teeth, a wrench as described, the said principal member having a cutting and gripping jaw pivotally attached to the said principal member and operated by the lever member, and a cutting and gripping device, substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 7th day of April, A. D. 1896.

JOSIAH F. RYDER.

Witnesses:

FRANK G. PARKER,
WILLIAM EDSON.