No. 791,917. PATENTED JUNE 6, 1905.

E. D. C. KOETH.

COMBINATION TOOL.

APPLICATION FILED NOV. 18, 1904.

2 SHEETS—SHEET 1.

Fig. 1.

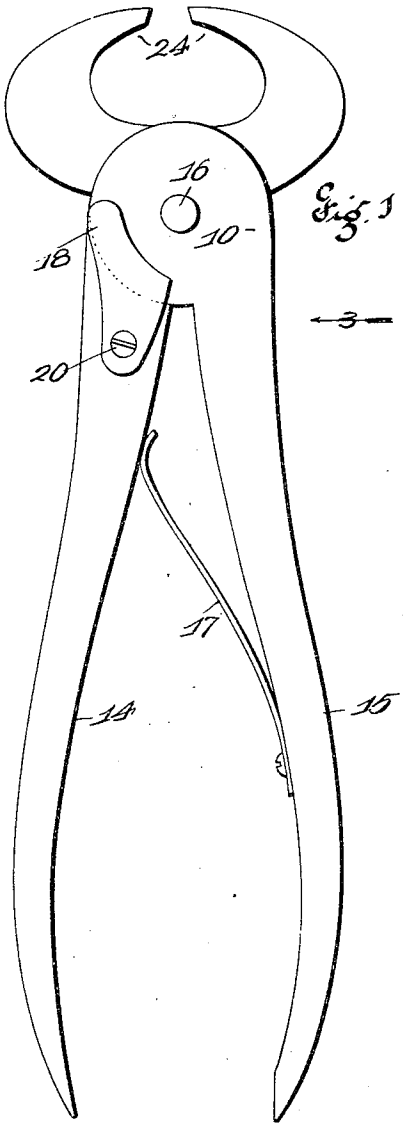


Fig. 2.

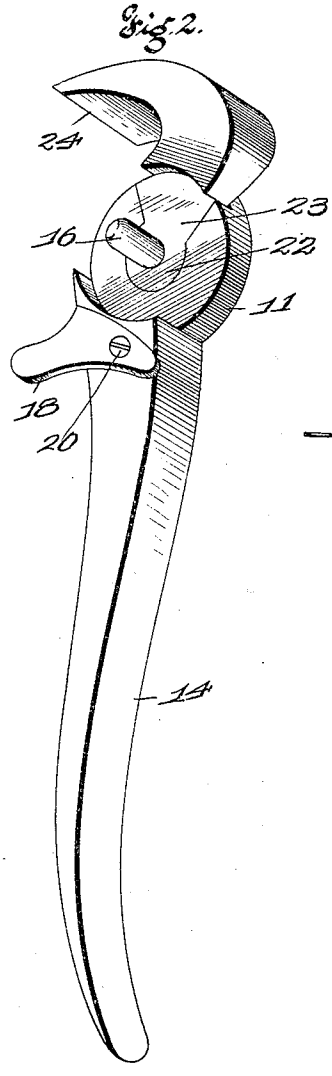


Fig. 3.

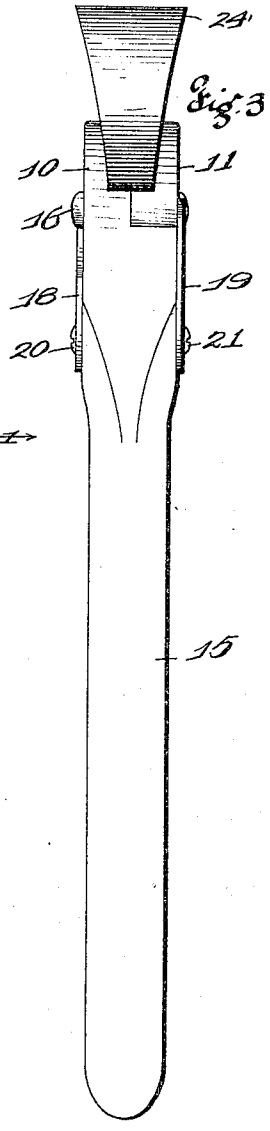
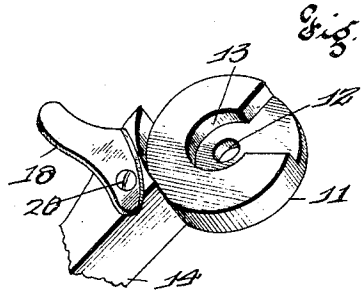


Fig. 4.



Witnesses
Alfred Bricks
Edw. M. Harrington

Inventor
Edward D. C. Koeth
by Kidder & Morgan & Wolcott his attys.

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2 SHEETS—SHEET 2.

Fig. 5

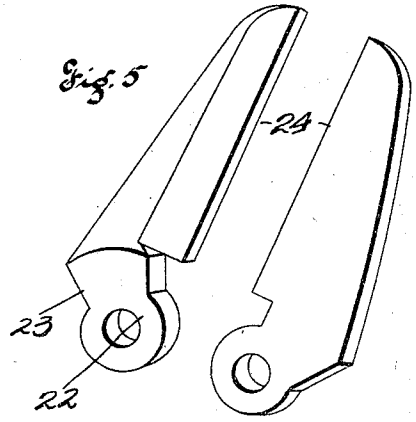


Fig. 6

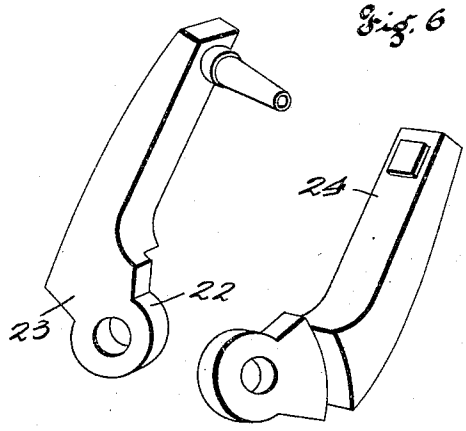
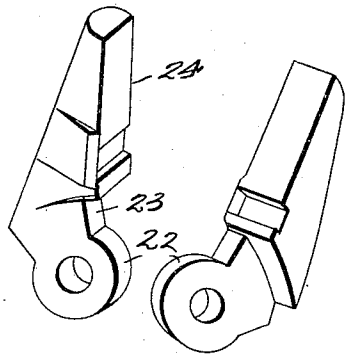


Fig. 7.



Witnesses

Alfred Bruce

Edw. M. Hunnington

Inventor

Edward D. C. Koeth

by Higdon & Langan & Hopkins Attys.

No. 791,917. Patented June 6, 1905.

UNITED STATES PATENT OFFICE.

EDWARD D. C. KOETH, OF DOERUN, MISSOURI.

COMBINATION-TOOL.

SPECIFICATION forming part of Letters Patent No. 791,917, dated June 6, 1905.

Application filed November 18, 1904. Serial No. 233,370.

To all whom it may concern:

Be it known that I, EDWARD D. C. KOETH, a citizen of the United States, and a resident of Doerun, Missouri, have invented certain new and useful Improvements in Combination-Tools, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in combination-tools; and it consists of the novel features herein shown, described, and claimed.

In the drawings, Figure 1 is a side elevation of a combination-tool adapted for cutting wire and embodying the principles of my invention, the view being taken looking in the direction indicated by the arrow 1 in Fig. 3. Fig. 2 is a perspective of one of the jaws and one of the handles shown in Fig. 1. Fig. 3 is an edge view as seen looking in the direction indicated by the arrow 3 in Fig. 1. Fig. 4 is a perspective of one of the pivot-plates, the handle being broken away and the jaw being removed. Fig. 5 is a perspective of a pair of removable jaws, said jaws having shear-blades. Fig. 6 is a perspective of a pair of the removable jaws and having leather-punching mechanism. Fig. 7 is a perspective of a pair of the removable jaws adapted for punchers, pliers, and wire-cutters.

Referring to the drawings in detail, the pivot-plates 10 and 11 are mates, each having a central pivot-opening 12 and a jaw-recess 13 around the pivot-opening and extending to the periphery of the plate. The handles 14 and 15 are mates and extend from the peripheries of the pivot-plates, said pivot-plates being circular and the handles being formed integral with the plates and the handles being substantially twice as thick as the plates. The pivot-pin 16 is riveted into one of the pivot-openings 12 and extends loosely through the other pivot-opening, so as to pivotally connect the plates.

The spring 17 is secured to the handle 15 and engages the handle 14 to force the handles apart. The retaining-plates 18 and 19 are secured to the sides of the handles 14 and 15 by screws 20 and 21, said plates being adapted to swing against the outer faces of the pivot-plates 10 and 11 and hold the pivot-plates together upon the pivot and said retaining-plates being adapted to swing out of engagement with the pivot-plates when it is desired to separate the pivot-plates. For purposes of attachment to the pivot-plates the jaws are interchangeable, each jaw comprising the circular perforated head 22, adapted to receive the pivot-pin 16 and to fit into the circular portion of the recess 13, the shank 23 extending from the head outwardly to the periphery of the plate and the tool 24 extending outwardly from the shank. The tools are offset relative to the shanks, so as to bring them into alinement in the same manner that the handles are offset.

In Fig. 2 the tools 24 are wire cutters or nippers. In Fig. 5 the tools 24 are shears. In Fig. 6 the tools 24 are leather-punchers, and in Fig. 7 the tools 24 are pliers and wire-cutters.

It is obvious that these tools may be changed and adapted for any purpose without departing from the spirit of my invention, my intention being to make all kinds of dental and surgical tools, pipe-tongs, leather-stretchers, and any and every kind of tools with interchangeable jaws in accordance with the principles of my invention.

I claim—

1. In a combination-tool: mating pivot-plates recessed upon their inner faces; a pivot connecting the plates; handles extending from the pivot-plates; retaining-plates pivoted to the handles to engage the opposing pivot-plate and hold the handles together; and interchangeable jaws adapted to be mounted in the recesses of the pivot-plates; substantially as specified.

2. In a combination-tool: mating pivot-plates; each having a central pivot-opening; and each having a jaw-recess around the pivot-opening and extending to the periphery of the plate; said jaw-recesses being in the inner faces of the pivot-plates; handles extending from the peripheries of the pivot-plates; a pivot-pin in the central openings of the pivot-plates; said pivot-plates being separable by sliding one of them off the end of said pivot-pin; jaw-heads mounted in the jaw-recesses

between the pivot-plates; tools carried by the jaw-heads; and retaining-plates 18 and 19 for holding the pivot-plates removably together so that the jaw-heads may be removed and replaced at will; substantially as specified.

3. In a combination-tool: mating pivot-plates; each having a central pivot-opening; and each having a jaw-recess around the pivot-opening and extending to the periphery of the plate; handles extending from the pivot-plates; the handles being substantially twice as thick as the plates; a pivot-pin operating in the pivot-openings; jaw-heads loosely mounted upon the pivot-pins in the recesses of the pivot-plates; tools extending from the jaw-heads; and retaining-plates pivoted to the handles to engage the opposing pivot-plate and hold the handles together.

In testimony whereof I have signed my name to this specification in presence of two subscribing witnesses.

EDWARD D. C. KOETH.

Witnesses:
FRANK BROWN,
ROY HAYNES.