W. C. BEAUCHAMP.

TOOL FOR CUTTING WIRE OR ROD.

APPLICATION FILED FEB. 1, 1915.

1,187,237. Patented June 13, 1916.

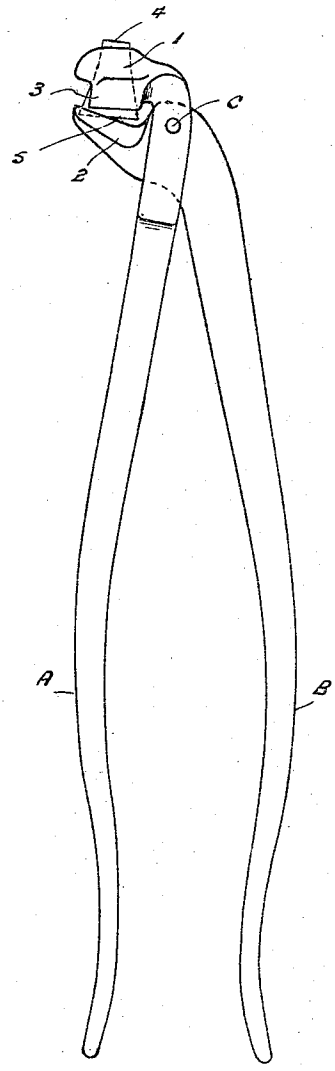


FIG 1

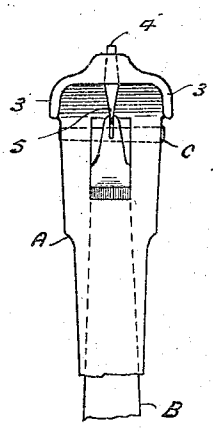


FIG 2

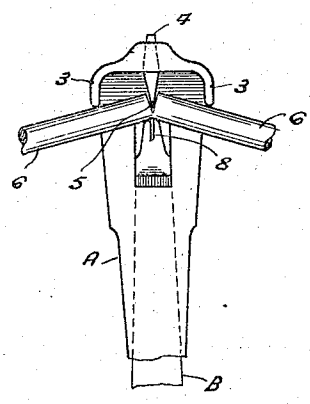


FIG 3

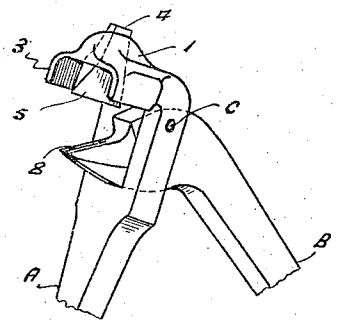


FIG 4

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TOOL FOR CUTTING WIRE OR ROD.

1,187,237. Specification of Letters Patent. **Patented June 13, 1916.**

Application filed February 1, 1915. Serial No. 5,541.

To all whom it may concern:

Be it known that I, WILLIAM CRAWLEY BEAUCHAMP, a subject of the King of England, residing at 51 Klea avenue, Clapham Common, London, England, dental-instrument maker, have invented certain new and useful Improvements in Tools for Cutting Wire or Rod, of which the following is a specification.

This invention relates to tools for cutting wire or rod, and refers to tools of the type in which two handles are provided to be gripped in the hand for bringing the pivoted cutting nippers together and cutting the wire or rod, and the said invention has for its object to produce a lighter and more powerful tool than those at present in use.

My invention consists essentially in the construction and arrangement of the parts of the tools of the aforesaid type whereby the desired object is obtained, all as hereinafter particularly described, shown in the accompanying drawings, and set out in the claims appended to this specification.

Figure 1 is a side elevation of the tool constructed in accordance with this my said invention, Fig. 2 is a front elevation of the cutting portion of the tool. Fig. 3 is a similar view but showing a wire in the jaws partially cut through. Fig. 4 in perspective illustrates the jaws of the tool in their open position.

In lieu of, as is now almost the universal custom, driving two cutting edges through the wire, I, in accordance with this invention, use but one cutter, and this cutter is detachable, so as to be capable of replacement by another, as and when required. Further, by means of two projections or lugs—one on either side of the aforesaid cutter—I induce a breaking or tearing strain on the wire which opens the cut, and thereby greatly facilitates the operation.

In carrying my invention into effect I construct the cutting nippers of two steel forgings A and B pivoted together after the manner of the "Hawksbill" pattern dental forcep, by which means the wire to be cut may be placed very near the fulcrum C, whereby greatly increased power results.

The special features of my invention are the beaks or jaws 1 and 2 which are made to project beyond the pivot or fulcrum C and at an angle from the handles A and B. The outer or box half 1 is broadened and bent over on either side in a hooded shape 3 (see particularly Figs. 2, 3 and 4), or the mechanical equivalent is made by fitting the sides or ears 3 separately. At equal distances from these and in the center of the hood is an oblong and tapered hole into which is fitted the flat tapered chisel or cutter 4. This cutter is readily removed, when desired, by a blow on the end—the ease by which it can be replaced by another forms an important feature of my invention.

When the cutter 4 is in position its cutting edge 5 projects one sixteenth of an inch at the back, where the heavier cutting is performed, and tapers to one thirty second of an inch at the front beyond the sides or ears 3. The cutting edge therefore enters the metal before the sides 3 come into contact with the wire 6, Fig. 3. On the pressure being continued these sides of the hood 3 aid the cutter by opening the cut and bending the wire 6 downward (see Fig. 3). The inner half or arm B of the tool terminates in a narrow but strongly constructed bill or jaw 2 to take the entire strain of pressing the wire 6 (Fig. 3) against the cutter 4. A portion 8 of the surface of the bill 2 is grooved or slotted to prevent injury to the cutter and to allow for variations in the length of the said cutter.

The handles A and B are adapted to be gripped in the palm of the hand, and to facilitate use with both hands, when cutting large wire, are preferably curved inward, and then outward at the ends.

What I claim is:—

1. In a cutting tool, the combination of a pair of relatively movable elements; a cutter mounted on one element; a part opposed to said cutter mounted on the other element; and bending means associated with said cutter and part for bending, away from said cutter, a rod being cut thereby.

2. In a cutting tool, the combination of a pair of relatively movable elements; a cutter mounted on one element; a part opposed to said cutter mounted on the other element; and bending means associated with said cutter and anvil tool for bending, back upon said part and away from said cutter, a rod being cut thereby.

3. In a cutting tool, the combination of a pair of relatively movable elements; a pair of spaced members and a cutter therebetween mounted on one of said elements; and a part on the other elements adapted to oppose said cutter, said part being remote from

said spaced members and adapted to approach nearer to a plane connecting the active portions of said spaced members than are other portions of the element on which said part is mounted.

4. In a cutting tool, the combination of a pair of relatively movable elements; a pair of ears and a cutter therebetween mounted on one of the elements; and an anvil tool mounted on the other element and provided with a slot adapted to receive the cutter.

5. In a cutting tool, the combination of a pair of relatively movable elements; a pair of ears and a cutter therebetween mounted on one of the elements; and an anvil tool mounted on the other element and provided with a slot adapted to receive the cutter, the distance between said ears being greater than the width of the anvil tool.

6. In a cutting tool, the combination of a pair of relatively movable elements; a pair of ears and a cutter therebetween mounted on one of the elements; and an anvil tool mounted on the other element and provided with a slot adapted to receive the cutter, the distance between said ears being greater than twice the width of the anvil tool.

7. In a cutting tool, the combination of a pair of relatively movable elements pivoted together, one of which is provided with a hooded portion forming a pair of spaced ears; a cutter disposed between said ears and mounted on the said element provided with the hooded portion; and an anvil tool on the other element opposite to said cutter.

8. In a cutting tool, the combination of a pair of relatively movable elements pivoted together, one of which is provided with a hooded portion forming a pair of spaced ears; a cutter disposed between said ears and mounted on the said element provided with the hooded portion; and an anvil tool on the other element opposite to said cutter and provided with a slot adapted to receive the cutter.

9. In a cutting tool, the combination of a pair of relatively movable elements pivoted together, one of which is provided with a hooded portion forming a pair of spaced ears; a cutter disposed between said ears and mounted on the said element provided with the hooded portion; and an anvil tool on the other element opposite to said cutter, the distance between said ears being greater than the width of said anvil tool.

10. In a cutting tool, the combination of a pair of relatively movable elements pivoted together, one of which is provided with a hooded portion forming a pair of spaced ears; a cutter disposed between said ears and mounted on the said element provided with the hooded portion; and an anvil tool on the other element opposite to said cutter and provided with a slot adapted to receive the cutter, the distance between said ears being greater than the width of said anvil tool.

In witness whereof I have signed this specification in presence of two witnesses.

WILLIAM CRAWLEY BEAUCHAMP.

Witnesses:

GORDON MACKELLAR ROBERTS,

O. J. WORTH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."