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Patented Mar. 12, 1901.

W. H. BRUCE.  
PLIERS OR PIPE TONGS.  
(Application filed Dec. 26, 1900.)

(No Model.)

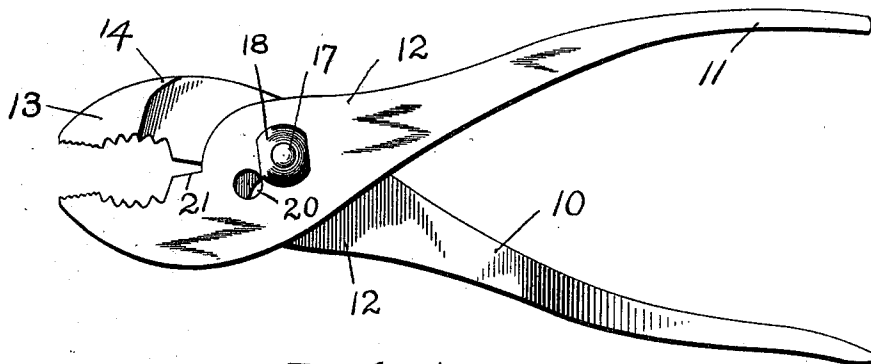


Fig. 1.

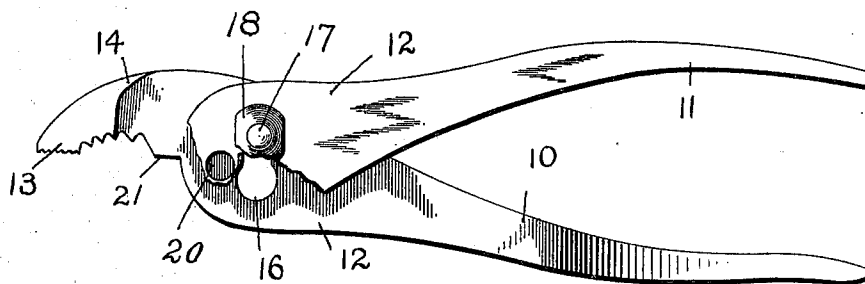


Fig. 2.

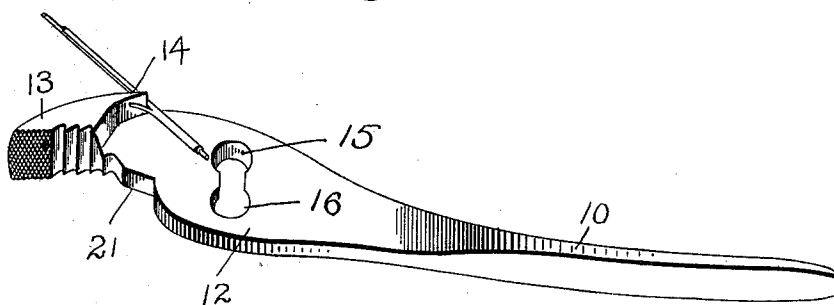


Fig. 3.

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# UNITED STATES PATENT OFFICE.

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## PLIERS OR PIPE-TONGS.

SPECIFICATION forming part of Letters Patent No. 669,721, dated March 12, 1901.

Application filed December 26, 1900. Serial No. 41,032. (No model.)

*To all whom it may concern:*

Be it known that I, WALTER H. BRUCE, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented new and useful Pliers or Pipe-Tongs, of which the following is a specification.

This invention relates to that class of tongs or pliers which are employed for joining and fitting pipes; and the especial object of this invention is to provide an improved form of pliers or pipe-tongs which are provided with a powerful shearing cutter for cutting off the ends of wires and with a blade or insulation-cutter for stripping insulations from wires, so as to adapt the pliers especially for the use of electricians.

To these ends this invention consists of the pliers and of the combinations of parts therein, as hereinafter described, and more particularly pointed out in the claims at the end of this specification.

In the accompanying drawings, Figure 1 is a side view of a pair of pliers constructed according to this invention. Fig. 2 is a similar view partially broken away in order to illustrate the holes which cooperate to form a shearing cutter, and Fig. 3 is a perspective view illustrating the blade or cutter for stripping insulation from wires.

In many classes of work, especially in hanging combination gas and electric fixtures, it is desirable to provide a single tool which may be employed for coupling and fitting pipes or for cutting comparatively heavy wires or for stripping insulation therefrom.

The especial object of my present invention is therefore to improve the form of pipe-tongs which are illustrated, for example, in United States Letters Patent No. 295,885, granted in the name of Herbert S. Pullman March 25, 1884, by providing the pliers of this class with a shearing cutter which may be employed for cutting off the ends of comparatively heavy wires and with a blade or cutter for stripping off insulation from wires. To accomplish this object, a pair of pliers constructed according to my present invention comprises a pair of pivotally-connected handles which carry the plier-jaws and have holes which register with

each other when the jaws are open and pass out of register with each other when the jaws are closed to form a powerful shearing cutter. Extending back from one of the jaws I also preferably provide a sharpened blade or insulation-cutter having a cutting edge substantially perpendicular to the engaging face of the handle which carries the same.

Referring to the accompanying drawings and in detail, a pair of pliers embodying this invention, as herein illustrated, comprises the handles 10 and 11, having pivotally-connected engaging faces 12. At their ends each of the handles 10 and 11 is provided with an offset jaw 13. Extending back from one of the offset jaws 13 is a sharpened blade or insulation-cutter 14, the cutting edge of which is substantially perpendicular to the engaging face 12 of the handle 10, which carries the same. The blade or insulation-cutter 14 forms a convenient device for stripping or cutting off the insulating coverings from wires when electrical connections are to be made.

Formed in the engaging face 12 of the handle 10 are stud-receiving sockets 15 and 16, which are connected by a narrower slot.

Secured in the handle 10 by means of a nut 18 is a stud 17, which may be set into engagement with either stud-receiving socket 15 or 16, as described in the patent before referred to, and formed in the engaging face 12 of the handle 11 is a socket or hole 20, which is arranged to cooperate with the socket 16 to form a powerful shearing cutter when the stud 17 is set into engagement with the stud-receiving socket 15, as illustrated in Fig. 2. The hole 20 is so located with respect to the stud 17 that it will be brought into register with the socket 16 when the jaws are open, as illustrated in Fig. 1, and will pass out of register with the socket 16 when the jaws are closed.

By inserting a wire through the hole 20 when the jaws are open the holes 16 and 20 will cooperate with each other to cut the wire when the pliers are closed, and inasmuch as the hole 20 is located comparatively near the pivot-stud 17 a powerful leverage may be exerted to shear off or sever comparatively heavy wires with comparatively little exertion. It is to be noted, however, that although

the cutter or shear formed by the holes 20 and 16 will act efficiently and powerfully for cutting off the ends of wires it is not adapted for severing or cutting the central part of the wire which does not have its end free to be inserted through the hole 20, and on this account I preferably retain the cooperating cutting-jaws 21, carried by the pivotally-connected handles 10 and 11, as described in the Pullman patent before referred to.

Changes may be made in the construction and relative proportions of parts of the pliers or pipe-tongs which form the subject-matter of this invention, and different features thereof may be omitted, if desired—that is to say, it is to be understood that the shearing cutter and the insulation-stripper are independent of each other, so that either one of said features may be employed, if desired, without involving the use of the other feature and without departing from the scope of this invention as expressed in the claims. It is not desired, therefore, to be limited to the construction herein shown and illustrated in the drawings; but

What is claimed, and desired to be secured by Letters Patent of the United States, is—

1. As an article of manufacture, a pair of pliers comprising pivotally-connected jaws carrying handles, one of which is provided

with two engaging stud-receiving sockets, and the other of which has a stud and is provided with a hole which coöperates with one of the stud-receiving sockets when its stud is set into engagement with the other stud-receiving socket to form a shearing cutter, substantially as described.

2. As an article of manufacture, a pair of pliers comprising handles 10 and 11 having pivotally connected engaging faces 12 with offset portions at their ends forming jaws 13, one of said jaws, 13, having a rearwardly-extending blade or insulation-cutter 14 with a cutting edge substantially perpendicular to the engaging face of its handle, and one of the handles being provided with two connected stud-receiving sockets 15 and 16, and the other handle being provided with a stud 17, and a hole 20 which coöperates with the stud-receiving socket 16 when the stud 17 is in engagement with the stud-receiving socket 15 to form a shearing cutter, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

WALTER H. BRUCE.

Witnesses:

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