Jan. 15, 1924. 1,481,056

P. T. GILBERT

PLIERS

Filed June 5, 1922

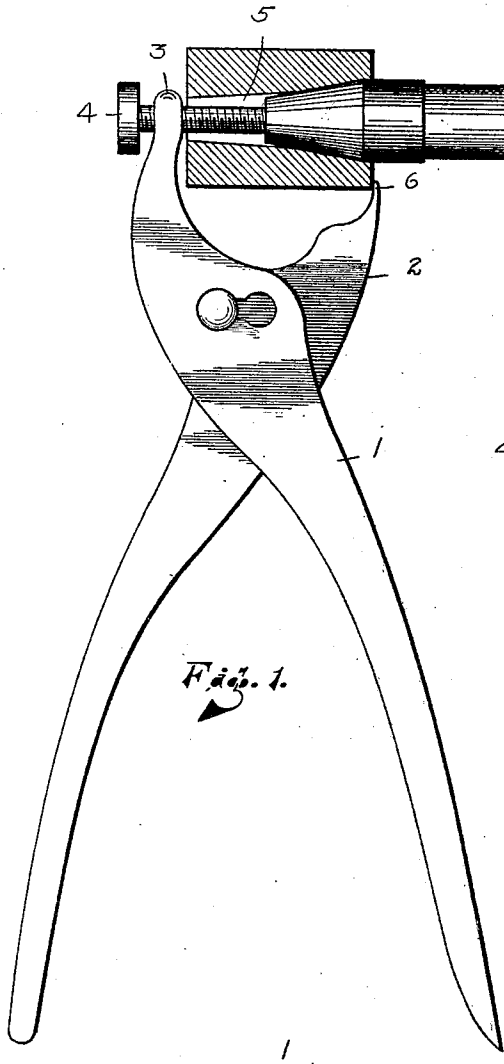



Fig. 1.

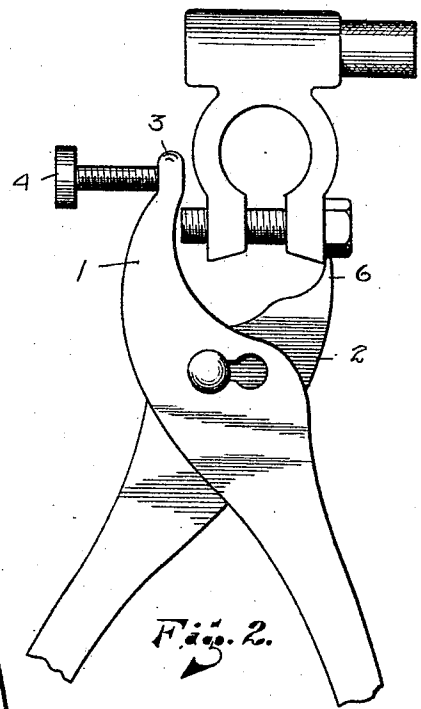



Fig. 2.

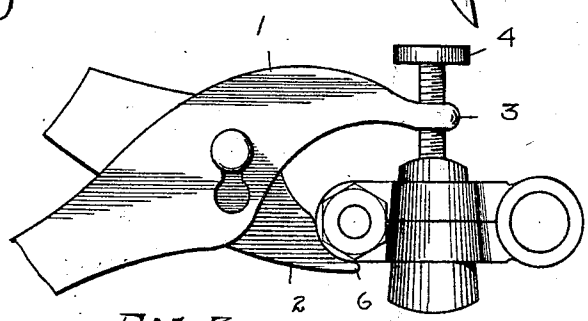



Fig. 3.

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# UNITED STATES PATENT OFFICE.

PERCY T. GILBERT, OF DULUTH, MINNESOTA.

## PLIERS.

Application filed June 5, 1922. Serial No. 565,833.

*To all whom it may concern:*

Be it known that I, PERCY T. GILBERT, a citizen of the United States, residing at Duluth, in the county of St. Louis and State of Minnesota, have invented certain new and useful Improvements in Pliers, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to hand instruments and has special reference to an improved form of pulling pliers for removing terminal connections on storage batteries or the like, such, for example, as tip or clamp terminals.

The advantages of some such tool for the manipulation of terminals on batteries or similar equipment is well known to those familiar with the repair of lighting or starting systems on automobiles, it frequently being quite hard to accomplish the removal or application of electric connections with ordinary tools at hand, though my present invention is an admirable tool for the purpose and is also convenient of manipulation; the same being the primary object of the invention.

Referring to the accompanying drawings:

Figure 1 is an elevation of my improved pliers as applied to a tip terminal in the act of disconnecting same;

Figure 2 is a similar view of the jaws of the pliers as applied to a clamp terminal; and

Figure 3 is a similar view to Figure 2 showing the instrument applied to a modified form of terminal.

The invention broadly relates to a modified form of the jaws of the common adjustable pincers, the overhang jaw of which is illustrated at 1 and the shorter jaw at 2, the latter being preferably wedge shaped for engaging an object in confined quarters.

In the extreme lip 3 of the overhang jaw is installed a thumbscrew 4, it being susceptible to adjustment either substantially towards or away from the other jaw so as to be able to reach into an aperture, such as illustrated at 5 in Figure 1 for the purpose of engaging the end of the male member of the terminal for the purpose of pushing against same when the lip 6 of the shorter jaw is impinging a portion of the terminal which it is desired to move in the opposite direction to that of the male portion; such conditions being common in what is called a tip terminal connection on a storage battery.

In the event of the pliers being used on a clamp terminal as shown in Figure 2, it may not be at all necessary to make use of the thumbscrew 4, as each jaw will directly impinge its relative part of the terminal which is to be moved in the opposite direction to that engaged by the other jaw. However, it is quite obvious that the essential feature apart from the specific construction of the jaws is that one is considerably shorter than the other.

From the foregoing it is evident that I have devised an exceedingly simple and inexpensive puller which it appears every battery repairman would appreciate as it provides a tool for the complete adjustment of the battery connection of an automobile, and is convenient for the adjustment of other devices requiring relatively small contraction or expansion.

Having thus described my invention what is claimed as new and desired to secure by Letters Patent is:

A pair of pliers of the character described having jaws of unequal length and an adjustable thumbscrew within the extreme outer lip of the longer jaw, whereby an object may be engaged by the thumbscrew beyond the limits of the shorter jaw.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

PERCY T. GILBERT.

Witnesses:
S. GEO. STEVENS,
S. C. BRONSON.