

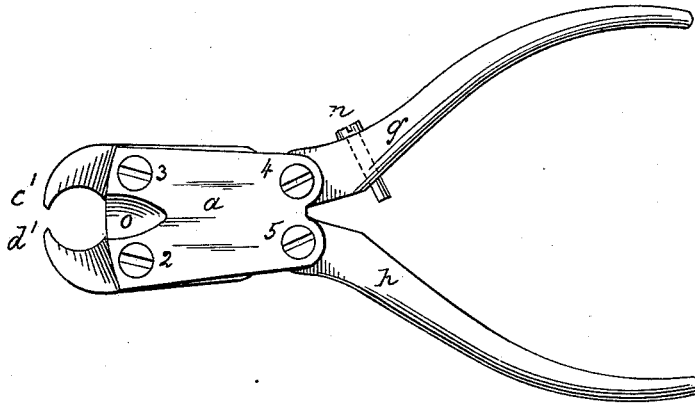
(Model.)

T. G. HALL.  
NIPPERS.

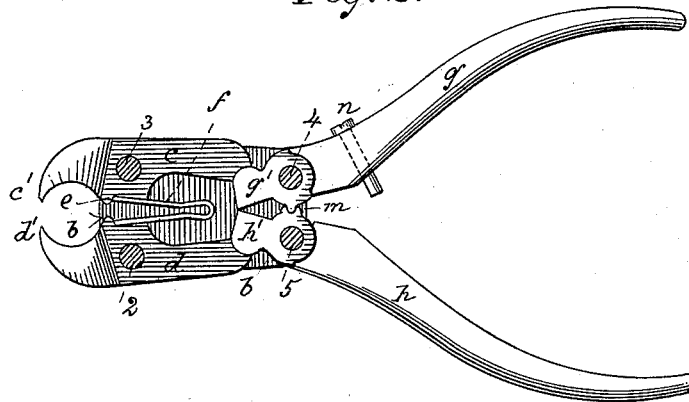
No. 419,666.

Patented Jan. 21, 1890.

*Fig. 1.*



*Fig. 2.*



Witnesses:

*Edgar Hall*

*Am. M. Valentine*

Inventor:

*Thomas G. Hall by*  
*Amos Broadus his*  
*Atty.*

# UNITED STATES PATENT OFFICE.

THOMAS G. HALL, OF MILFORD, CONNECTICUT, ASSIGNOR TO THE INTER-  
CHANGEABLE TOOL COMPANY, OF NEW YORK.

## NIPPERS.

SPECIFICATION forming part of Letters Patent No. 419,666, dated January 21, 1890.

Application filed April 27, 1881. Serial No. 31,902. (Model.) Patented in France February 20, 1880, No. 135,176.

### *To all whom it may concern:*

Be it known that I, THOMAS G. HALL, of Milford, county of New Haven, and State of Connecticut, have invented certain Improvements in Cutting-Nippers, (and for which I obtained a patent in France dated February 20, 1880, and numbered 135,176,) of which the following description, in connection with the accompanying drawings, is a specification.

10 This invention consists of certain improvements upon the cutting-nippers for which Letters Patent of the United States were granted to me May 14, 1867, No. 64,664, and also November 5, 1878, No. 209,677.

15 Figure 1 is an external, and Fig. 2 an internal, view of said cutting-nippers with my improvements thereto applied.

My improved nippers consist of a pair of jaw-levers *c d*, upon the outer ends of 20 which cutting-edges *c' d'* are formed, and upon the inner ends of which bearings are formed to match upon the inner ends *g' h'* of a pair of handle-levers *g h*. These jaw-levers and the inner ends of the handle-levers 25 are inclosed between a pair of side plates *a*, the two jaw-levers, the two handle-levers, and the two side plates being all combined and united upon the four screw-fulera 2, 3, 4, and 5. The head of each fulcrum is countersunk 30 into one side plate and its threaded end passes through the levers and screws into correspondingly-threaded holes in the opposite side plate, thus securing both side plates and all the levers together. The cutting-edges of 35 the nippers are closed by the short ends *g' h'* of the handle-levers *g h*, which, it will be

seen, are fitted between the long ends of the jaw-levers, and the cutting ends are kept from slamming together by the adjustable pin *n*, adjusted to strike the handle-lever *h*, 40 so as to save the cutting-edges from actual contact. Now, to separate the cutting-edges after they have been forced together by the handles, a spring *f* is inserted between them, 45 in the manner shown in the drawings, the two limbs of this spring being set into a seat cut into the inside edges of each jaw-lever, said seat having a lip or projection *e b* over 50 its upper end to keep the spring from riding up out of its place. To cause the two handle-levers and the cutting-edges to move in unison, the two handle-levers are connected, as at *m*, opposite the fulera 4 5, by a prong and notch connection, or, by what is the same 55 thing, a section of cog-gearing.

Having thus described my improvement, I claim and desire to secure by Letters Patent—

The body composed of the side plates, the independent fulera for the jaw-levers and handle-levers, the jaw-levers provided with 60 cutting-edges and with lips, and the handle-levers, having short arms and a prong and notch always in engagement, combined with the V-shaped spring held by the lips and the jaw-levers. 65

In testimony whereof I have signed my name hereto in the presence of two subscribing witnesses.

THOMAS G. HALL.

Witnesses:

JOHNNIE I. WALTON,  
WM. J. SHIMER.