

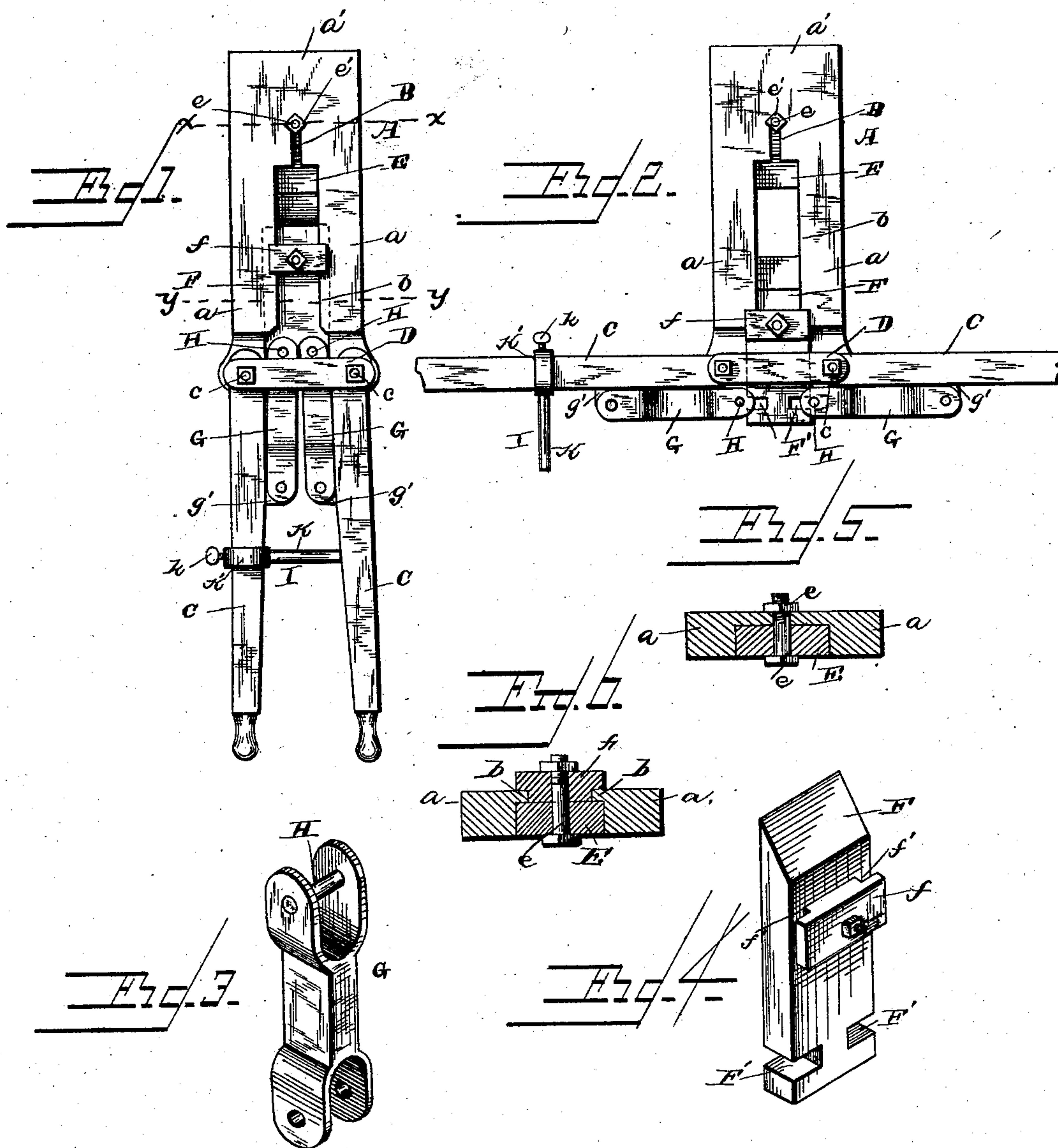
(No Model.)

J. H. WINDISCH.

BOLT CUTTER.

No. 365,455.

Patented June 28, 1887.



Witnesses

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# UNITED STATES PATENT OFFICE.

JOHN H. WINDISCH, OF OAK HARBOR, OHIO.

## BOLT-CUTTER.

SPECIFICATION forming part of Letters Patent No. 365,455, dated June 28, 1887.

Application filed February 9, 1887. Serial No. 227,051. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN H. WINDISCH, a citizen of the United States, residing at Oak Harbor, in the county of Ottawa and State of Ohio, have invented new and useful Improvements in Bolt-Cutters, of which the following is a specification.

My invention relates to improvements in bolt cutters or clippers; and it consists in a certain novel construction and arrangement of parts for service, clearly described hereinafter, and specifically pointed out in the claims.

My object is to provide means whereby the knives may be withdrawn from the frame without disturbing any other part of the mechanism, and, further, to provide improved means of adjusting the knives to take up the wear thereon.

The invention consists, mainly, in the novel arrangement of the parts to produce more satisfactory results than are attainable by similar devices now in general use.

In the accompanying drawings, Figure 1 is a rear elevation of the cutter. Fig. 2 is a similar view with the handles spread apart and the lower blade about to be withdrawn. Fig. 3 is a detail view of the link between the handles and the lower knife. Fig. 4 is a similar view of the lower knife. Fig. 5 is a transverse sectional view through the upper knife on the line *xx* of Fig. 1. Fig. 6 is a transverse vertical section on the line *yy* of Fig. 1.

Referring to the drawings, in which similar letters denote corresponding parts in all the figures, A designates the frame of the cutter, comprising the side arms, *a a*, and cross-head *a'*, said arms *a* having an inwardly-projecting flange, *b*, on the rear inner sides thereof, which flanges, near the upper end of the frame, are extended farther inwardly, leaving only a narrow slit, B, between the inner edges thereof.

The handles C are bifurcated at their upper ends, and the said bifurcated ends passed, respectively, on either side of the lower ends of the arms *a*, and journaled on bolts *c*, passed through aligned openings in said bifurcated ends and the arms *a* of the frame. A brace bar or plate, D, extends across the tool both on the front and rear side thereof, and said plates are secured at their ends on the outside of the bifur-

cated ends of the handles by means of the bolts *c*.

E represents the upper knife, having a bolt, *e*, and nut *e'* on the rear side, said bolt being adapted to pass up into the slit B and have the nut *e'* screwed on the end in rear of and bearing against the rear side of the flanges *b*, to secure said knife rigidly in place. It will be seen that by simply loosening the said nut the knife may be taken out by sliding the bolt down the slit B, when the nut will pass out between the flanges below the said narrow slit.

F is the movable plate, having the ledger-plate *f* bolted to the rear side and forming a groove, *f'*, on each side for the reception of the flanges *b*. To place the knife in position, it is necessary to slide it in from the lower ends of the arms *a*.

G G represent links, bifurcated at each end and bolted at the lower ends on opposite sides of the perforated ears *g'*, formed on the insides of the handles C, and at the upper ends they are provided with stationary bolts H, secured in the aligned openings in the bifurcated ends and extending across the opening between the ends. The said bifurcated upper ends of the links G are passed on either side of the lower movable knife, F, and the bolts H inserted into the recesses *F'*, formed in the outer edges of the said knife.

It will be readily seen that while the tool is in operation, the handles being only swung outwardly a moderate distance, the bolts H will be securely held from slipping out of the said recesses *F'*, and when it is desired to remove the knife entirely from the frame it is simply necessary to spread the handles wide apart, thus drawing the bolts in the ends of the links out of the said recesses and allowing the knife to be taken out.

To replace the knife in position, slide it partly up on the flanges *b*, place the bolts H in the recesses therein, and draw the handles together, and the cutter is ready for use.

I represents a check or adjuster to limit the motion of the handles toward each other, consisting of a bar, K, having a sleeve, *K'*, on one end to pass around and slide on one of the handles, and having a set-screw, *l*, to fix the said check at any desired point of the length of the handles. It will be evident that the



closer said check is set to the lower ends of the handles (said handles being diverging toward the lower ends) the closer the handles will come together, and consequently the nearer will the lower knife approach the upper. I provide still another means of "setting" the knives up as they wear down—namely, the nut *e'* may be loosened and the upper knife moved farther down in the frame, the space above said knife being bushed, thus forming a backing to prevent the return to the old position.

In my improved clipper I provide two means, therefore, of adjusting the knives as they wear, and thus obviate all danger of the tool becoming inoperative from the fact that the knives will not cut close; also, the manner of applying the power by means of the links is calculated to prevent all loss of power, as the action upon the knife is as direct as possible. Further, my manner of constructing the tool enables the knives to be removed from the frame for sharpening or any other purpose without loosening or withdrawing a bolt or rivet, it being only necessary to spread the handles and the lower knife is released, the upper knife being withdrawn, as described, by sliding the bolt out of the slot B. Thus my cutter is very compact, strong, and durable, easily adjusted to take up wear, powerful in operation, and the blades are easily removed when desired. These being the most desirable points of excellence in a tool for the purpose named, the improved cutter will readily commend itself to the notice and esteem of those interested in the art to which it appertains.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a bolt-cutter, the handles, links pivoted thereto, and having a bolt or pin in the

upper end, combined with the movable plate or knife having recesses *F'* in the sides to receive said bolts H, said plate or knife being adapted when the handles are separated to be withdrawn from the frame of the tool, substantially as described.

2. In a bolt-cutter, the frame having arms *a*, provided with flanges *b*, and the knives E *F*, secured between said arms and adapted to be withdrawn therefrom by sliding down said flanges, and recesses *F'* in the movable plate, combined with the handles C and links G, secured at the lower ends to the handles and provided at the upper ends with bolts H, to operate in the recesses *F'*, and adapted when the handles are separated to be disengaged from said recesses and allow the withdrawal of the lower knife, substantially as described, for the purpose hereinbefore set forth.

3. In a bolt cutter, the combination of a frame provided with the arms *a* and the knife E, adapted to be rigidly fixed between said arms at the upper end, the movable plate or knife *F*, having the recesses *F'* near the lower end, the ledger-plate links G, bifurcated at both ends and secured at their lower ends to the ears *g'* on the handles, and at their upper ends to the lower end of plate or knife *F* by bolts H entering the recesses *F'*, the handles C, operating the movable knife by means of the links G, the adjuster I, secured to one of the handles C and bearing against the opposite handle, and the brace-bar D, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOHN H. WINDISCH.

Witnesses:

J. H. KRAEMER,  
C. H. STEWART.