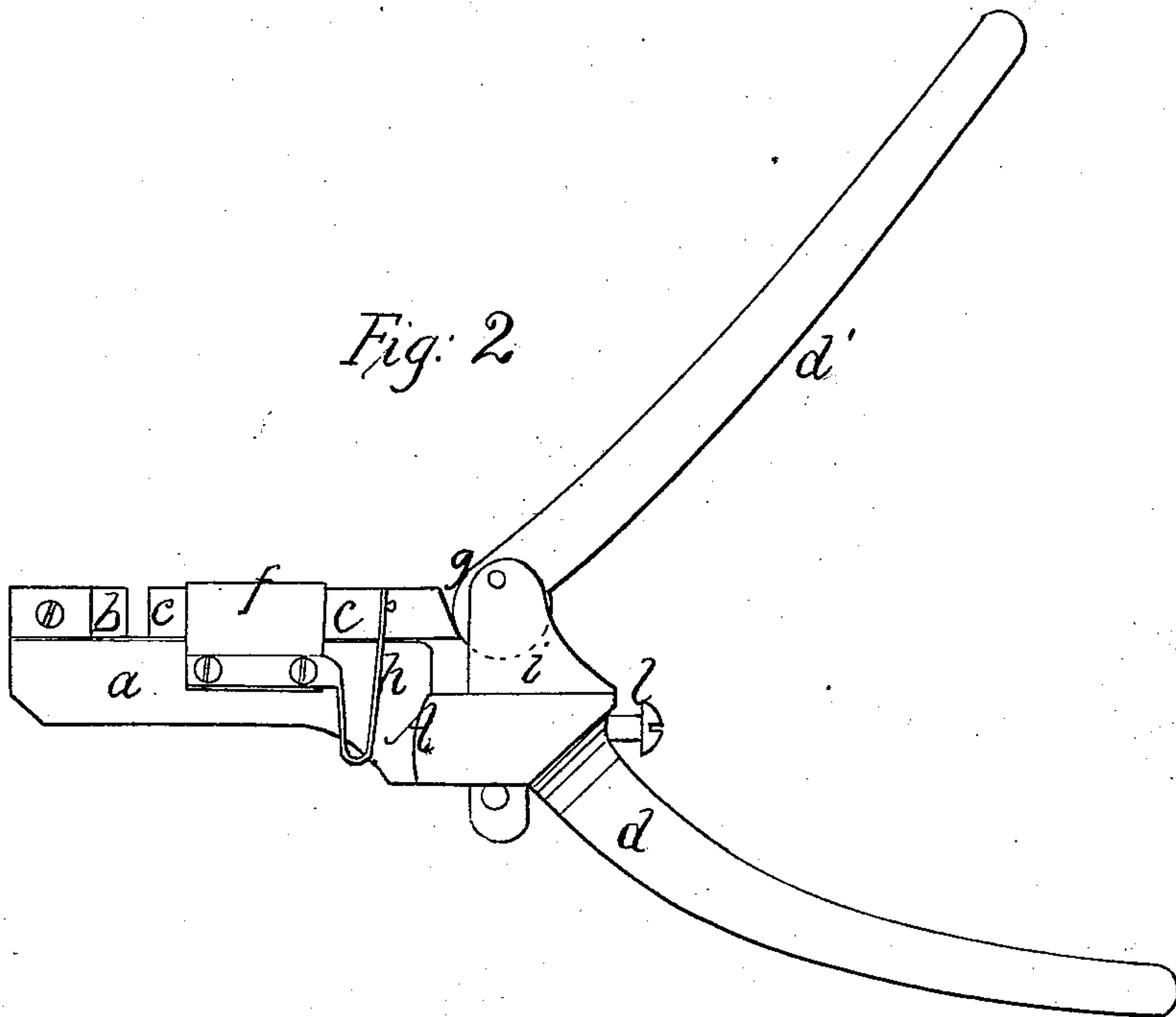
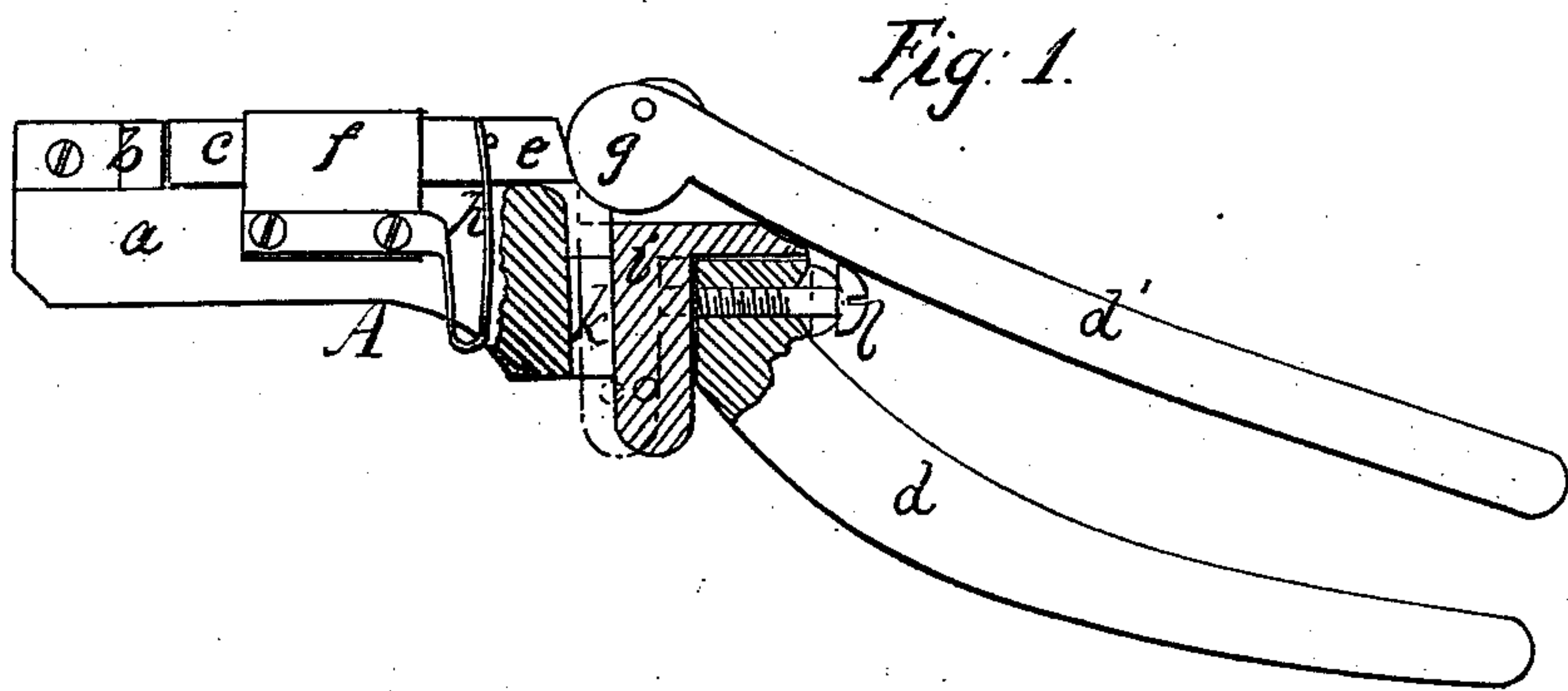


*G. W. Lewis,*  
*Bolt Cutter.*  
*N<sup>o</sup> 84,701.      Patented Dec. 8, 1868.*



*Witnesses;*  
*R. S. Orford*  
*W. A. Goder*

*Inventor*  
*G. W. Lewis*  
*By J. Fraser & Co*  
*attys*



G. W. LEWIS, OF DANSVILLE, NEW YORK.

Letters Patent No. 84,701, dated December 8, 1868.

IMPROVED BOLT-TRIMMER.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, G. W. LEWIS, of Dansville, in the county of Livingston, and State of New York, have invented a certain new and useful Improvement in Instrument for Trimming Carriage-Bolts and Rivets; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

Figure 1 is an elevation of my improved instrument, with the cutter closed, as in the act of trimming a bolt or rivet.

Figure 2, a similar view, but with the cutter open.

Like letters of reference indicate corresponding parts in both figures.

The object of my improvement is to provide a convenient instrument by which the ends of carriage-bolts and rivets may be trimmed off neatly when in place.

The invention is an improvement on devices previously used, and consists in casting, with the stock, a curved or other-shaped handle, and employing an independent screw for adjusting the cutters.

In the accompanying drawings—

A indicates the stock of the instrument, having an arm, *a*, on which is mounted stationary knife *b* and sliding cutter *c*, and having also a handle, *d*, by which the instrument is operated. The cutter *c* is thrown forward in bearing *f* by means of cam *g*, and the reaction is produced by spring *h*. The cam *g* is pivoted to fulcrum-standard *i*, which adjusts forward and back in slot *k*, by means of screw *l*, or any equivalent device. Cam *g* has a lever, *d'*, which, when turned down, serves, with arm *d*, to form the regular handle by which the instrument is operated.

The special advantage of this arrangement consists in the combination of the adjustable fulcrum *i* with cutter *c*, whereby the wearing away of the edge of the cutter *c* may be compensated for.

In trimming the ends of carriage-bolts and rivets, when in place, it is desirable to cut the ends evenly and smoothly, and hence the sharp edges of the cutters should always shut closely together. By constant

wear and grinding, the edge retreats and leaves a gap, and the bolt or rivet is left with a rough projection in the centre, which is coarse and unsightly. In many instances, also, the bolt will be but partially cut, and it will require a second or third attempt, and the result is that the bolt is not only disfigured, but so mutilated that the nut cannot be easily turned off.

I remedy all these difficulties by adjusting the cam so as to bring the edges of the cutters in contact at all times.

By this means no "drawing" of the cutter is required, at least till it has worn up past the adjustability of the fulcrum.

A handle cast with the stock adds greatly to the strength of the device, there being considerable strain on parts during operation. It also allows a larger sweep of the cam-lever. My trimmer can be handled more readily than instruments of this kind hitherto in use. The curved handle allows bolts to be reached in some places where a straight handle makes them inaccessible. A handle not cast with the stock is weak, and will soon "give" or break, besides being otherwise complex and expensive.

I do not claim any of the parts shown in the Letters Patent of O. J. Smith, dated November 13, 1866.

I do not claim an adjustable fulcrum irrespective of the cutter, as I am aware that the same is not new; but

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The curved handle *d*, cast with the stock *A*, in combination with the independent screw *l*, the cam-lever *g d'*, fulcrum *i*, and the cutters *b c*, substantially as described, for the purpose specified.

2. In combination with the above, the spring *h*, substantially as and for the purpose described.

In witness whereof, I have hereunto signed my name, in the presence of two subscribing witnesses.

G. W. LEWIS.

Witnesses:

R. F. OSGOOD,  
QUINCY VAN VOORHIS.