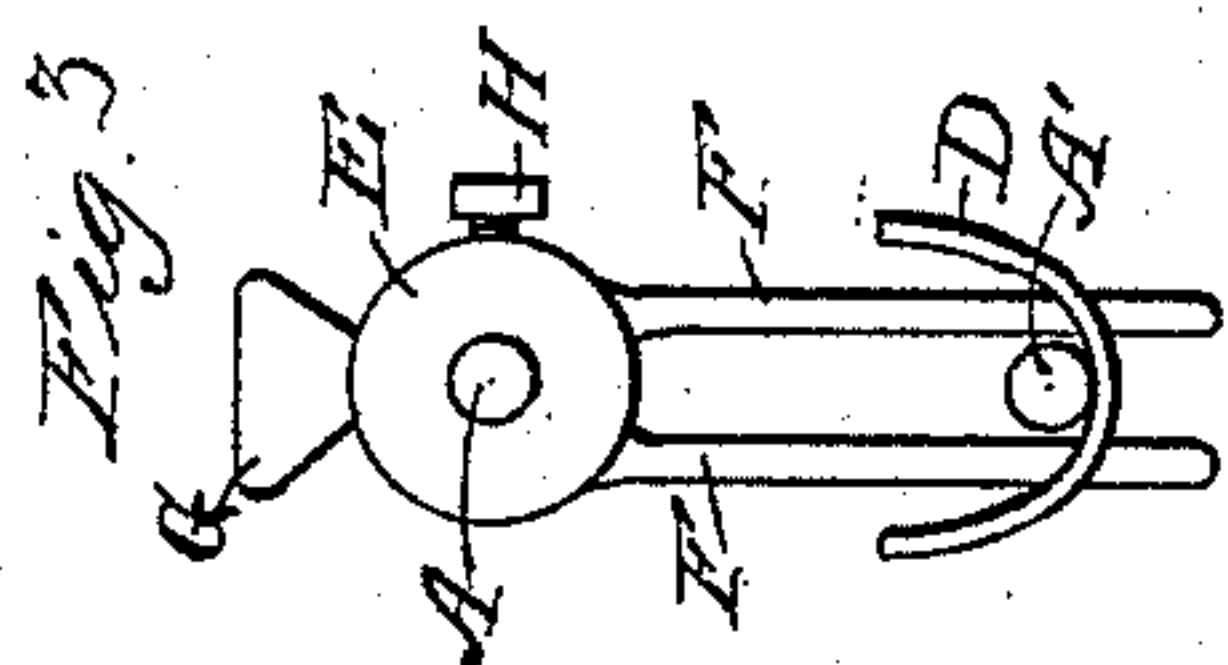
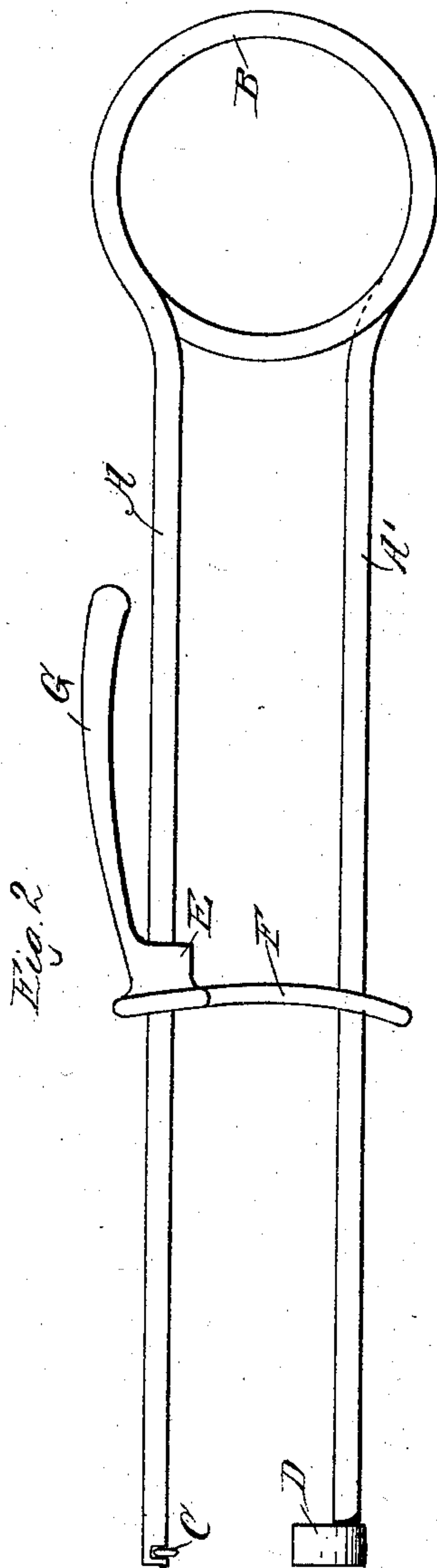
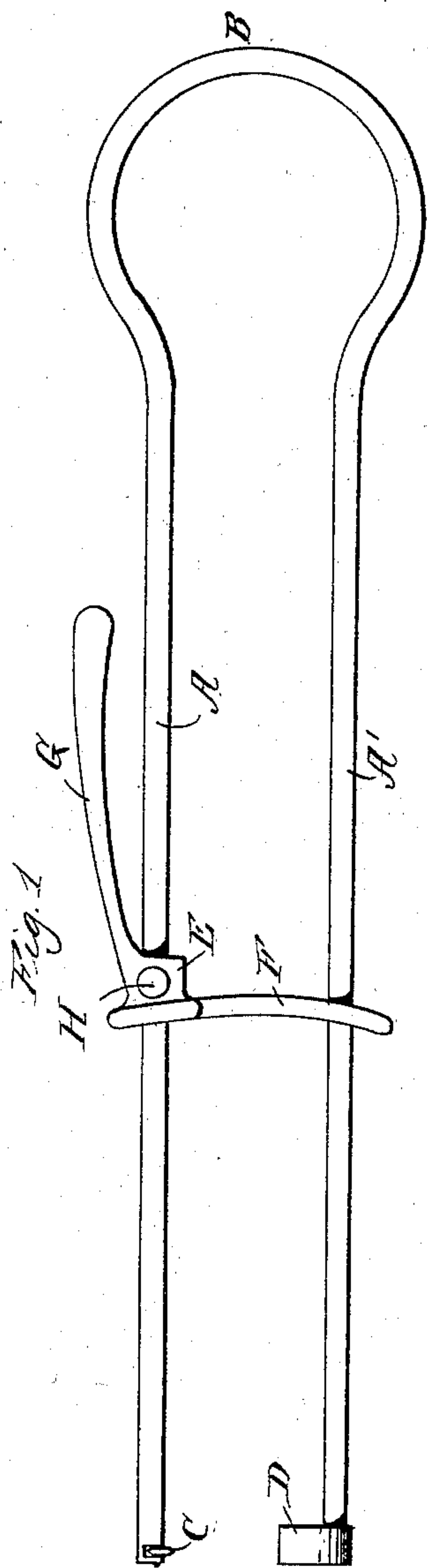


(No Model.)

A. ADAMS, Jr.
GLASS TUBE CUTTER.

No. 505,211.

Patented Sept. 19, 1893.



Witnesses
W. M. K. Fowler

Inventor

UNITED STATES PATENT OFFICE.

AUSTIN ADAMS, JR., OF ORANGE, NEW JERSEY.

GLASS-TUBE CUTTER.

SPECIFICATION forming part of Letters Patent No. 505,211, dated September 19, 1893.

Application filed June 6, 1891. Serial No. 395,334. (No model.)

To all whom it may concern:

Be it known that I, AUSTIN ADAMS, Jr., a citizen of the United States, and a resident of Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Glass-Tube Cutters, of which the following is a specification.

My invention relates to a novel construction of an appliance for cutting glass tubes, plates and other articles, and has for its object the provision of a device simple in construction, inexpensive in manufacture and efficient in practical use.

To attain the desired end, my invention consists in the construction and arrangement of parts hereinafter first fully described, and then pointed out in the claims.

In the drawings which form a part of this specification Figures 1, and 2, represent side elevations, and Fig. 3, an end view of a glass cutter constructed according to my invention.

Like letters of reference wherever they occur indicate corresponding parts in all the figures.

Referring again to the drawings A,—A', represent two jaws connected together in a movable relation preferably by means of an integral hinge B. consisting of a single coil as shown in Fig. 1 or of a double coil as represented in Fig. 2—by means of which hinge connection the jaws will, when caused to approach each other, ordinarily articulate in unison. One of the jaws, as A, is provided with a cutting implement as a rotary steel cutter, C. and the other serves to provide a rest for the glass being preferably provided with a clamp piece D.

In cutting glass tubes the jaw A. may be inserted within the tube as hereinafter described and upon the instrument being manipulated, the jaw A', will be caused to fit and abut against the exterior of the glass tube to be cut, and thus, in connection with the impact of the cutting disk C. against the inside of the glass tube, hold the tube steady and firmly in position between the parts A, A', at a right angle with the cutter C. while the glass is being cut, a circular channel being thereby cut or incised upon the inside of the glass tube.

The form of the connecting device or hinge B. may be varied and any equivalent means

substituted therefor, but I prefer the construction herein shown and described.

I supply means for keeping the jaws normally apart from each other, the same consisting in the present instance of the resilience of the spring metal out of which my appliance is constructed.

One of the jaws as A. is ordinarily provided with a scale and may also carry a gage plate E'. located upon a collar E loosely mounted upon the same. I also provide means whereby the jaws A, A' will approach each other in the same plane as for example, the means formed by the slot F', of the connection E, F, F, the depending guides F. F. of which may be secured to one jaw as A, and serve to provide means, as stated, for directing the course of the other jaw, as A', in its approach to the one first named.

In order to lock the gage-plate in any desired position and to obtain a greater leverage I provide one of the arms, as A. with a preferably forwardly projecting handle G. This handle serves two separate and independent purposes, and may be employed in either capacity, if desired, without the other. That is to say the handle G may be used first as a lever, the jaw A passing loosely within an orifice or collar E of the connection E, F, F, which is locked by the set screw H, the other jaw A', being prevented from escaping from the depending parts F, F, of the said connection; and second as a means, in connection with the interior orifice or bore of the said collar E, for automatically locking the connection E, F, F, and the jaw A together, the orifice through the said connection being in this case about the size of the diameter of the jaw A, whereupon the set screw H, may if preferred be dispensed with. It will be observed that my connection although engaging both jaws, is not directly connected with and does not bear directly against both jaws. The handle G extends either in a forward or backward direction, as preferred. The auxiliary mechanical devices as the connection E F F, gage plate E' and handle G. are movably mounted upon one of the jaws at or forward of the hinge connection.

In practical operation the connection carrying the gage plate E' may be placed in its proper location, with or without the use of a

set screw H, and the handle G, and the jaw A', are then grasped with one hand of the operator (which movement serves to lock the gage-plate in position) while the tube is held in the other hand. One jaw as A, is now inserted within the tube after which the parts, as the handle G, and jaw A', are pressed together imparting the necessary pressure upon the cutting implement G, in order to cause it to cut the circular channel required, after which a slight tap upon the end of the tube will cause the same to separate at the point incised, leaving an even square cut clean edge on the separated edges of the glass tube. The function of the handle or projection G being to lock the gage plate E, it is obvious that the same may be constructed so as to be operated by means of the set screw H, in lieu of the said locking handle.

As it is evident that many slight changes in the construction and relative arrangement of parts might be resorted to without departing from the spirit or scope of my invention, I would have it understood that I do not restrict myself to the particular construction and arrangement of parts shown and described, but that I reserve the right to make such changes and that,

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

1. A hand glass cutter consisting of two jaws flexibly connected at one end, and constructed and arranged to move with an articulating movement, and carrying at the other ends respectively a glass cutter and a suitable bearing opposite the cutter, the cutter carrying bar being provided with a gage block and handle integral therewith adjustable along the jaw.

2. A hand glass cutter consisting of two jaws flexibly connected by a spring consisting of a double coil and carrying at the other ends respectively a glass cutter and a suitable bearing opposite the cutter, the cutter carrying bar being provided with a gage block and handle integral therewith adjustable along the jaw.

3. A hand glass cutter consisting of two

jaws flexibly connected at one end, and constructed and arranged to move with an articulating movement, and carrying at the other ends respectively a glass cutter and a suitable bearing opposite the cutter, the tool being also provided with an integral handle and guide movably mounted upon one jaw of the same and located forward of the said flexible connection.

4. A hand glass cutter consisting of two jaws flexibly connected by a spring consisting of a double coil and carrying at the other ends respectively a glass cutter and a suitable bearing opposite the cutter, the tool being also provided with an integral handle and guide movably mounted upon one jaw of the same and located forward of the said connection.

5. The combination of two jaws flexibly connected at one end and carrying at the other ends respectively a glass cutter and a suitable bearing opposite the cutter, the cutter carrying jaw being provided with a gage block adjustable along the jaw and provided with two projecting bars for guiding the opposite jaw, and with a projecting integral handle whereby pressure applied upon the outside of said handle will lock said guide block upon the bar.

6. The combination of two jaws flexibly connected at one end by a spring consisting of a double coil and carrying at the other ends, respectively, a glass cutter and a suitable bearing opposite the cutter, the cutter carrying jaw being provided with a gage block adjustable along the jaw and provided with two projecting bars for guiding the opposite jaw, and with a projecting integral handle whereby pressure applied upon the outside of said handle will lock said guide block upon the bar.

Signed at New York, in the county of New York and State of New York, this 3d day of June, A. D. 1891.

AUSTIN ADAMS, JR.

Witnesses:

WM. M. V. FOWLER,
L. M. MEEKER.