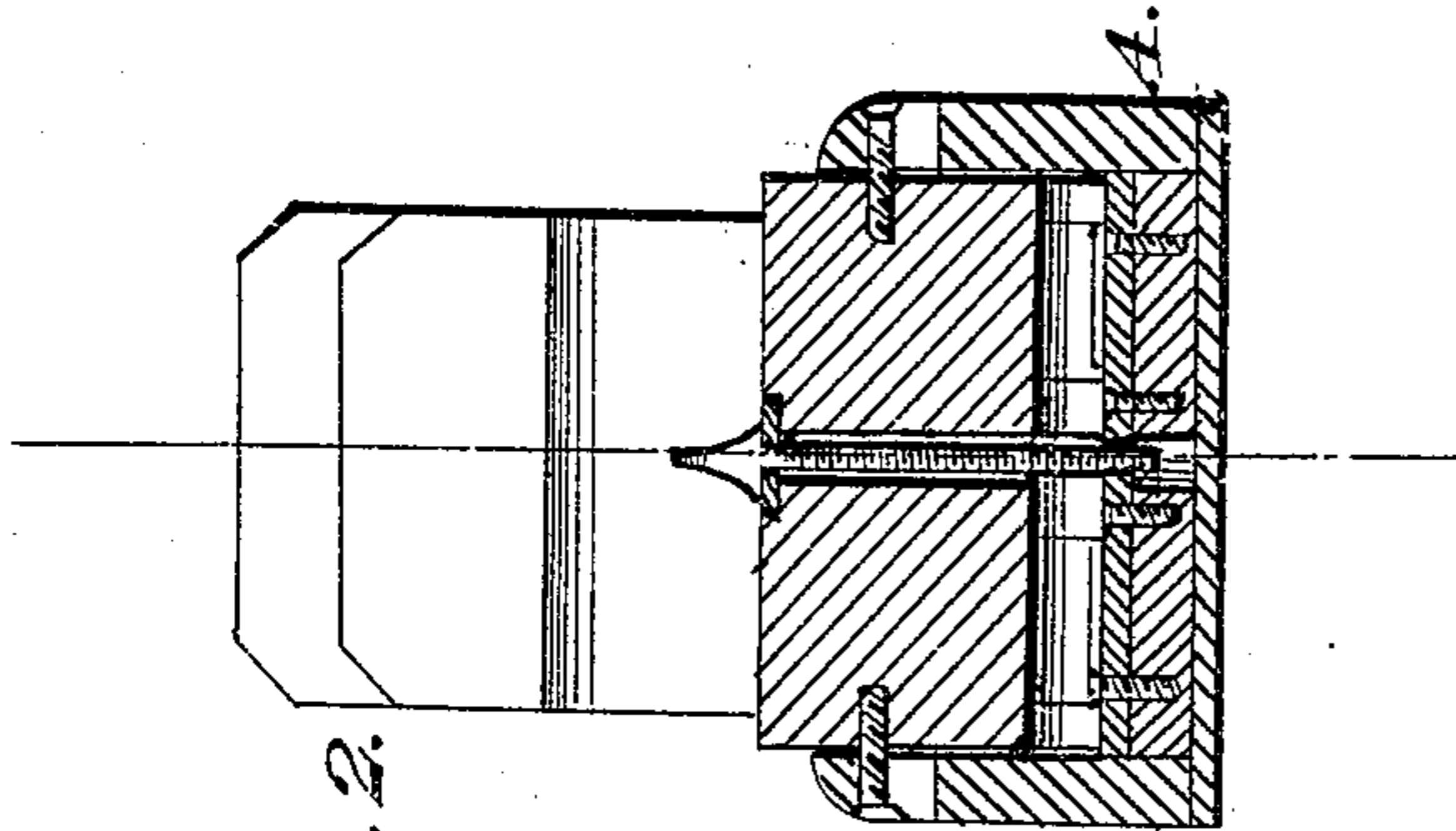


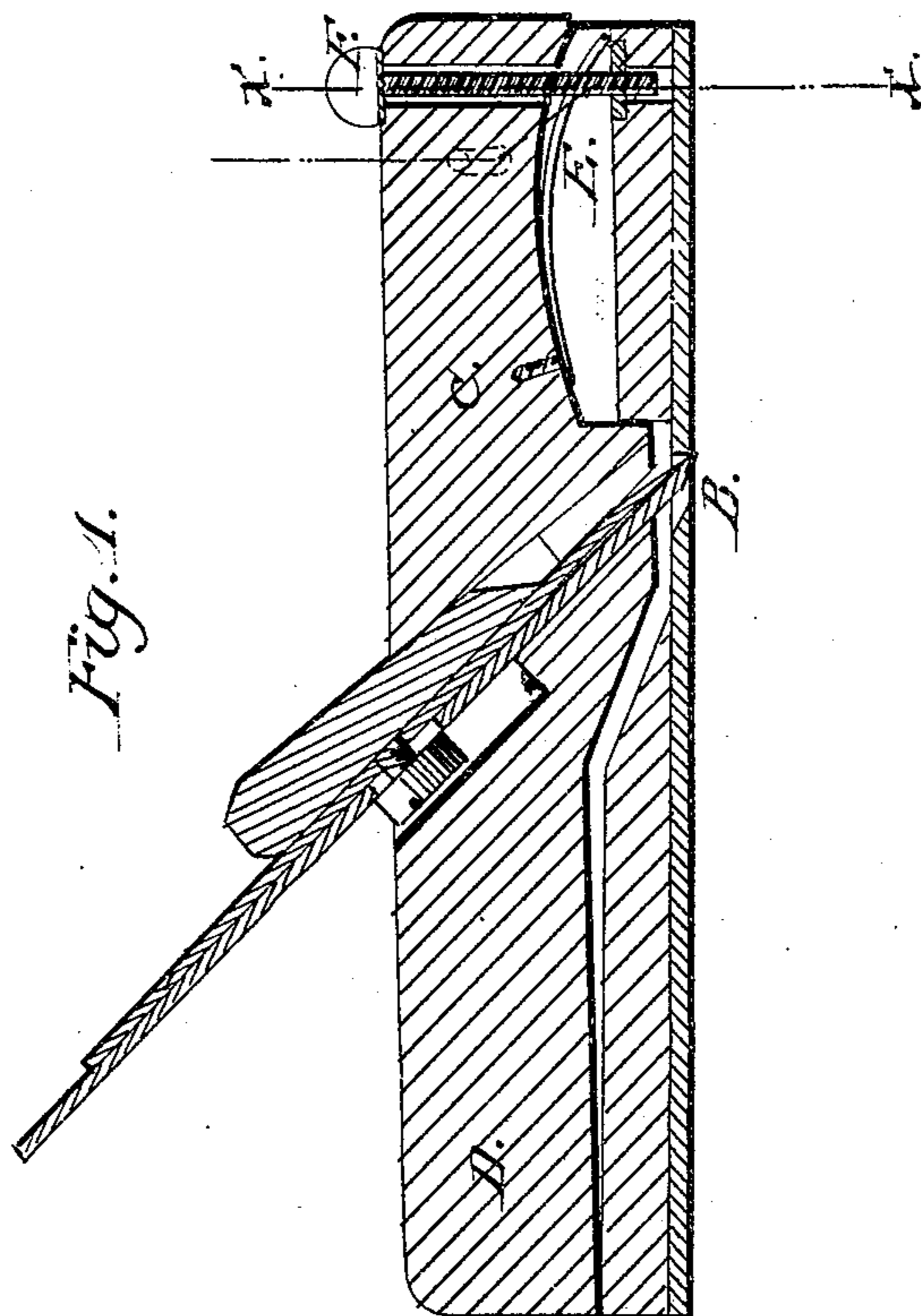
*G. Buckel,*  
*Bench Plane.*

*No. 81,335.*

*Patented Aug 25, 1868.*



*Fig. 2.*



*Fig. 1.*

*Witnesses:*  
*Wm. A. Morgan*

*Inventor:*  
*Geo. Buckel,*

*per Munn, & Co.*  
*Attorneys.*

# United States Patent Office.

GEORGE BUCKEL, OF DETROIT, MICHIGAN.

*Letters Patent No. 81,335, dated August 25, 1868.*

## IMPROVEMENT IN PLANES.

*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, GEORGE BUCKEL, of Detroit, in the county of Wayne, and State of Michigan, have invented a new and improved Plane; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The object of this invention is to provide a plane so arranged that the cut may be regulated either in a positive manner or by the pressure of the hand, and that the bit may be raised out of contact with the board being operated on when it is being moved back.

It consists in making the stock in two parts, one part, which supports the bit, being pivoted at the rear end in a longitudinal channel through the other, and provided with a spring and adjusting-screw at the other end, the springs being so arranged as to throw the bit out of contact with the board when the pressure of the hand is removed, and the set-screw governs the amount of such movement.

Figure 1 represents a longitudinal sectional elevation of my improved plane, and

Figure 2 represents a transverse section on the line *x x* of fig. 1.

Similar letters of reference indicate corresponding parts.

A represents one part of the stock, which is provided with a deep and wide channel in the upper portion from end to end, as clearly shown in fig. 2, and with an opening through the bottom for the plane-bit, as shown at B.

C represents the other part of the stock, which is fitted to the channel in the part A, and pivoted thereto at the rear end, as shown at D.

It is provided with the usual opening for the plane-bit and wedge, and for the escape of the shavings, and at the front end with a spring, E, in a recess in the under face of the same. The said spring bears upon the bottom of the channel, and has a constant tendency to raise the part C away from the said bottom of the channel.

F represents a set-screw, which screws into a nut in the bottom of the channel in the part A, and arrests the upward movement of the part C, due to the action of the spring. The said screw may be adjusted to regulate the said movement of the part C, as desired.

The plane-bit being set by the wedge in the part C as desired, the operator, in using the plane, may, on shoving it forward, so press down the front end of the part C as to cause the bit to take the full cut for which it is set, or, by a lighter pressure, take but a part of the said cut, and when the cut has been made, and the pressure necessary for making the same is relaxed, the spring will throw the part C up so as to take the edge of the bit out of contact with the surface being planed while the plane is being drawn back, thereby protecting the edge from being worn round from that cause.

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

A plane-stock, constructed of the parts A and C, pivoted together, and provided with a spring, E, and set-screw, F, substantially as and for the purpose set forth.

The above specification of my invention signed by me, this eighth day of July, 1868.

GEORGE BUCKEL.

Witnesses:

JOSEPH KUHN,

CHARLES STARKLOFF.