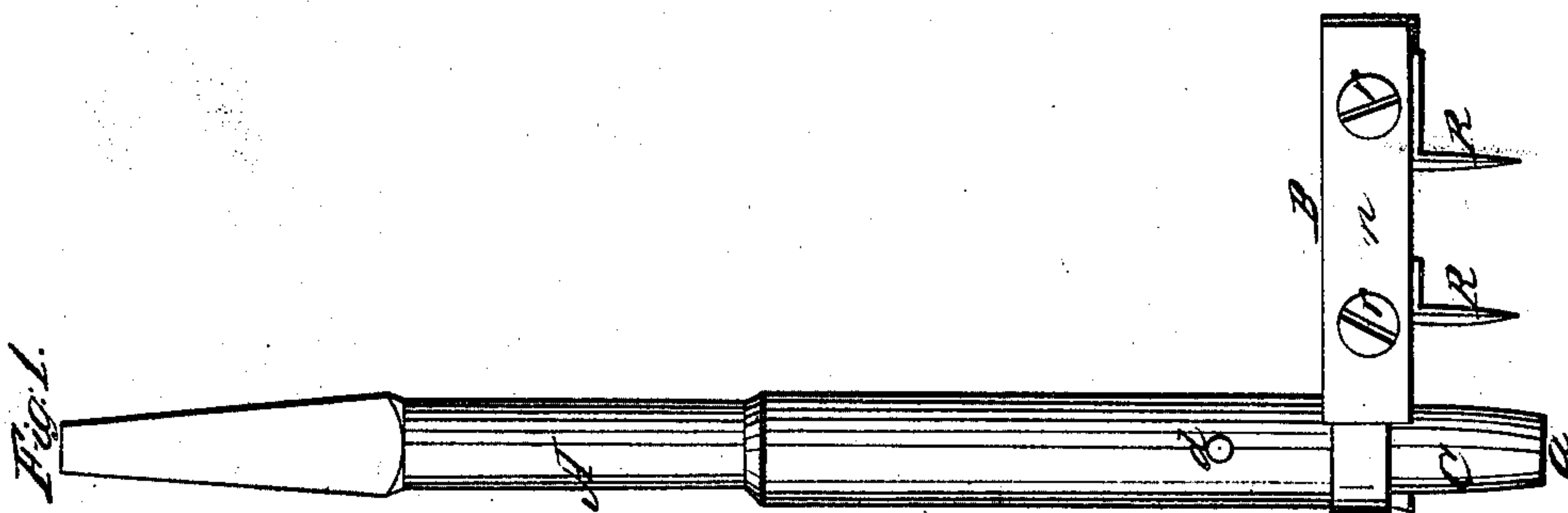
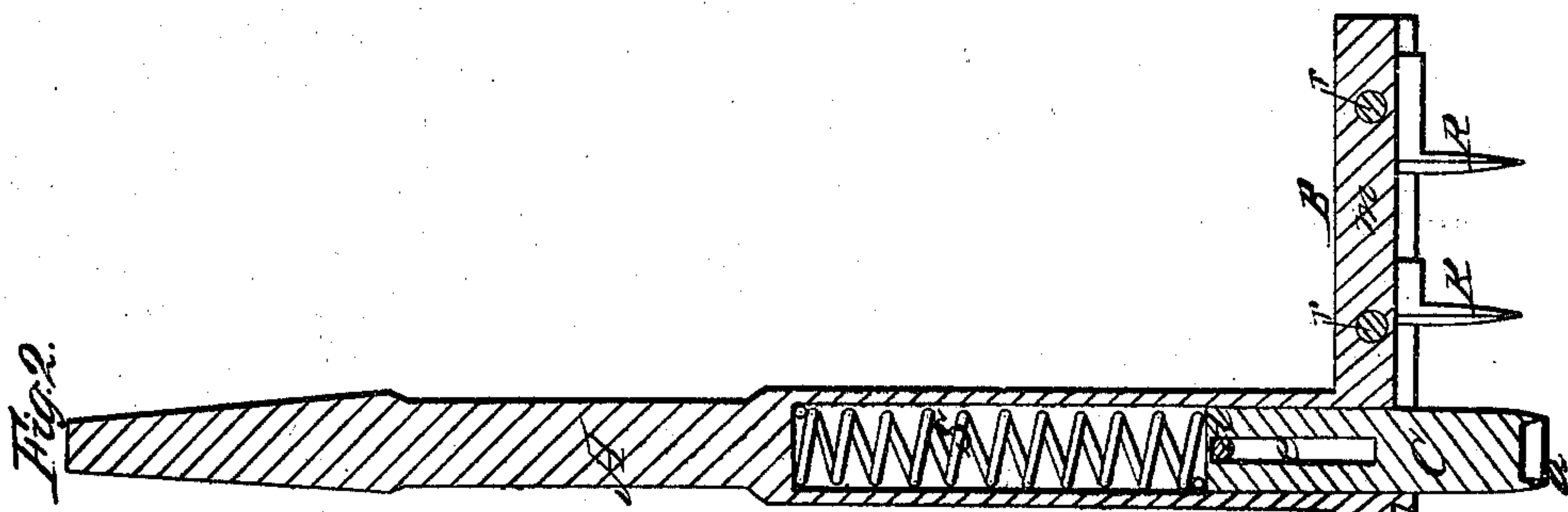
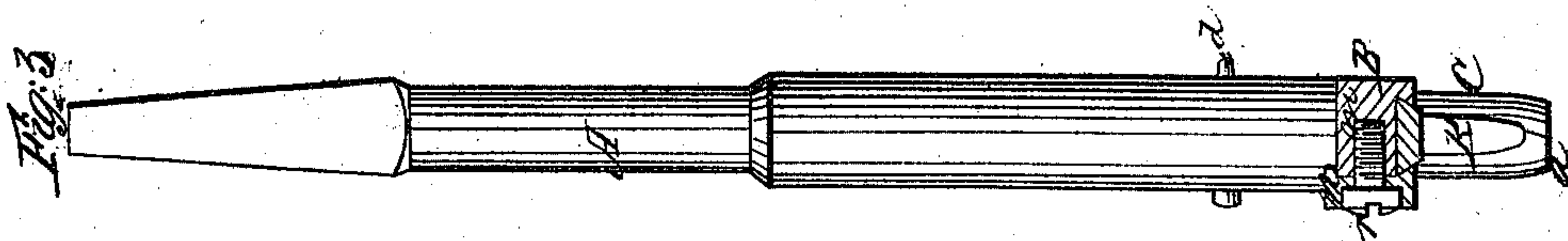


W. A. Clark.

Washer Cutter.

N<sup>o</sup> 94,870.

Patented Sept. 14, 1869.



Witnesses  
J. M. Brown  
J. H. Haynes

Inventor:

Wm. A. Clark



# United States Patent Office.

WILLIAM A. CLARK, OF WOODBRIDGE, CONNECTICUT.

Letters Patent No. 94,870, dated September 14, 1869.

## IMPROVED WASHER-CUTTER.

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, WILLIAM A. CLARK, of Woodbridge, in the county of New Haven, and State of Connecticut, have invented a new and useful Improvement in Adjustable Plug and Washer-Cutters, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, and in which—

Figure 1 represents a side view or elevation of an adjustable plug and washer-cutter, constructed in accordance with my improvement;

Figure 2, a sectional elevation of the same; and

Figure 3, a front view or elevation thereof.

Similar letters of reference indicate corresponding parts.

My invention relates to a plug and washer-cutter, in which a spring or yielding centre is used in connection with a radial arm, having an adjustable cutter or cutters, and attached to the stock which carries the centre, so that on applying suitable pressure and rotating the stock, the cutter or cutters make the necessary incision in or through the material out of which the plug or washer is to be made; and

The invention consists in certain novelties in the construction of said device or combination of parts, including an annular cutting-edged adjustable or springing centre, whereby the action of the tool is much improved, and many conveniences or advantages secured.

Referring to the accompanying drawing—

A represents the stock of the tool, suitably shaped at its upper or back end to admit of its being worked or rotated by a brace or other proper means, and which is of a socket-construction at its opposite end, to receive within it the centre C and spring S.

This centre C is of peculiar construction, being made to present an annular cutting-edge, *a*, at its outer end, whereby, on being pressed down on or against the wood, leather, or other material out of which it is required to cut a plug or washer, the same makes a circular cut or indentation in the surface of the material, that most effectually serves to guide or centre the tool during the action of the cutter or cutters R R.

This is important, as with a flat or conical centre the cutters, as they are rotated and borne down into the material by pressure on and rotation of the stock A, are very liable, as, for instance, in working on wood,

to follow at points in their rotation the fibre, dragging or pressing the centre to one side, and so destroying the truth of the cut by the deviation of the cutters from their circular travel, which makes irregular work.

Such irregularity is rendered impossible by the guiding or restraining action which is secured to the centre through its annular cutting-edge *a*, within the surface of the material.

In the socketed connection of said centre C with the stock A, it is preferred to restrict the centre from independently turning, and to lock the same with the stock, so that it may have play up and down therein, subject to the action of the spring S, to allow of the cutters projecting into and through the material, and, on removing pressure from the stock, of their clearing themselves from the cut.

This is done by cutting a vertical guiding-slot, *e*, through the centre C, and passing a locking-pin, *d*, through it and the stock.

The cutter or cutters R R, of which there may be one or more, accordingly as it is desired to cut plugs or washers, may be variously attached to their carrying radial arm B, so as to admit of their adjustment nearer to or further from the centre C, to suit different diameters of cut, but a most convenient and substantial attachment of the cutters and construction of said radial arm may be secured by forming such arm of a main branch, *m*, which is made a fixture to the stock and clamping-plate *n*, adjustable by screws *r r*, and both the branch and plate formed with dovetail-shaped inner edges, to hold the cutters R R in between them, and on slackening the screws *r r*, to admit of said cutters being slid or adjusted in direction of the length of the arm, as required.

What is here claimed, and desired to be secured by Letters Patent, is—

The combination, with the annular spring-borne centre C and its stock A of the cutter-arm B, constructed as described, of a main branch, *m*, and clamping-plate *n*, formed with dovetailed inner edges, to hold the adjustable cutters R R in between them, as shown and described.

WM. A. CLARK.

Witnesses:

FRED. HAYNES,  
HENRY PALMER.