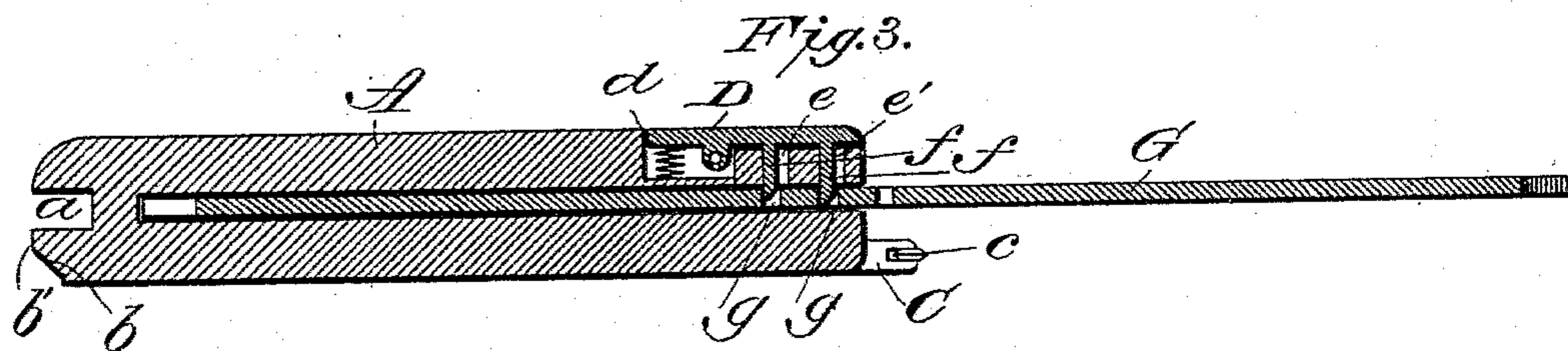
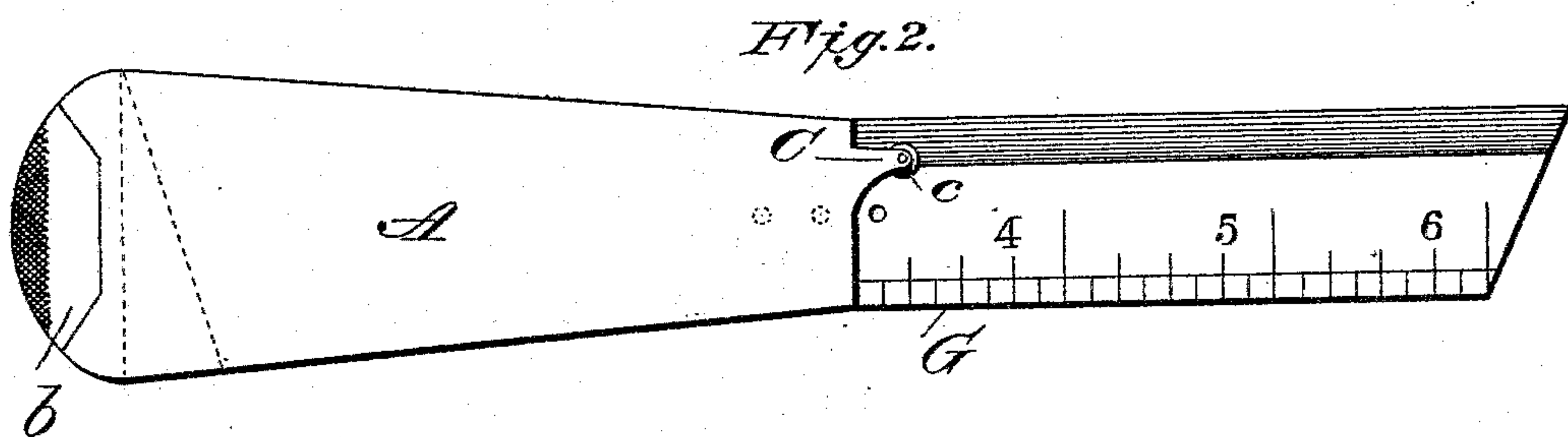
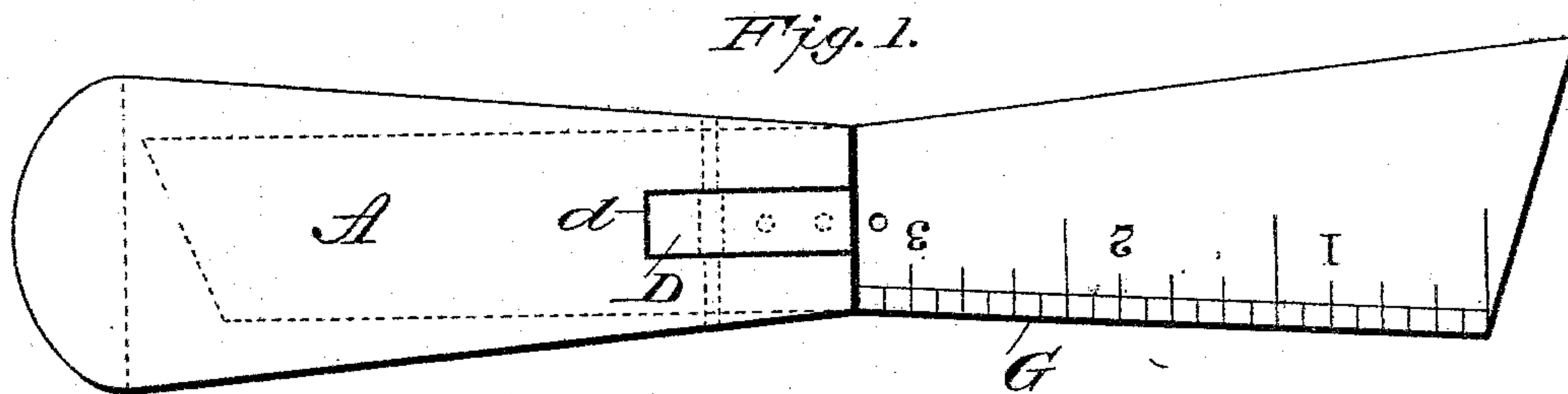


(No Model.)

E. F. HAYWARD.
COMBINATION GLAZIER'S TOOL.

No. 494,921.

Patented Apr. 4, 1893.



Witnesses *L. S. Elliott.*
W. H. Johnson

Enos F. Hayward
Inventor
by *[Signature]*
Attorney

UNITED STATES PATENT OFFICE.

ENOS F. HAYWARD, OF LAKE CITY, IOWA.

COMBINATION GLAZIER'S TOOL.

SPECIFICATION forming part of Letters Patent No. 494,921, dated April 4, 1893.

Application filed December 29, 1892. Serial No. 456,691. (No model.)

To all whom it may concern:

Be it known that I, ENOS F. HAYWARD, a citizen of the United States of America, residing at Lake City, in the county of Calhoun and State of Iowa, have invented certain new and useful Improvements in Combination Glaziers' Tools; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in glaziers' tools.

The object of the invention is to provide an implement in which will be combined a handle having a reversible blade to be used either as a putty knife or a trimming knife, said handle also having means for securing the blade in position, a glass cutter, point driver and a short slot for trimming the glass; as will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification: Figure 1 is a side elevation showing the knife with the puttying blade in position for use. Fig. 2 is a view showing the trimming blade. Fig. 3 is a longitudinal sectional view.

A designates the handle, which is preferably made up of a single casting and is provided with a slot or recess, *a*, designed to serve as a glass trimmer. One end of the handle is beveled on one side, as shown at *b*, so as to provide a point driver, and it will be noted that by providing this bevel the distance the point will be driven into the sash is limited, as the end *b'* will strike against the sash. At the rear end of the bevel is a shoulder which engages with the point, and it will be noted that the side of the handle which lies against the glass when the point is being driven is a plane surface.

C designates a projection located at one end of the handle, said projection being bifurcated to receive a revoluble steel glass cutter *c*. The side of the handle opposite this glass cutter is provided with a recess *d* and with apertures *e* and *e'*. In the recess *d* is pivoted a spring actuated catch *D*, which pro-

jects above the apertures *e* and *e'* and is provided with pins *ff* which project through said apertures and engage with perforations located near the center of the blade. The pin nearest the pivot is a little shorter than the other pin, so that when the catch is raised the blade can be withdrawn and reversed in the handle. The blade is constructed so that one end may serve as a puttying knife, while the other has a beveled edge and point so that it may be used as a trimmer for cutting away the putty from the sash frame. For convenience I graduate the blade as a rule as shown. By providing the spring catch with two pins the blade may be held securely in the handle.

The combination herein set forth forms a cheap and convenient tool for glaziers' use.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a glazier's tool, the combination of a handle having a spring catch and reversible blade, said handle being provided at one end with a projecting portion carrying a cutting wheel and at the opposite end a beveled portion with a shoulder which is adapted to serve as a point driver, substantially as shown, and for the purpose set forth.

2. In a glazier's tool, the combination of a reversible blade constructed substantially as shown and provided with apertures *g g*, a spring plate pivoted to one side of the handle and provided with pins of different lengths which are adapted to engage with the perforations in the blade, the handle having a glass cutter, point driver, and above said point driver a recess or open-ended slot, for the purpose set forth.

3. In combination with a handle constructed substantially as shown and provided with a recess and apertures, of a spring-actuated plate *D* pivoted within the recess and provided with pins *ff* of different lengths, a blade *G* having apertures with which said pins are adapted to engage, for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ENOS F. HAYWARD.

Witnesses:

E. W. TOWNSEND,
EVA R. HAYWARD.