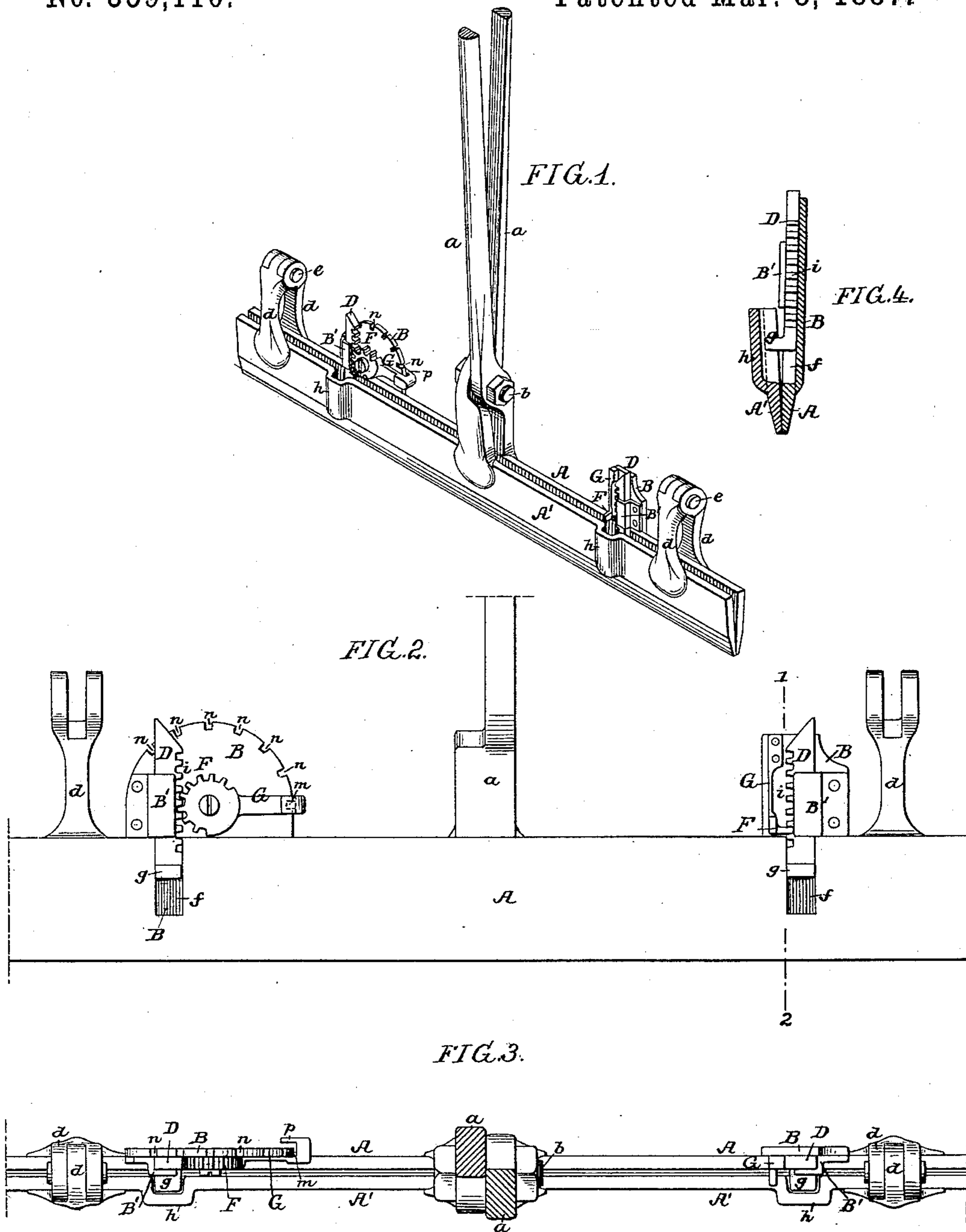


(No Model.)

J. A. VARE.  
TINNERS' TONGS.

No. 359,110.

Patented Mar. 8, 1887.



Witnesses:  
David S. Williams  
William D. Corner

Inventor:  
John A. Vare  
by his Attorneys  
Howson & Sons

# UNITED STATES PATENT OFFICE.

JOHN A. VARE, OF PHILADELPHIA, PENNSYLVANIA.

## TINNERS' TONGS.

SPECIFICATION forming part of Letters Patent No. 359,110, dated March 8, 1887.

Application filed June 28, 1886. Serial No. 206,422. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN A. VARE, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Tanners' Tongs, of which the following is a specification.

My invention relates to that class of tanners' tongs which have adjustable gages, the object of my invention being to provide the tongs with gages which can be readily adjusted, and securely locked in position after adjustment, and which can be applied to the tongs without materially weakening the blades of the same, without unduly increasing their bulk, and without interfering with the proper manipulation of the tongs.

In the accompanying drawings, Figure 1 is a perspective view of a pair of tongs provided with adjustable gages in accordance with my invention; Fig. 2, a plan view of part of one of the blades of the tongs and the gages and adjusting devices carried thereby; Fig. 3, a rear view of part of the pair of tongs; and Fig. 4, a transverse section on the line 1 2, Fig. 2, showing both blades of the tongs. Figs. 2, 3, and 4 are on a larger scale than Fig. 1.

A A' are the two blades of the tongs, each of which has a projecting operating arm or handle, *a*, these arms crossing each other, and being pivoted together by means of a pin, *b*, as shown. Each blade has near each end a projecting arm, *d*, and these arms are pivoted together by means of pins *e*, concentric with the pin *b*, the additional pivotal connection near each end serving to stiffen the blades and insure the maintenance of the same properly in line throughout their entire length.

Secured to or forming part of and projecting from the rear edge of the blade A of the tongs is a plate, B, which, in connection with a plate, B', secured thereto, forms a guide for a gage-stem, D, the front side of the latter being adapted to a recess, *f*, in the blade A, and being upturned or provided with a projecting tongue, *g*, which enters a hood, *h*, formed on or secured to the blade A', the preferable plan being to form this hood directly on the blade, as shown.

The gage-stem D has on one edge teeth *i*, to the spaces between which is adapted a retainer, F, which may be either in the form of a single tooth carried by an elastic arm, G, as shown at the right-hand side of Fig. 2, or it may consist of a toothed segment pivoted to the plate B and connected to an elastic arm, G, the outer end of which is provided with a tooth, *m*, for engagement with one of a series of notches, *n*, formed in the segmental edge of the plate B, as shown at the left-hand side of Fig. 2, a lug, *p*, on the arm serving, by contact with the under side of said plate, to prevent such strain on the arm as would interfere with or detract from its elasticity.

Either of the constructions shown permits the ready adjustment of the gage to suit the width of flange which is to be turned up, the gage being rigidly secured against accidental displacement after it has been once set.

The providing of the blade A' with a hood for the reception of the projecting end of the gage prevents any loss of strength which might be due to the cutting away of the blade for the reception of said gage.

I claim as my invention—

1. The combination of an adjustable gage-stem with a tong-blade having a rearwardly-projecting plate forming a guide for said stem, all substantially as specified.

2. The combination of a gage-stem having a toothed edge, a tong-blade having a projecting plate forming a guide for the stem, and a retainer engaging with the toothed edge of the stem, all substantially as specified.

3. The combination of the tong-blade having a projecting plate with retaining-notches, the toothed gage-stem, the segmental retainer engaging said stem, and the arm projecting from the retainer and having a lug for engaging with the notches of the plate, all substantially as specified.

4. The combination of the tong-blade having a projecting plate with notched segmental edge, the toothed gage-stem, the toothed segmental retainer, and the elastic arm of the latter, having a lug for engaging the notched edge of the plate, and a guard-finger for preventing the undue bending of the arm, all substantially as specified.

5. The combination of the gage-stem having a projecting end with a pair of tongs, one blade of which forms a guide for said stem, the other blade having a hood for the reception of the projecting end of the stem, all substantially as specified.

In testimony whereof I have signed my name

to this specification in the presence of two subscribing witnesses.

JOHN A. VARE.

Witnesses:

WILLIAM D. CONNER,  
HARRY SMITH.