



# UNITED STATES PATENT OFFICE.

ALLEN F. WILSON, OF CLAYTON TOWNSHIP, GLOUCESTER COUNTY, NEW JERSEY, ASSIGNOR TO MOORE BROTHERS, OF SAME PLACE.

## IMPROVEMENT IN GLASS-TOOLS.

Specification forming part of Letters Patent No. **154,109**, dated August 11, 1874; application filed July 25, 1874.

*To all whom it may concern:*

Be it known that I, ALLEN F. WILSON, of Clayton township, Gloucester county, New Jersey, have invented an Improvement in Tools for Finishing the Mouths of Glass Bottles, of which the following is a specification:

My invention consists, first, of a combination of the jaw-shanks with a spring-shield, employed to protect against heat the hands of persons using the tools, the respective shanks and the shield being attached together permanently, and forming a single piece, constructed and operating as hereinafter specified; second, a gage or plug constructed to revolve, and thus avoid wear of its conical end when the tool is being manipulated.

Figure 1 is a longitudinal section through the middle of the improved tool, dotted lines being introduced to show the changed relative positions of the parts when the tool is in use. Fig. 2 is a cross-section through the spring-shield *c* and either shank *b* or *b'*, at any point intermediate between the free ends *f* or *f'* of the shield and the points *d* or *d'*, where the shield and shanks are united. Fig. 3 is a cross-section of either shank on the line *x* or *y* of Fig. 1, showing one of the two similar free ends *f* and *f'* of the shield.

The jaws *a* and *a'* are of ordinary construction. When closed on the neck of a glass bottle and manipulated, as usual, they give the required shape to the exterior of the mouth of the bottle. *b* and *b'* are the shanks of the jaws, respectively. *c* is a spring-shield, permanently attached to the shanks *b* and *b'* at *d* and *d'*, from which points of attachment the spring *c* extends along toward the jaws, and over the outside of the respective shanks *b* and *b'*, leaving intervening open spaces *e* and *e'*, Figs. 1 and 2, between the spring and shanks, respectively, as shown. *f* and *f'*, Figs. 1 and 3, are the ends of the spring *c*. When the spring *c* is relieved of pressure, contact between the ends *f* and *f'* and the shanks is broken, as shown. *g* is the plug, the conical upper end of which is inserted, as usual,

into the neck of the bottle, it being employed to shape and gage the inside of the mouth of the bottle. The plug *g* differs in action from ordinary plugs employed for a like purpose in having capacity to revolve in its bearings. It is cylindrical in form, and is provided with a shoulder, *h*, near its lower end, which end passes through an aperture in the spring *c*, and is secured by a nut on the outside of the spring, as shown in Fig. 1. *i* is the plate, forming part of the plug, and arranged thereon so as to clear the jaws when they are closed, as shown by dotted lines, and not interfere with the revolving of the plug. *j* is the guide. It is furnished with the shoulders *k* and *k'*, which serve to gage the thickness of the ring intended to be formed on the neck of the bottle. The plug *g* passes through a corresponding aperture in the guide *j*, in which aperture it can be revolved.

Hitherto such plugs have been made stationary, which construction made it necessary for the conical end of the plug to turn in the mouth of the bottle when the tool was being manipulated. The conical end was soon worn by use, and thus unfitted to properly gage the mouths of the bottles, and had, therefore, to be frequently renewed, at considerable expense.

I claim—

1. The handle composed of the shanks *b* and *b'* and the spring-shield *c*, the shanks and shield being united permanently, and the shield being caused to extend along the shanks from their points of union toward the jaws *a* *a'*, leaving intervening open spaces between said spring and shanks, respectively, in the manner and for the purpose substantially as set forth.

2. The combination of the jaws *a* *a'*, shanks *b* and *b'*, spring-shield *c*, revolving plug *g*, plate *i*, and guide *j*, substantially as set forth, for the purpose specified.

ALLEN F. WILSON.

Witnesses:

CHAS. F. FISLER,  
BENJ. HARDING.