N. B. KEYES.

GLASS CUTTER.

APPLICATION FILED JAN. 31, 1908.

915,447. Patented Mar. 16, 1909.

Fig. 1.

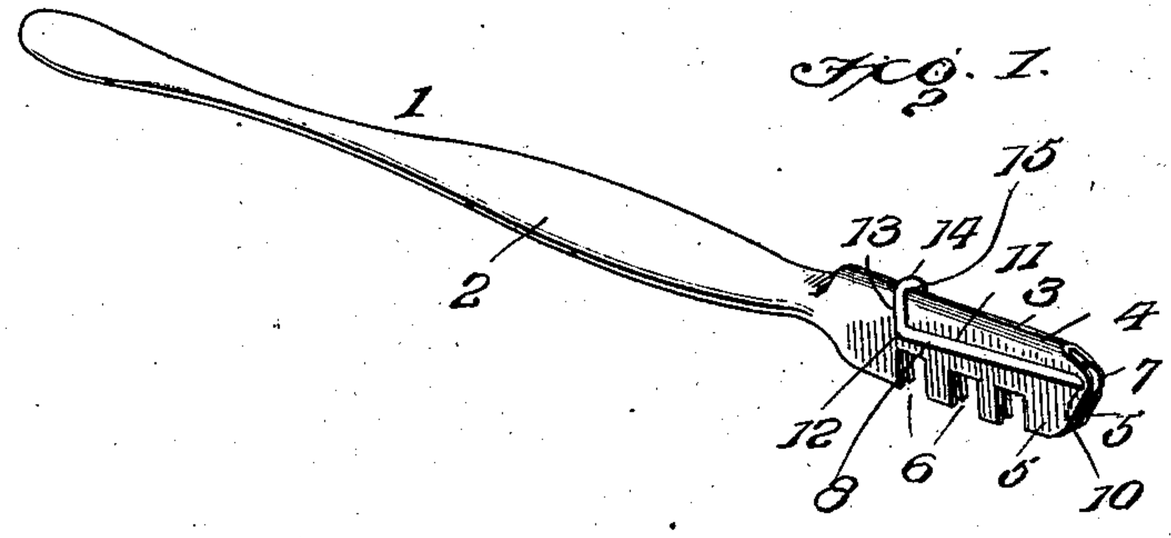



Fig. 2.

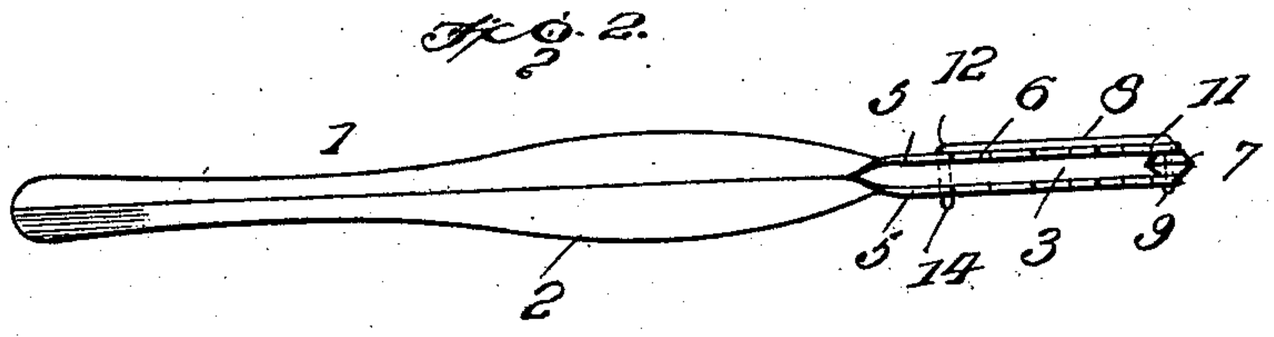



Fig. 3.

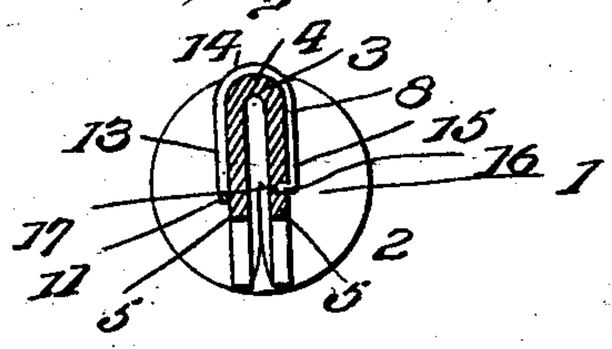



Fig. 4.

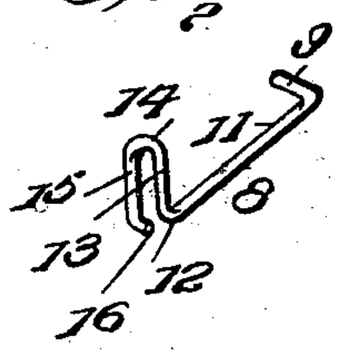
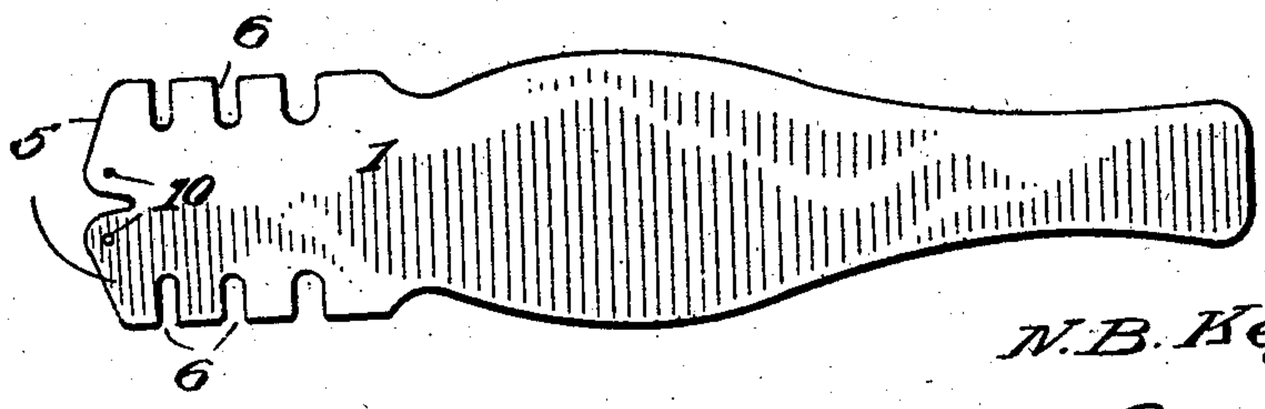



Fig. 5.

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# UNITED STATES PATENT OFFICE.

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## GLASS-CUTTER.

No. 915,447. Specification of Letters Patent. Patented March 16, 1909.

Application filed January 31, 1908. Serial No. 413,628.

*To all whom it may concern:*

Be it known that I, NELSON B. KEYES, a citizen of the United States, residing at Unionville, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Glass-Cutters, of which the following is a specification.

This invention relates to improvements in glass cutters.

The object of the invention is to produce the tool from a single piece of sheet metal, making an economical and durable structure.

A further object of the invention is to provide a detachable support for the cutting wheel, the support being of spring formation to engage an opening in the body of the tool.

The invention also relates to improvements in the details of construction and the specific arrangement of parts, which will be hereinafter referred to and particularly pointed out in the claims.

In the drawings—Figure 1 is a perspective view of my improved glass cutter. Fig. 2 is a bottom view. Fig. 3 is a cross section taken through the head. Fig. 4 is a detail view of the wheel support. Fig. 5 is a view of the blank.

1, indicates the tool formed from a single piece of sheet metal, and shaped to provide a handle 2, and head 3. The head portion is formed by bending the metal over itself as at 4, to provide spaced parallel members 5—5, having notches 6, at their ends for engaging the glass when separating it after cutting. The handle portion 2, is formed by bending the metal, the two ends being brought together in rear of the members 5—5.

The fold 4, at the free ends of the head is cut away to receive the cutting wheel 7, which is beveled on its edge in the usual manner. The cutting wheel is mounted on a detachable supporting element 8, one end bent to provide a journal 9, which passes through openings 10—10, in the members 5—5. From the journal, the supporting element is bent at 11, to lie close to the head and extends back a short distance and is bent again at 12, to extend upwardly as at 13, where it is again bent at 14, to provide a hook 15, which straddles the folded portion 4, of the head. The extreme end of the hook is bent inwardly to provide a slight projection 16, designed to engage an opening or seat 17, in the members 5. The support is constructed of thin spring metal, so that when it is applied, the projection will be sprung into the seat 16.

In operation, the journal 9, is passed through the openings in one of the members 5, and the wheel 7, is interposed, and the journal is forced through the opening to and through the opening in the other member. Then the hook is turned down toward the head until the hook embraces it and the projection 16, is opposite seat 17, when the former will be sprung into the latter, and hold the support, hence the wheel is locked to the head.

I am aware a support of this character is not broadly new, but by the construction set forth, I provide a positive locking connection between the parts, and do not weaken the body of the tool. The support being formed of spring metal the projection automatically engages the seat when the hook is forced down on the head.

What I claim is:

1. A glass cutter comprising a handle and a head, the latter having two spaced members, one of which is provided with a seat, a cutting wheel between the spaced members, a spring support on which the cutting wheel is mounted, said support having a lateral projection at one end to be sprung into the seat to lock the wheel in position.

2. A glass cutter comprising a handle and a head, the latter having two spaced members formed with openings, one of said members having a seat, a cutting wheel interposed between the members and formed with an opening, a support having a journal passing through the openings in the members and the cutting wheel, said support having a bent portion fitting snugly against the head and a yielding hook at the end of the bent portion to embrace the head, said hook having a projection, the projection being yieldingly held in engagement with the seat to lock the cutting wheel in position.

3. In combination a tool having two members formed with openings and a seat, a detachable element fitting between the members and formed with an opening, and a spring support through the openings in the members and the opening in the detachable element, and having its opposite end bent to form a hook formed with a lateral projection, the hook embracing the tool and the lateral projection being yieldingly held in the seat.

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

NELSON B. KEYES.

Witnesses:
H. V. McDONOUGH,
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