

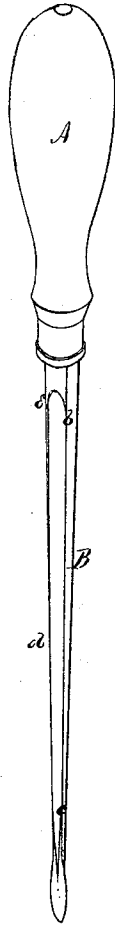
*F. I. Palmer,*

*Belt Awl.*

*No. 101655.*

*Patented Apr. 5. 1870.*

*Fig. 1.*



*Fig. 2.*



*Witnesses*

*Jno. A. Ellis.*  
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*Att'y.*

# United States Patent Office.

FREDERIC INGERSOLL PALMER, OF YOUNGSTOWN, OHIO.

Letters Patent No. 101,655, dated April 5, 1870.

## IMPROVED BELT-AWL

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, FREDERIC INGERSOLL PALMER, of Youngstown, in the county of Mahoning and State of Ohio, have invented certain new and useful Improvements in Belt-Awls; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, which form a part of this specification.

The nature of my invention consists in the construction of a "leather-awl," for making round holes, of any desired size, in leather.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a perspective view, and

Figure 2 is a cross-section of my improved leather-awl.

A represents the handle, to which the awl B is firmly secured, in any suitable manner.

The awl B is made with a spear-shaped point, *a*, sharpened on both edges, so as to easily penetrate the leather.

From the base of the point *a* the awl contracts or diminishes in thickness for a short distance, and then gradually increases up to the handle, it being convex on the lower side, and hollowed out or concave on the upper side.

The left-hand edge of this concave, that is, from *b* to *c*, has a sharp cutting-edge, while the right-hand edge, from *d* to *e*, is rather blunt.

To make holes in leather, the point *a* is pressed through it, until the leather is on the smaller portion of the awl directly above the base of said point. Then by turning the awl the cutting-edge *b c* cuts it out.

It will readily be seen that the hole can be made of any size desired, by merely pushing the awl through as far as deemed necessary, turning the awl all the time around from left to right.

If deemed necessary, both edges of the concave may be cutting-edges, in which case the awl may be turned in either direction.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

An awl, having cutting-edges as described, and a spear-shaped point, diminishing in thickness for a short distance above the base of said point, then increasing in thickness, as set forth.

In testimony that I claim the foregoing as my own, I affix my signature in presence of two witnesses.

FREDERIC INGERSOLL PALMER.

Witnesses:

J. R. DAVIS,

E. BRYNEX.