

*B. W. Nichols.*

*Shears.*

*N<sup>o</sup> 96339.*

*Patented Nov. 2. 1869*

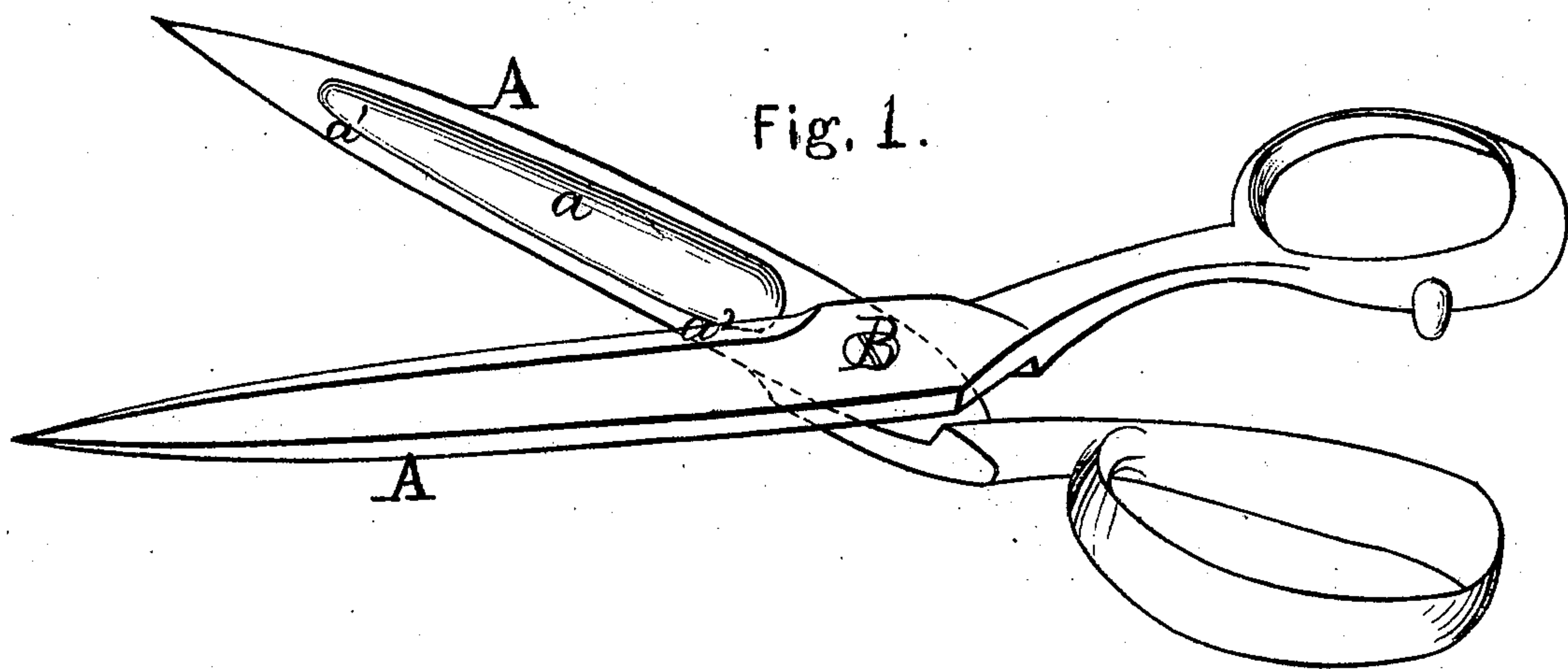


Fig. 2.



Witnesses:

*H. N. Doubleday*  
*A. B. Smith*

Inventor:

*B. W. Nichols*  
Per *A. M. Smith* Atty.

# United States Patent Office.

BYRON W. NICHOLS, OF CANTON, OHIO, ASSIGNOR TO CANTON MALLEABLE-IRON COMPANY, OF SAME PLACE.

*Letters Patent No. 96,339, dated November 2, 1869.*

## IMPROVEMENT IN SHEARS.

The Schedule referred to in these Letters Patent and making part of the same.

I, BYRON W. NICHOLS, of Canton, in the county of Stark, and State of Ohio, have invented certain Improvements in Shears, of which the following is a specification.

My invention relates to the construction of the cutting-blades of shears in such manner that the desired length and strength may be attained with the use of less material, while at the same time there is a greater uniformity of thickness throughout their entire length, thus securing a high degree of elasticity and a more perfect conversion into steel in the case of shears which are first cast from gray or white iron and then converted into steel.

A further beneficial result arising from my improved construction is a narrow cutting-edge which will not become bevelled and dull so soon as the wider ones, and which, when dulled, can be mach more readily put in order, particularly by persons not wholly familiar with the operation of grinding such articles.

Figure 1 is a perspective view of a pair of opened shears, embodying my improvement, and

Figure 2 is a section of the same when closed, taken through the line *y y*, fig. 1.

In the drawing—

A A are the blades of shears, of any usual or desired form or size, and may be made in any ordinary manner, although, in practice, I prefer to cast them from common gray or white iron, and then to steelify them by some of the many well-known processes.

B is a rivet, which secures the parts together, and also serves as a fulcrum.

*a* is a groove, cavity, or recess, upon the inner face of each blade.

This cavity or recess I make in form substantially as shown in the drawings, but both form and depth may be varied as experience or circumstances may dictate; however, I prefer that its outline shall be such that the cutting-edge which lies adjacent thereto, as indicated *a<sup>1</sup> a<sup>2</sup>*, shall be of uniform width throughout, in order that the abrasion of parts which occurs during use may wear away this edge as evenly as possible; I also prefer that the depth of the groove shall be such as to give as nearly a uniform thickness as possible to the blade, as it is less liable to warp during cooling, and in cases where it is steelified after shaping, it is much easier to do the work perfectly than it is when the blade is of varying thickness.

Having now described my invention,

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

The construction of the blades of shears, with a groove, cavity, or recess, as and for the purpose set forth.

BYRON W. NICHOLS.

Witnesses:

A. C. TONNER,

A. J. UNDERHILL.