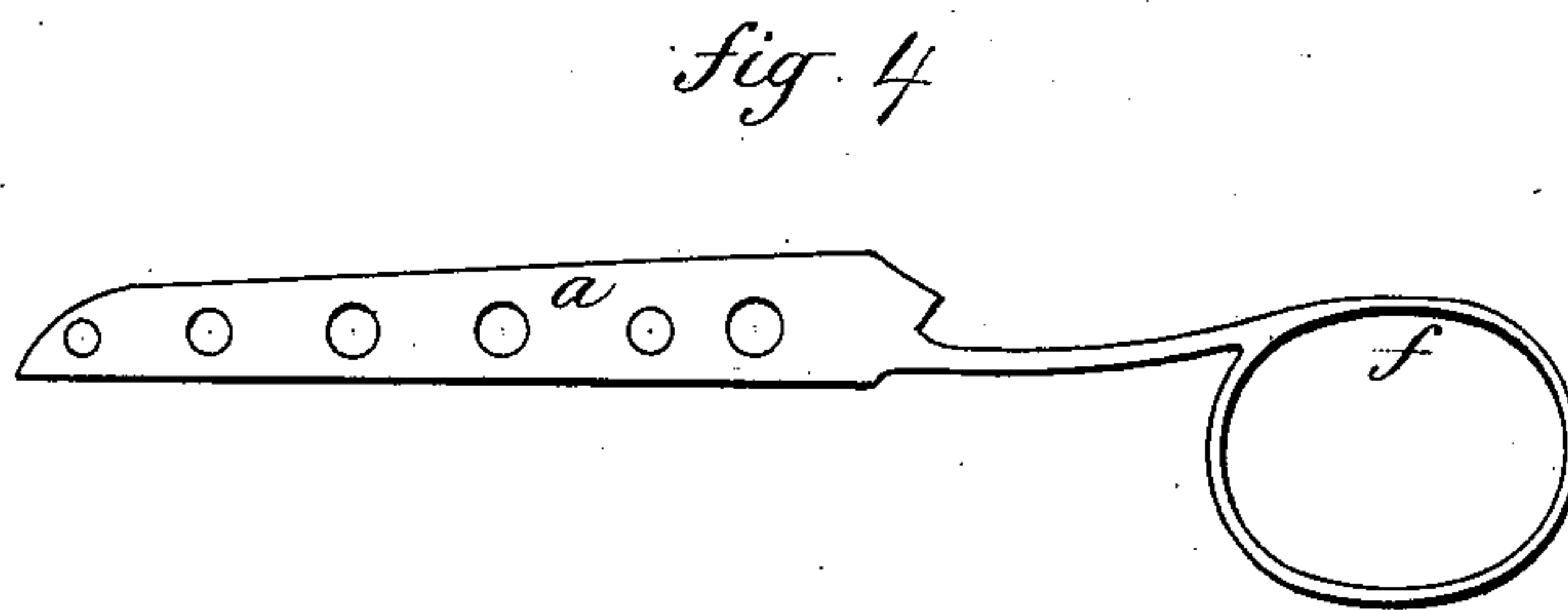
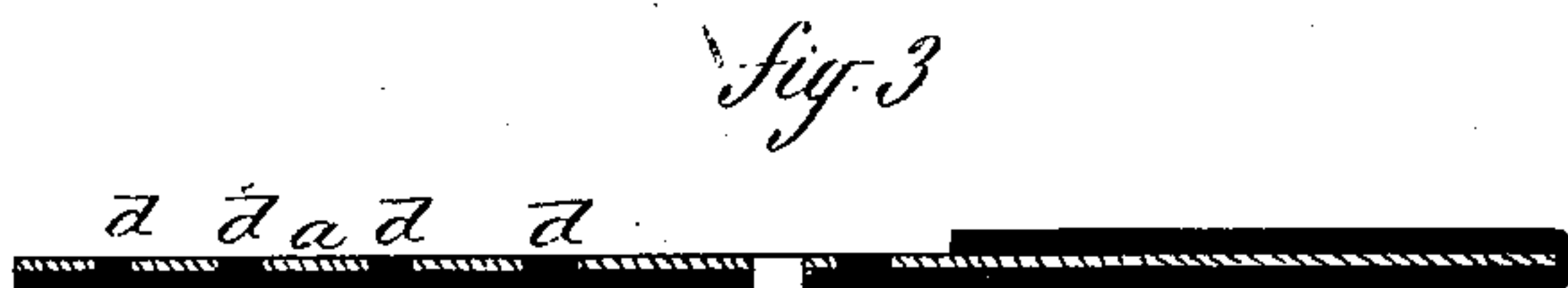
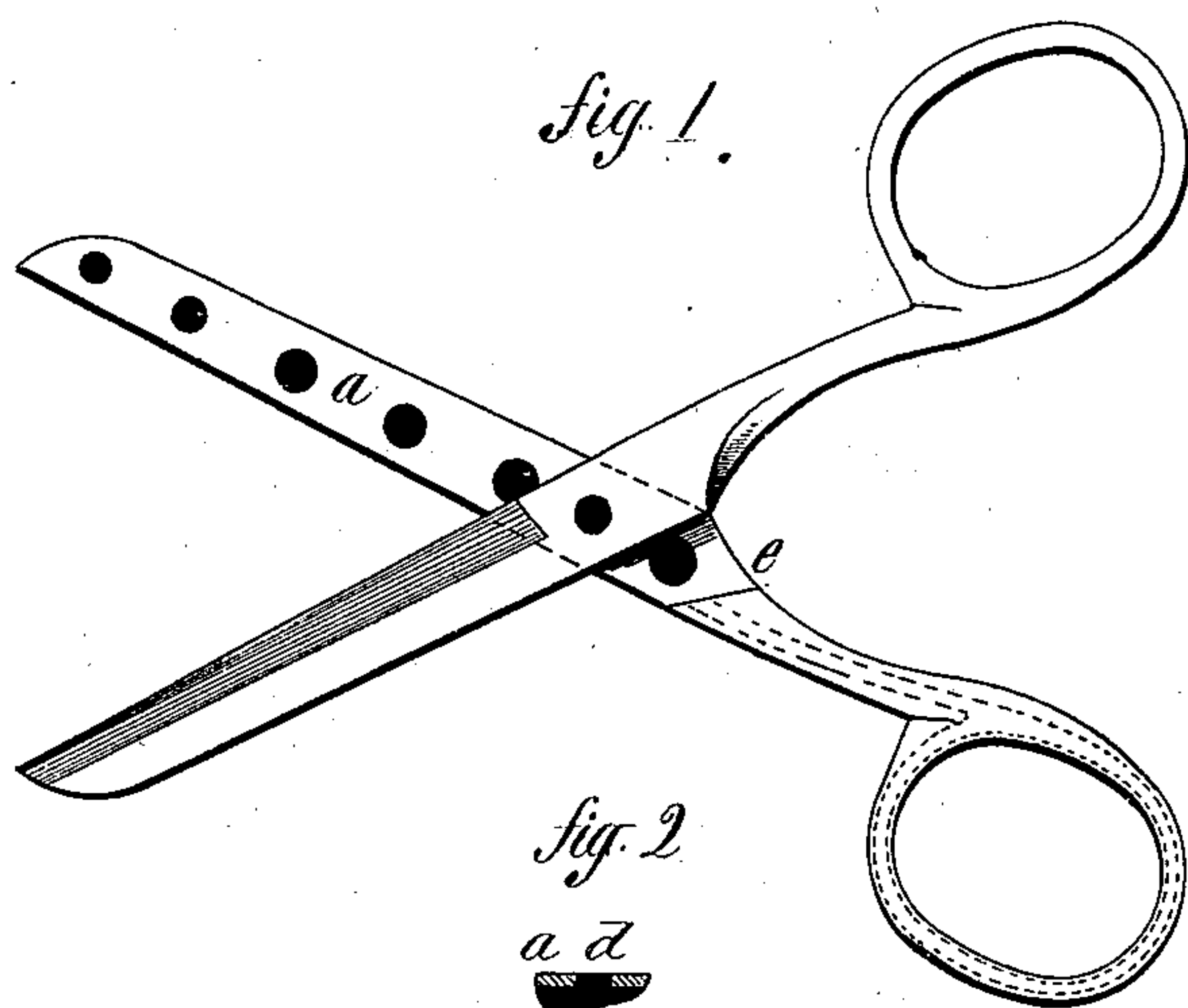


(Model.)

J. D. FRARY.
Scissors.

No. 227,514.

Patented May 11, 1880.



Witnesses.
W. H. Murray.
Wm. A. Earle

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UNITED STATES PATENT OFFICE.

JAMES D. FRARY, OF BRIDGEPORT, CONNECTICUT.

SCISSORS.

SPECIFICATION forming part of Letters Patent No. 227,514, dated May 11, 1880.

Application filed March 24, 1880. (Model.)

To all whom it may concern:

Be it known that I, JAMES D. FRARY, of Bridgeport, in the county of Fairfield and State of Connecticut, have invented a new Improvement in Scissors; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view of the scissors, the blades open; Fig. 2, a transverse section through one blade; Fig. 3, a longitudinal section through one blade and bow; Fig. 4, a steel blank, as prepared for introduction to the mold.

This invention relates to an improvement in the manufacture of scissors, the object being to use a white or soft metal for the body of the scissors which may be readily finished and yet not liable to oxidation; and the invention consists in the construction, as hereinafter described, and particularly recited in the claims.

White-metal, or such as does not readily oxidize, is not susceptible of being brought to a cutting-edge. Therefore, in the manufacture of such scissors, I first form a thin plate, *a*, of steel or similar hard metal, for the inner or meeting surfaces of the two blades, and so that the edge will be exposed. Preferably I make this plate the full size of the blade, as shown, but it may be less in extent, it only being essential that it shall form the cutting-edge. This plate I perforate at several points with holes larger upon the face than at the back, as by countersinking, or prepare it in such manner that the soft metal to be used for the body shall securely engage therewith. I then mold the blade and bow complete in the usual manner for casting soft metal, and place the strip of steel in its proper place in the mold; then pour in the soft metal, which fills the mold and unites with the steel by the perforations, as at *d*, or otherwise, and securely attaches itself to the steel, forming the bows complete. Then the scissors are finished in the usual manner.

The metal used is preferably what is known as "white-metal," because of the desirable

color; but other soft metal may be used with the same result.

As the metal would be liable to wear around the pivot, the steel or hard-metal plate of the blade should be extended backward to form a bearing for the pivot, as at *e*. This extension of the steel plate will add very much to the wear or durability of the scissors.

To strengthen the bows, the facing of the blade may be continued through the bows, the blank being cut as seen in Fig. 4, the bow part *f* sufficiently less in extent to be inclosed by the soft metal poured around it, as indicated in broken lines, Fig. 1. This blank may be stamped complete from any thin sheet-steel, and this not only gives a fine steel cutting-edge to the blade, but strengthens the scissors throughout, and enables the production of scissors of the highest finish and quality at a very small cost.

I am aware that cast-iron scissors have been made united to a steel edge in the process of casting; but this has only exposed the edge of the steel, leaving the cast-iron to form the meeting-surfaces, and the scissors so made are quite as liable to oxidation or rust as all-steel scissors.

I claim—

1. Scissors constructed from soft cast metal united in the process of casting to thin cutting-plates of steel or similar hard metal, substantially as described.

2. Scissors constructed from soft cast metal united in the process of casting to thin cutting-plates of steel or similar hard metal, when the said plates are extended back to form the pivot-bearing, substantially as described.

3. Scissors constructed from soft metal, the blades faced with steel or similar hard metal, which is extended back to the bows, the facing secured to the blade, and the extension of the bows inclosed by the soft metal in the process of casting, substantially as described.

JAMES D. FRARY.

Witnesses:

JOS. C. EARLE,
J. H. SHUMWAY.