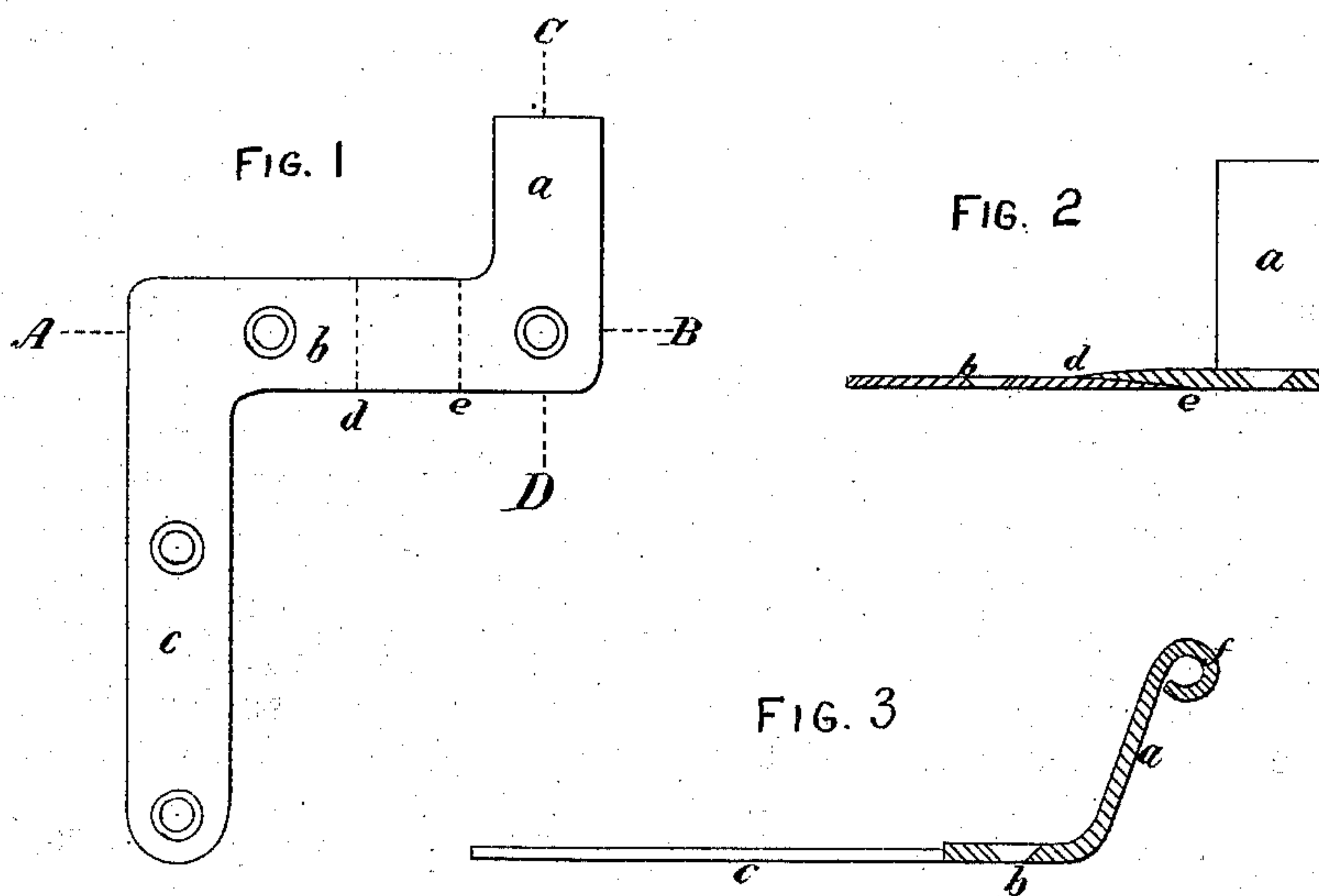


**Z. F. BRYANT.**  
**Blind-Hinges.**

No. 157,711.

Patented Dec. 15, 1874.



WITNESSES.

*Jas. E. Starbuck.  
Herbert T. Whitman.*

INVENTOR.

*Zenas F. Bryant  
By T. W. Porter Atty*

# UNITED STATES PATENT OFFICE.

ZENAS F. BRYANT, OF CHELSEA, ASSIGNOR TO WILLIAM CALDWELL, OF  
BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN BLIND-HINGES.

Specification forming part of Letters Patent No. **157,711**, dated December 15, 1874; application filed  
June 12, 1874.

### CASE A.

*To all whom it may concern:*

Be it known that I, ZENAS F. BRYANT, of Chelsea, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Window-Blind Hinges; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

This invention relates to the class of hinges which are formed with three arms or members and two right angles; and the invention consists in a hinge formed by cutting each of the right angles from separate sheets of metal of unequal thickness, and then uniting the said angles or parts by welding at some point in the central arm or member, the pintle-eye being formed in the arm of the thicker metal, in order that such projecting part, which unites with the wall-hook, shall possess the required strength, while the rail arm or limb is of thinner metal.

Figure 1 is a plan view of a hinge having the angles cut from separate sheets of metal and united by welding in the central arm. Fig. 2 is a vertical section taken on line A B, Fig. 1, and Fig. 3 is a vertical section taken on line C D, Fig. 1, both these sections showing the pivotal portion formed of metal of an increased thickness.

In the drawings, *a* represents the arm, formed with the eye *f*, in which the pintle of

the hook is inserted. *b* is the central arm, which is secured to the blind-stile, and *c* is the arm which is secured to the rail for the purpose of preventing the blind from sagging. The dotted lines *d e*, Figs. 1 and 2, represent the points of the lap where the two parts of the hinge are welded together. The point of union between these two constituent parts of the hinge may be at any point of the central arm between the two right angles; but I prefer that shown in the drawings. As before referred to, arm *a* and that part of arm *b* between arm *a* and the weld are of greater thickness than is arm *c*.

By my method of constructing this class of hinges a large saving is effected in the cost of material, as narrow iron is less expensive than that which is wide. A saving is also effected in the cost of cutting dies; and while that portion of the hinge which prevents the blind from sagging can be made of light iron, the pivotal portion can be formed of iron of such increased thickness as the weight of the blind may require.

I claim as my invention—

A blind-hinge having the three arms or members *a b c* cut from two pieces of metal of different thickness, and the two parts united by welding, as set forth and described.

ZENAS F. BRYANT.

Witnesses:

EBEN HUTCHINSON,  
EUGENE HUMPHREY.