B. D. WASHBURN.

Blind-Hinges.

No. 151,942. Patented June 9, 1874.

Fig. 1.

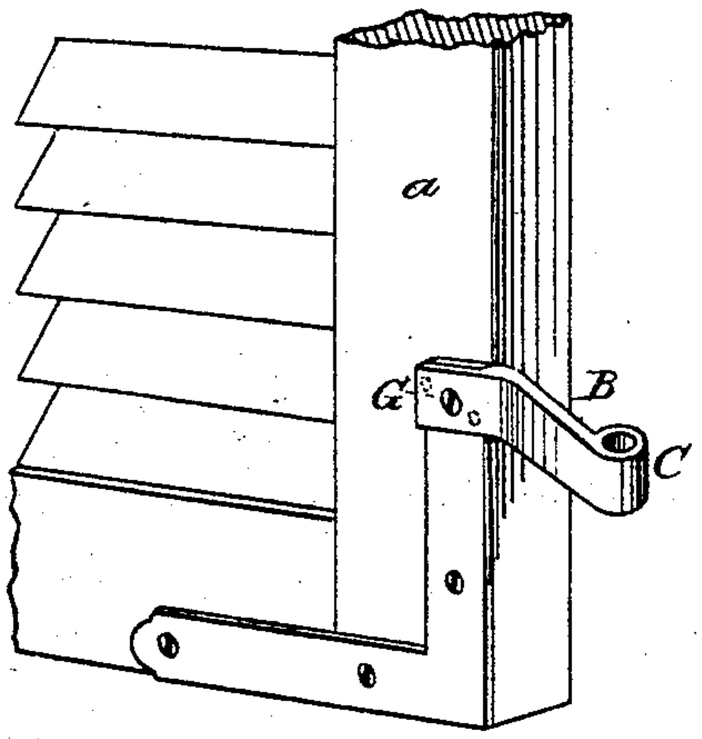


Fig. 2.

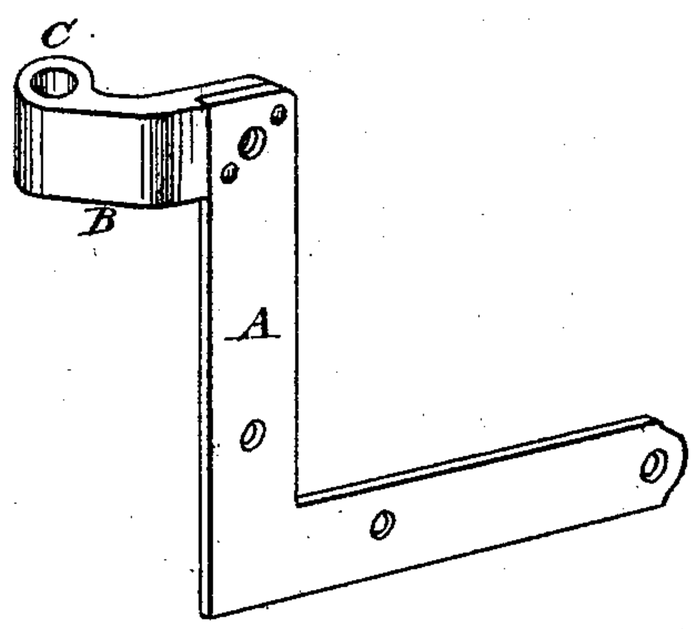


Fig. 3

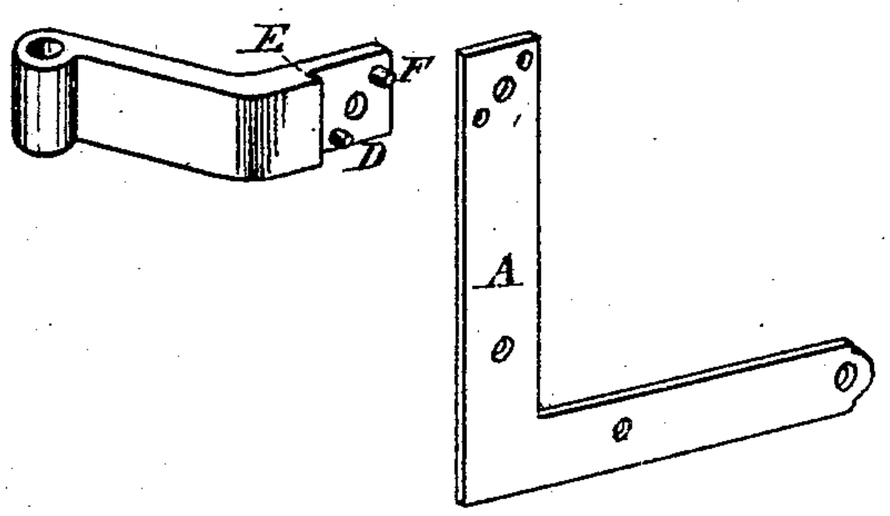
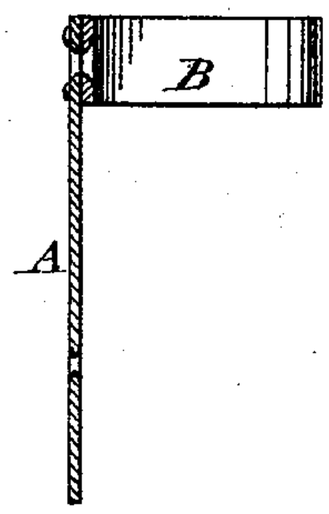


Fig. 4.



Witnesses.
W. J. Peyton.
N. R. Graham

Inventor.
B. D. Washburn.
By James L. Norris.
Atty.

UNITED STATES PATENT OFFICE.

BENJAMIN D. WASHBURN, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN BLIND-HINGES.

Specification forming part of Letters Patent No. **151,942**, dated June 9, 1874; application filed January 14, 1874.

To all whom it may concern:

Be it known that I, BENJAMIN D. WASHBURN, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Elbow Blind-Hinge, of which the following is a specification:

This invention has for its object to furnish a blind-hinge, which shall be durable and simple in construction, and more easily manufactured and applied in position than the hinges heretofore constructed under Letters Patent granted to me October 29, 1867, and No. 70,299. The invention consists in forming the hinge-arm or part which connects with the fixed pintle or hook of cast-iron, and separate from the elbow-plate, which is made of wrought-iron, and is attached to the shutter to act as a brace or stay, and thus, by making said parts separate from each other, they may be made of different metals, greatly reducing the cost of manufacture.

In the accompanying drawings, Figure 1 is a perspective view, representing my hinge as applied to a shutter. Fig. 2 is a perspective view, representing the hinge before being applied in position. Fig. 3 is a detached view of the parts, showing the supporting shoulder and studs; and Fig. 4 is a section of the angle-plate, representing the countersunk openings in the same.

In the manufacture of wrought and sheet iron hinges, as heretofore generally practiced, the parts composing the hinge are welded together, which renders it a difficult task to form a strong and neat hinge, as flaws and other incidental defects occur in the iron of which such hinges are constructed.

In order to avoid these defects, and to furnish a strong and durable hinge, I proposed the idea of constructing blind-hinges of a single piece of wrought or sheet iron, as described in my Patent No. 70,299, but owing to the fact that the best quality of iron must be used in the construction of the hinges, and as a waste of metal generally occurs in cutting out the hinge-blanks, the cost of manufacture is found to be too great.

In order to furnish a hinge which shall combine the strength and durability of the single-piece wrought-iron hinge, together with a reduced cost of manufacture, I propose to construct the same in two separate parts—that is, forming the angle-plate which is attached to the shutter in one piece, and the hinge-arm which turns on the fixed pintle of another piece.

As represented in the drawing, A designates the angle-plate, which is formed of wrought-iron, and is secured to the corner of the shutter *a* to brace or stay the same, and to support the hinge-arm B, which is made of cast-iron. Said elbow-plate is provided with countersunk openings on one or both of its sides, so as to enable it to be reversed for use on right or left hand shutters. The hinge-arm B, which is made or formed in one piece, is cast in molds together with the pintle-socket C, at its outer end.

In an ordinary hinge made of sheet metal, the pintle-socket is weakened to a considerable extent at the point where the bend of the metal occurs, but in a cast-metal socket, as now proposed, this result is perfectly avoided.

The hinge-arm B may be made straight, or bent into an elbow form, according to the location of the shutter and description of the building to which it is applied, a straight arm being used when the shutter is not required to clear obstructions on the building, and an elbow-arm being resorted to when projections necessitate a certain outward throw of the shutter. The pintle-sockets may also be arranged on different sides of the hinge-arm, as shown in the drawings, to enable it to be used with right and left hand shutters. The inner extremity of the hinge-arm is reduced in thickness to the extent of the width of the angle-plate, so as to form a seat, D, and shoulder E. Said seat receives the end of the angle-plate, and the shoulder rests or bears against the edge of the plate, so as to offer a firm support and strong connection for the parts composing the hinge. The permanent connection of the hinge-arm to the angle-plate is effected by studs or rivets F, which may be formed integral with the hinge-arm or they may be made separate, but in both cases they are passed through holes in the angle-iron, and then riveted or headed.

While I deem the studs to possess the requisites of a firm and durable fastening, I do

not invariably propose to use the same for fastening the parts of the hinge together, for I may employ instead an ordinary screw, G, which is passed through openings in the hinge-arm and angle-plate, so as to enter the shutter, said screw being resorted to, however, in every instance, whether the studs be used or not, in order to fasten the hinge to the shutter. It will, of course, be apparent, that the connection of the hinge-arms with the wall of the building is effected by a fixed pintle, which may be in the form of an ordinary hook, or the pintle of a male butt.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The angle-plate A, formed of wrought metal, and the hinge-arm B formed of cast metal, of separate pieces, and connected together, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 7th day of January, 1874.

B. D. WASHBURN.

Witnesses:
WM. J. PEYTON,
A. H. NORRIS.