J. W. Jordan,

Hinge.

No. 85,310. Patented Dec. 29, 1868.

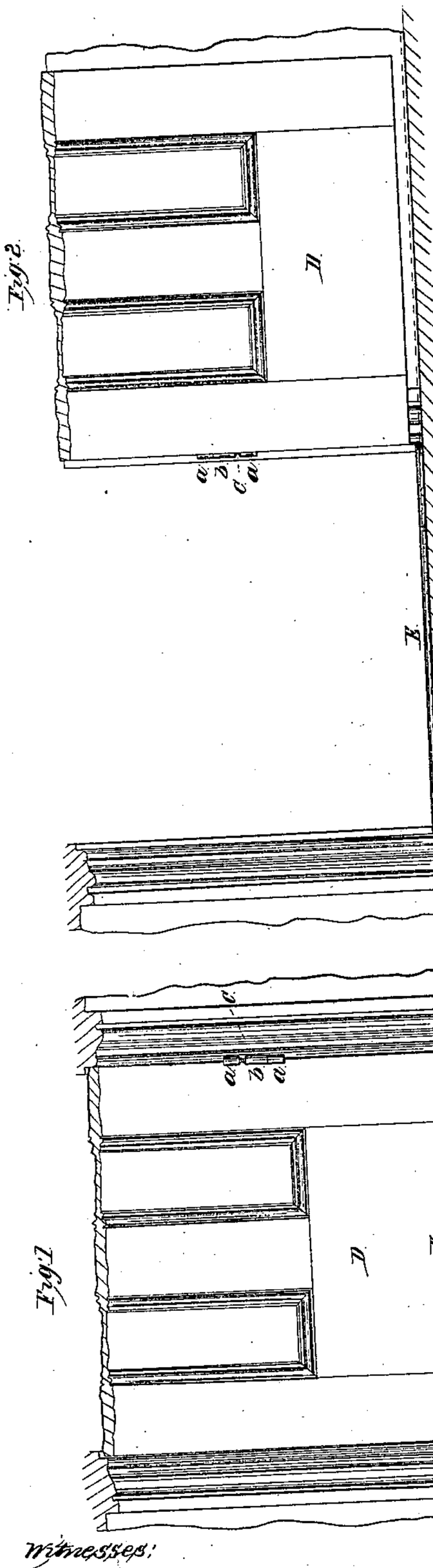

Fig. 2.

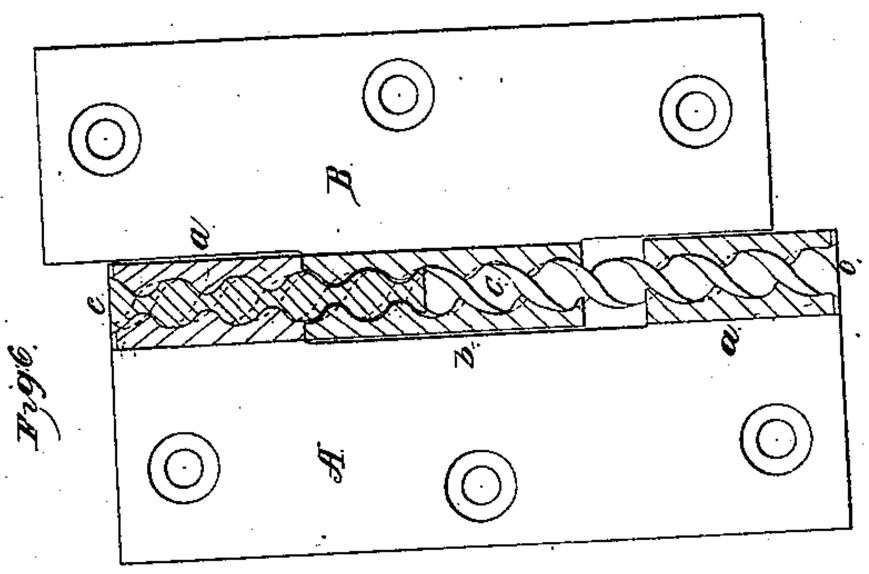

Fig. 6.

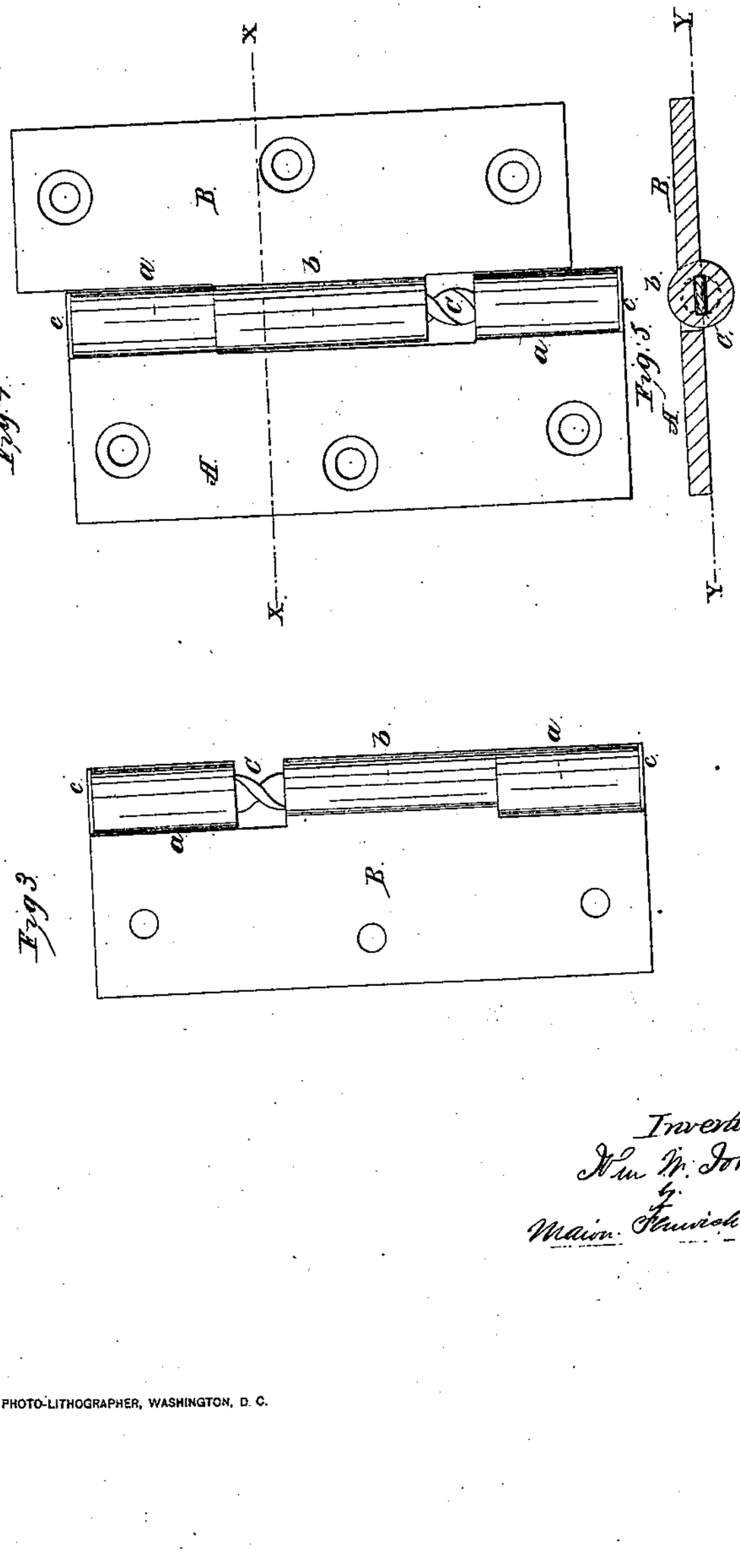

Fig. 4.

Fig. 5.

Fig. 1.

Fig. 3.

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JOHN W. JORDAN, OF LEXINGTON, VIRGINIA.

Letters Patent No. 85,310, *dated December* 29, 1868.

IMPROVEMENT IN BUT-HINGES.

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, JOHN W. JORDAN, of Lexington, in the county of Rockbridge, and State of Virginia, have invented a new and improved Hinge; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a view of the lower portion of a door and door-frame, showing the condition of the hinge and door when shut.

Figure 2 is a similar view of the same parts, showing the door fully open.

Figures 3, 4, 5, and 6 are enlarged views of the improved hinge, showing its construction.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to an improvement on hinges, which are so constructed as to cause a door, shutter, or gate hung by them to receive vertical movements in the act of opening and shutting the same.

The nature of my invention consists in connecting the leaves of a hinge together by means of a twisted or helical pintle or screw, which is fixed to the eye of one of the leaves of the hinge, and so applied to the eye of the opposite leaf as to cause the leaf which is free to swing to rise and fall in the act of moving it about its axis, as will be hereinafter explained.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

In the accompanying drawings, A and B represent the two leaves of the improved hinge.

The leaf A is constructed with two eyes, *a a*, upon its hinging edge, through which holes are made longitudinally, of a diameter slightly greater than the diameter of the twisted pintle C.

If desirable, the passage through these eyes *a a* may be made a counterpart of the twisted pintle, as shown in fig. 6, so that this pintle can be screwed into the eyes and held as fast by riveting its ends, as shown at *c c*.

I prefer to have plain, circular holes through the eyes *a a*, as above stated, for the reason that they can be more readily formed in casting or otherwise producing the leaves A.

The leaf B is constructed with an eye, *b*, upon its hinging edge, which eye is somewhat shorter than the space between the eyes *a a* of the leaf A. Through this eye a passage is made, which is the female or counterpart of the pintle C, so that when the two leaves of the hinge are connected by this pintle, and the latter riveted, or otherwise secured, to the eyes of the leaf A, so as not to move in them, a strong joint will be formed between the leaves.

In the act of moving either one of the leaves thus jointed about the axis of such joint, the screw-twist of the pintle will cause a motion of such leaf in a direction with the length of the pintle.

The leaves A and B may be cast of malleable iron, and the screw-passage through eye *b* produced by coring, and the pintle C may be made of wrought-iron, by taking a strip of this metal of proper length, thickness, and width, and twisting it after the manner of producing auger-stems.

If the leaves A and B are made of wrought-iron, the screw-passage or counterpart of pintle C may be made through the eye *b*, by means of suitable grooving-bits receiving an advance and retrograde movement at the same time they are rotated.

In figs. 1 and 2, I have represented one useful application of my improved hinge.

Fig. 1 represents a door closed, and shows the bottom edge close to the sill-strip E. Fig. 2 shows the door when open, with its bottom edge raised sufficiently to clear the carpet, which latter is represented in red.

This improved hinge thus causes a door to rise bodily in the act of opening it, so as to clear a carpet upon the floor; and when such door is closed, it will fit snugly upon the sill-piece, so as to keep out dust and air. The weight of an open door, thus hung, will also operate to close and keep it closed; and by inverting the hinges and applying them to shutters, the weight of the shutters will operate to keep them open when opened.

I am aware that hinges operating upon the general principle herein described are not new, and therefore I do not desire to be understood as making claim to such hinges.

Having described my invention,

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

Fitting the eye-bracket *b* of the hinge-leaf B, upon the helical or screw-pintle C, between the eye-brackets *a a* of the leaf A, so that the eye-bracket of leaf B is free to traverse up and down upon the pintle, between the eye-brackets *a a*, substantially as and for the purpose described.

JNO. W. JORDAN.

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