R. C. MORRIS.

Angle-Plate for Doors.

No. 220,489. Patented Oct. 14, 1879.

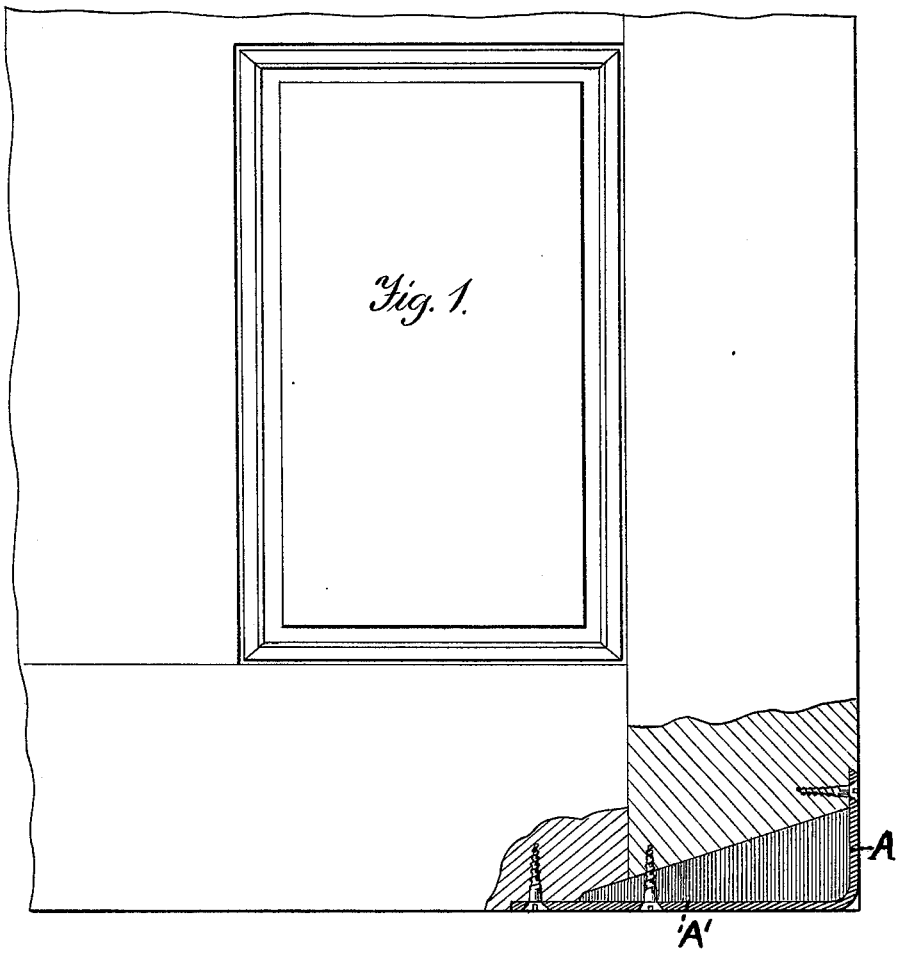
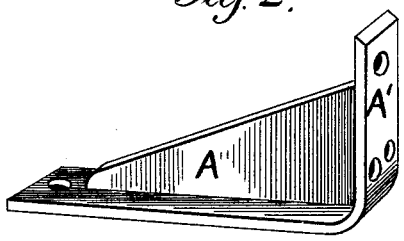


Fig. 1.

Fig. 2.



Witnesses.
A. Ruppert.
C. M. Connell

Inventor.
Robt. C. Morris
Per. Jas M. Blanchard
Attorney

UNITED STATES PATENT OFFICE.

ROBERT C. MORRIS, OF OLNEY, ILLINOIS, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO HIRAM H. McLANE, OF SAN ANTONIO, TEXAS.

IMPROVEMENT IN ANGLE-PLATES FOR DOORS.

Specification forming part of Letters Patent No. **220,489**, dated October 14, 1879; application filed August 1, 1878.

To all whom it may concern:

Be it known that I, ROBERT C. MORRIS, of Olney, in the county of Richland and State of Illinois, have invented certain new and useful Improvements in Doors; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification—

Figure 1 being an elevation of a portion of a door, a section thereof being broken away to show the application of my improvement; and Fig. 2 is a perspective view of the strengthening-bracket.

Corresponding letters denote like parts in both of the figures.

This invention relates to doors and gates generally, it being particularly applicable to such as are hung upon hinges, the object being to provide against sagging, and otherwise to strengthen them so that they shall not be liable to change their form.

The improvement consists in inserting into the corner or corners of doors or gates a metallic bracket or brace, which is so arranged therein as to give firmness to the structure, and prevent it from sagging when upon hinges or changing its form when otherwise applied.

In providing doors or gates with my improvement, I prefer to cut in one or more corners thereof a groove for the reception of a web or brace, A, formed upon the bracket A′, as shown in Fig. 1 of the drawings.

The bracket A′ is substantially of the form shown in Fig. 2, the vertical and horizontal portions thereof being at a right angle to each other, and each provided with apertures for the reception of screws with which to attach them to the door, said horizontal portion being of sufficient length to cause it to pass beyond the joint between the side and end rails of the door.

Extending from the vertical to the horizontal portions there is a web or brace, which, as above stated, is let into a slot formed in the device for its reception, said web or brace preventing the bending of the bracket, and thus any sagging of the door when mounted upon its hinges.

This bracket may be made of any suitable kind of material, such as cast-iron, wrought-iron, malleable iron, or brass, and in cross-section the vertical and horizontal portions may be of such width as to be equal to the thickness of the door to which it is applied; or they may be of less width, and in being applied be let into a recess formed for their reception in the door.

In the drawings accompanying this specification I have shown but one bracket, and that as applied to the lower outer corner of the door; but I contemplate using two or more in each door, according as the dimensions and weight thereof may require, and I also propose to use them in the upper or lower corners, or both, as occasion may demand.

It is apparent that this improvement is applicable to sliding doors as well as to those which swing upon hinges. It is also applicable to gates, window-shutters, and other similar structures, and especially to the doors of railroad-cars, which, owing to their violent usage, are often found out of form, and are thus prevented from moving upon their rollers or hangings. In the latter class of doors it will probably be found advisable to insert a bracket in each of its corners, by doing which the change of form above alluded to will be entirely prevented.

It should be remarked that the vertical and horizontal portions of the brackets may be of any desired length and of varying thickness, according to the service required of them.

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

A strengthening-bracket for doors, gates, or frames generally, to be applied to the external angles of the same, consisting of a strip or plate of metal bent or formed to the desired angle, one of the legs of said angle-piece being of sufficient length to cover and embrace the joint of the meeting parts of the

door or frame, the two legs being joined by a rib or feather of metal placed lengthwise of thereof and between their side edges, and adapted to enter a kerf or slit cut in the corner of the door or frame, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

ROBERT C. MORRIS.

Witnesses:
C. M. CONNELL,
H. H. MCLANE.