

M. J. KOLLING.

DOOR HINGE.

APPLICATION FILED SEPT. 23, 1912.

1,046,806.

Patented Dec. 10, 1912.

2 SHEETS-SHEET 1.

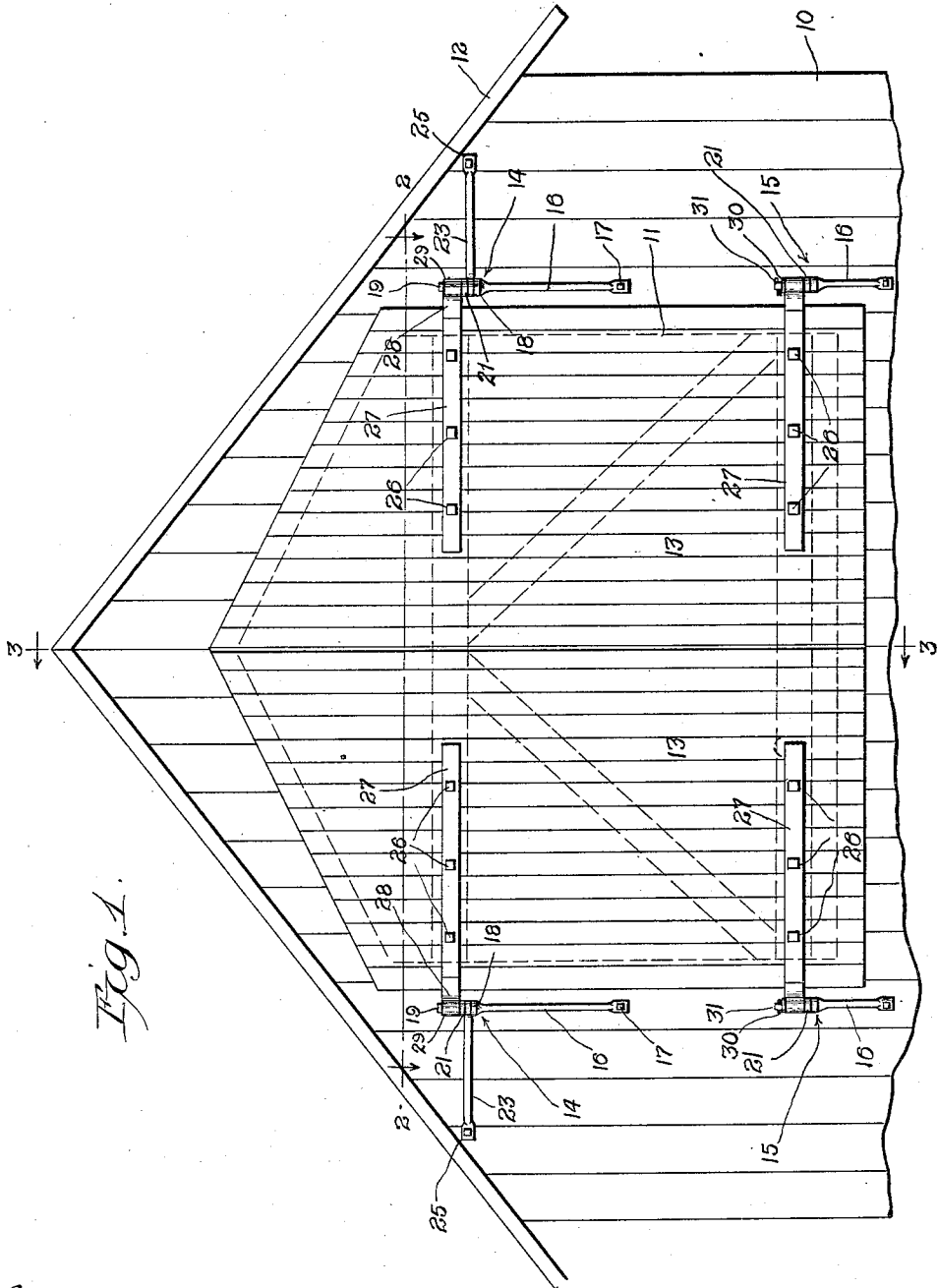


Fig. 1.

Witnesses:

Harry S. Gaither  
Jean Agness.

by

Inventor

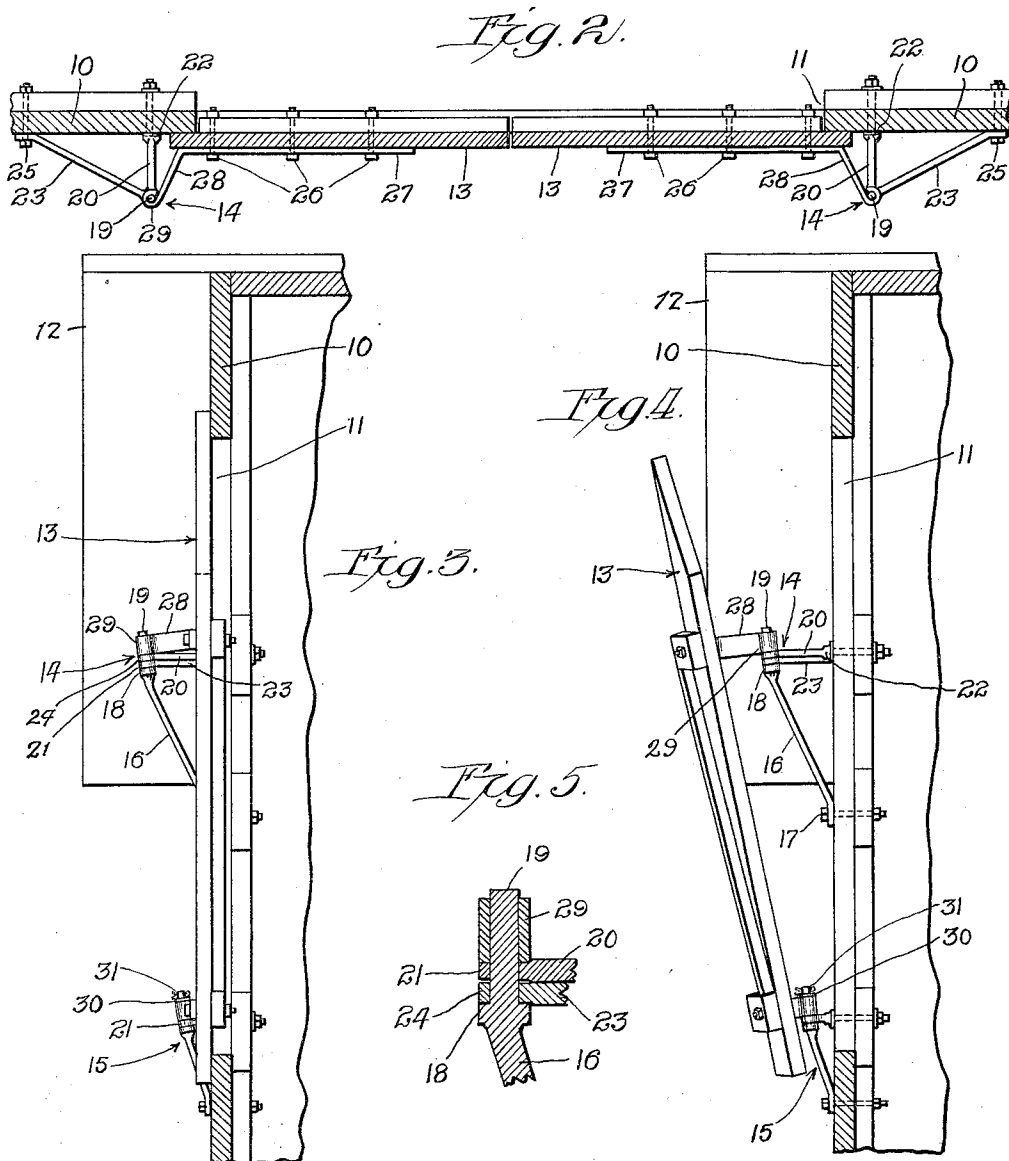
Michael J. Kolling  
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Witnesses:  
*Harry S. Gaither*  
*Jean Agness.*

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# UNITED STATES PATENT OFFICE.

MICHAEL J. KOLLING, OF CROWN POINT, INDIANA.

## DOOR-HINGE.

1,046,806.

Specification of Letters Patent.

Patented Dec. 10, 1912.

Application filed September 23, 1912. Serial No. 721,790.

*To all whom it may concern:*

Be it known that I, MICHAEL J. KOLLING, a citizen of the United States, residing at Crown Point, in the county of Lake and State of Indiana, have invented a new and useful Improvement in Door-Hinges, of which the following is a specification.

This invention relates to hinges and more particularly to that form of hinge adapted for supporting hay barn doors.

The main object of the invention is the provision of a simple, strong and substantial hinge, arranged to support a hay barn door in such manner that the door may swing into fully open position without interference with the eaves of the roof.

Other objects and advantages will appear in the course of this specification, and to said ends and other ends this invention consists in the several novel features hereinafter described and claimed.

The invention is clearly illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a fragment of a hay barn and its doors, with a complete set of my improved hinges in use thereon; Fig. 2 is a horizontal section taken on the line 2—2, Fig. 1. Fig. 3 is a vertical section taken on the line 3—3, Fig. 1; Fig. 4 is a similar section showing one door in its fully open position and Fig. 5 is a detail, vertical section through the pintle of one of the hinges.

Referring to said drawings, 10, designates the wall of a hay barn, having the usual door opening, 11, near the peak of its roof, 12. The doors 13, 13, are arranged in pairs as usual and are hinged to the wall by the hinges, represented generally, at 14—15.

Each upper hinge, 14, comprises a vertical brace rod, 16, flattened at its lower end and secured to the wall of the barn by a bolt, 17, which passes through the flattened portion and wall, and has a nut secured upon its inner threaded end, bearing against the rear face of the wall. The brace rod, 16, extends upward in an outwardly inclined direction from its flattened portion, and near its upper end, it is enlarged to provide a shouldered portion, 18, above which it projects upward in the form of a pintle, 19.

Connecting the upper end of the brace rod, 16, with the wall, 10, is a horizontal strut, here shown in the form of an eye bolt, 20, having an eye, 21, on its outer end fitted upon the pintle, 19. Between its ends, said

eye bolt is formed with a shoulder, 22, adapted to bear against the wall, 10, and its inner end is threaded and has secured thereon a nut, whereby the eye bolt may be securely fastened to the wall. If desired, the washers may be interposed between the shouldered portion and wall and between the nut and the wall. A horizontal brace rod, 23, having an eye, 24, encircling the pintle, 19, between the eye, 21, and shoulder, 18, extends in a diagonal direction from the pintle to the wall, where it is flattened and secured thereto by a bolt and nut, 25, said bolt passing through the wall of the barn and having the nut secured upon its inner threaded end. The parts thus far described form one leaf of the hinge.

In the lower hinge, the strut, 20, is made somewhat shorter than the corresponding strut of the upper hinge,—that is, the distance from the center of its eye, 21, to the shoulder, 22, is less than the distance from the center of the eye to the shoulder of the upper strut, consequently the pintle of the lower hinge is set closer to the face of the wall than the pintle of the upper hinge. Both pintles are arranged to extend in one and the same oblique line passing axially therethrough, the purpose of which will be explained later on in the course of this specification.

Secured to the door as by bolts and nuts, 26, is the other leaf, 27, of the hinge, and said leaf comprises a strip of metal bent out at the end adjacent to its companion leaf as at 28, to form an oblique portion extending to the pintle where it is bent around to form an eye, 29, encircling the pintle and resting upon the eye of the eye bolt, 20. In the case of the lower hinge, a washer, 30, is placed over the eye, 29, of the leaf, 27, and a split pin, 31, is inserted in a hole in the pintle above the washer. If desired the brace rod, 23, may be omitted in the lower hinge, as illustrated in the drawings.

It is to be observed that by reason of the vertically inclined pintles, the doors will swing out from the wall in an oblique direction, the upper ends swinging farther away from the wall than the lower ends, whereby the upper ends of the doors may clear the eaves of the roof and still swing to fully open position. They move down slightly in swing to open position, and thereafter tend to remain in open position, except when force enough is exerted against them to close

them. It is also to be observed that the parts are reversible so that they will serve as right hand or left hand hinges.

I claim as new and desire to secure by Letters Patent:

10 In a door hinge construction, a leaf comprising a vertically inclined brace rod having a bolt at its lower end for connection with a wall of a barn, a shoulder intermediate its ends and a vertically and outwardly inclined pintle above said shoulder, a horizontal eye bolt arranged for attachment to the wall and having its eye encircling said

pintle, a second horizontal eye bolt arranged for attachment to the wall and extending diagonally to the pintle, where its eye encircles said pintle, and a second leaf arranged for attachment to a door, and having an outwardly bent portion formed with an eye at its extremity encircling and pivoted upon said pintle. 15 20

MICHAEL J. KOLLING.

Witnesses:

EARL R. COLE,  
FRED A. BARR.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents Washington, D. C."