(No Model.)

J. H. MORGAN, Jr.

GABLE OR LOFT DOOR FOR BARNS.

No. 342,374. Patented May 25, 1886.

Fig. 1.

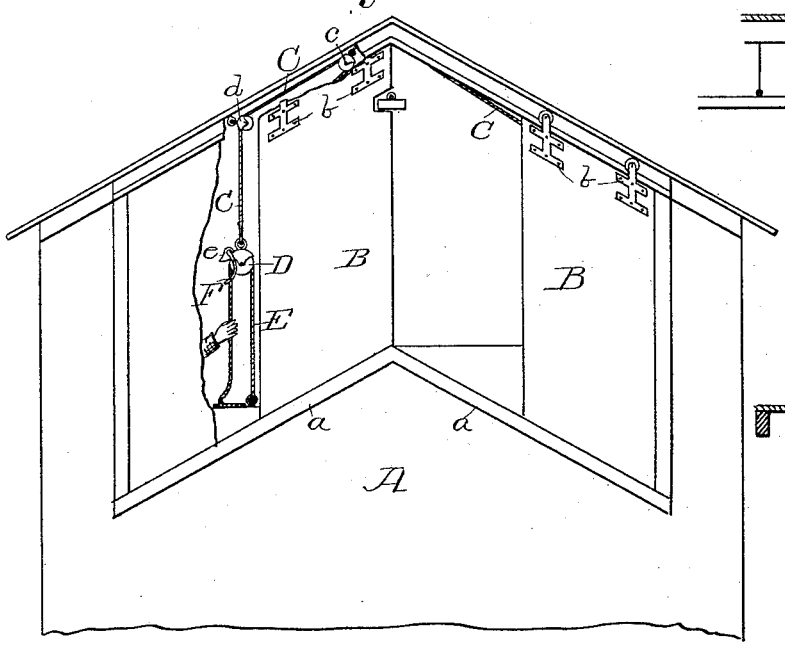


Fig. 2.

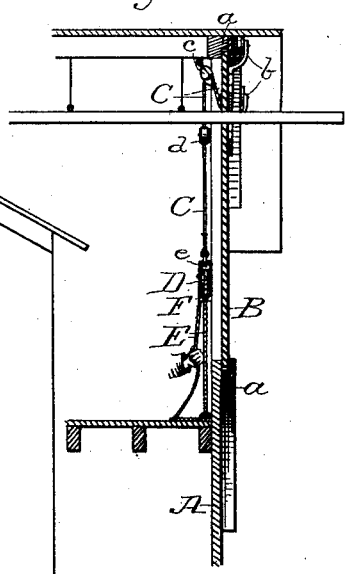


Fig. 3.

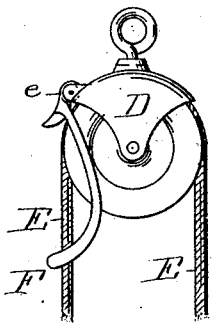
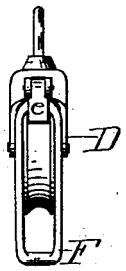


Fig. 4.



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JOHN H. MORGAN, JR., OF NAAUSAY, ILLINOIS.

GABLE OR LOFT DOOR FOR BARNS.

SPECIFICATION forming part of Letters Patent No. 342,374, dated May 25, 1886.

Application filed January 21, 1886. Serial No. 189,251. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. MORGAN, Jr., of Naausay, in the county of Kendall and State of Illinois, have invented certain new and useful Improvements in Gable or Loft Doors for Barns; 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.

Heretofore it has been customary to make the loft or gable doors of barns designed to store hay, straw, &c., just as near the peak of the roof as possible, in order to accommodate and facilitate the operation of the hay-elevating devices. The nearness of this door to the peak of the barn-roof has, however, been limited heretofore by reason of the horizontal action of the doors, it being necessary to locate the doorway low enough for said doors to swing open under the projecting eaves.

The object of my invention is to provide a door located immediately under the ridge of the roof, which has a sliding motion parallel to the slope of the roof over it, which, when open, remains so by virtue of its weight, and which permits the adjacent end of the track on which the hay-carrier travels to project a suitable distance beyond the side wall of the barn.

In the drawings, Figure 1 is a side elevation of the upper portion of a barn, showing my invention applied thereto. Fig. 2 is a transverse vertical section of the same, and Figs. 3 and 4 are side and end views, respectively, of a pulley used in connection with my invention.

Reference being had to the drawings, A represents the end of a barn having a doorway immediately under the gable. Converging at a point immediately under and intersected by a vertical line intersecting the apex of the roof are the sliding doors B B. These doors have their upper and lower oblique edges confined in the guides *a a*, which are placed parallel to the slope of the roof under which they are placed.

The doors B move parallel to the pitch of the roof, and in order to facilitate this movement I provide them with hangers *b b*, the wheels journaled in the ends of which travel on the outer vertical flange of the ⊔-iron secured to the contiguous guide *a*.

It will be observed that if there were nothing to prevent, the weight of the doors would gravitate them down their inclined paths away from each other, thus leaving the doorway open. In order to keep them closed I secure to their upper edges nearest the highest point thereof the ropes C C. These ropes pass over pulleys *c c*, depending from the roof nearer the apex of the same than where said ropes C are secured to the door. From pulleys *c* said ropes travel down to pulleys *d*, and from thence vertically downward to pulley D, suspended on the end thereof.

Fastened preferably to the floor is the hand-rope E, which passes up and around pulley D, and is grasped by the hand and pulled when it is desired to close the doors. In order to prevent rope E from slipping back through pulley D, I pivot to the pulley a dog, *e*, which, when the rope E slips back, impinges against the same and holds it. In order to disengage the dog *e*, when desirous of opening doors B, I secure to or make integrant therewith the yoke or handle F, by means of which it can be raised and the rope released.

If desired, both doors could be opened with one pulley, D, and rope E. In this event, however, the rope C is connected with rope C on the other side.

The doors B may, if desired, be counterbalanced by weights, which will keep them closed. When opened, they could be kept so by bolts or catches.

In Figs. 1 and 2 the doors are shown cut away, so that the suspended track on which the hay-carrier travels can project a suitable distance beyond the side of the barn.

I do not wish to be confined to the means shown for operating the doors B, for they can be varied greatly; but what I deem of principal importance is the doors themselves—*i. e.*, the sliding doors, the meeting-point of which is immediately under the apex of the roof and reciprocating parallel to the slopes of the roof under which they are located.

What I claim as new is—

1. A loft or gable door for barns, consisting of doors B B, the vertical edges of which meet on the vertical plane intersected by the peak of the roof, and which have a sliding or reciprocal motion away from said meeting-point parallel to the slope of the roof under which they are placed.

2. The combination, with a barn having a doorway in the end immediately under the apex of and within the gable of the roof, of the doors B B, meeting on the same vertical plane as the apex of the roof, and having a sliding or reciprocating motion away from said meeting-point parallel to that slope of the roof under which they are placed, and means for operating said doors.

3. The combination, with a barn having a doorway in the end immediately under the apex and within the gable of the roof, of the doors B B, moving in suitable guides parallel to the slope of the roof under which they are placed, the rope C, pulleys *c* and *d*, rope E, and pulley D.

4. The combination, with a barn having a door in the end thereof immediately under the apex and within the gable of the roof, of the doors B, the rope C, pulleys *c* and *d*, rope E, and pulley D, said pulley D having a dog, *e*, adapted to bite said rope E when moving backward through said pulley, substantially as and for the purpose set forth.

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

JOHN H. MORGAN, JR.

Witnesses:
JAMES H. COYNE,
FRANK D. THOMASON.