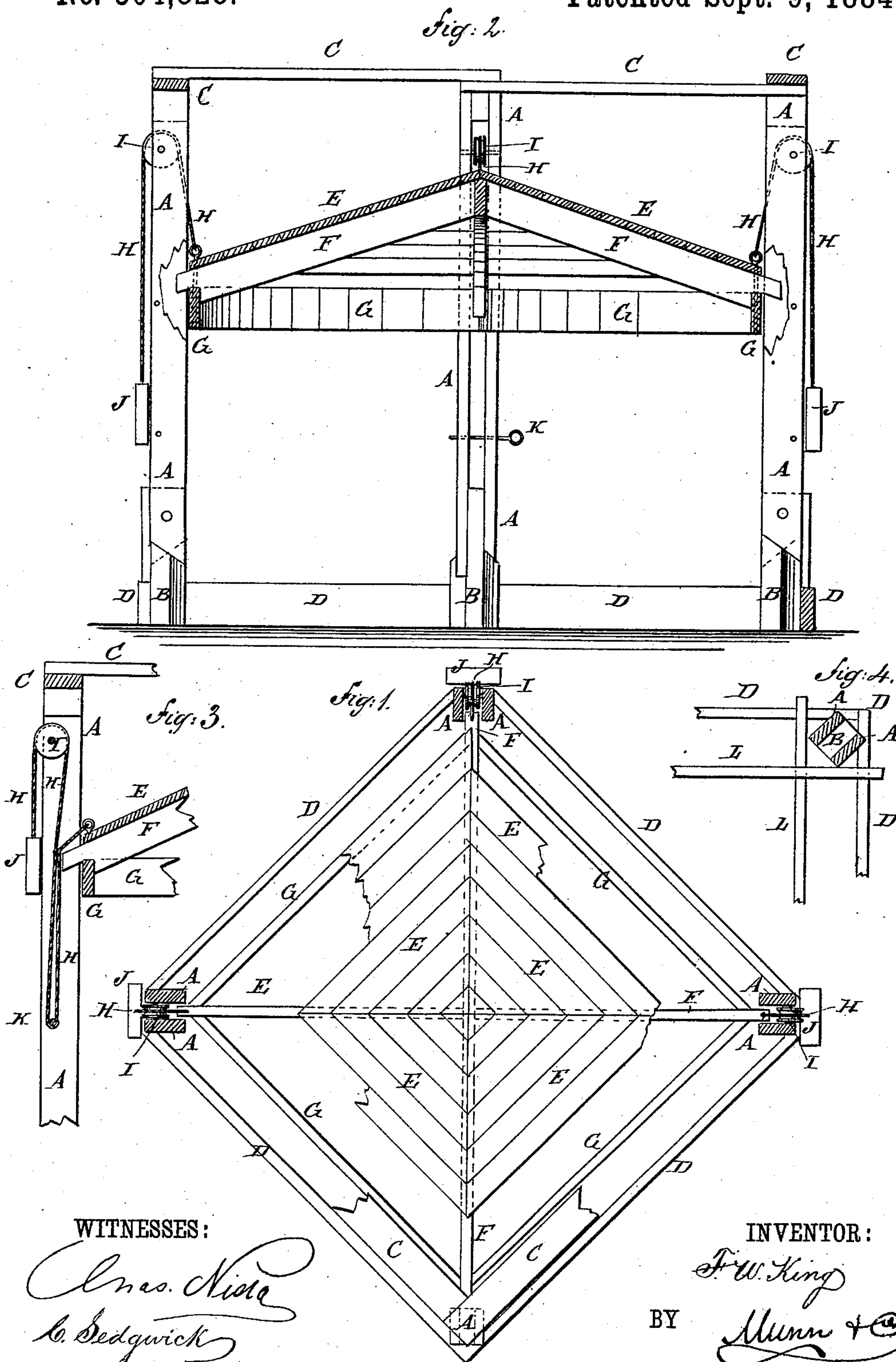


(No Model.)

F. W. KING.
BALANCED STACK ROOF.

No. 304,828.

Patented Sept. 9, 1884.



UNITED STATES PATENT OFFICE.

FREDERICK WILLIAM KING, OF FARMINGTON, IOWA.

BALANCED STACK-ROOF.

SPECIFICATION forming part of Letters Patent No. 304,828, dated September 9, 1884.

Application filed January 3, 1884. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK WILLIAM KING, of Farmington, in the county of Van Buren and State of Iowa, have invented a new and useful Improvement in Balanced Stack-Roofs, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of my improvement, partly in section and parts being broken away. Fig. 2 is a sectional elevation of the same, parts being broken away. Fig. 3 is a sectional elevation of a part of the same, illustrating the arrangement when the roof is to be held down by the weights. Fig. 4 is a sectional plan view of a part of the same, illustrating the arrangement for forming a crib.

The object of this invention is to provide stack-roofs constructed in such a manner that they can be readily raised and lowered, and which will be held securely in place.

The invention consists in a stack-roof constructed with slotted posts and rafters covered with boards and shingles provided with ropes attached to the said roof, passing over pulleys pivoted in the upper parts of the slotted posts, and having balancing-weights attached to their ends, so that the said roof can be readily raised and lowered. The slotted posts are provided with pins placed below the roof to receive the weight-ropes, so that the gravity of the roof and weights will be made to act together to hold the said roof down upon the stack. Against the inner sides of the posts are laid the crossed ends of bars to adapt the stack-roof to serve as a corn-crib, as will be hereinafter fully described.

The posts that support the roof are formed by attaching the lower ends of pairs of upright bars A to the opposite sides of tenons formed upon the upper ends of the short posts B, the lower ends of which are set in the ground. Four (more or less) posts, A B, are used for each roof, as the form and size of said roof may require. The upper ends of the posts A B are connected by bars C, as

shown in Fig. 2, and their lower ends may be connected by bars D, as shown in Figs. 1 and 2. The roof is formed by attaching boards E, or boards and shingles, to rafters F, which are connected near their lower ends by bars G. The lower ends of the rafters F are inserted in the slots of the posts A B, and move up and down in the said slots as the roof is raised and lowered.

To the roof E F G, at or near the lower ends of the rafters, are attached the ends of ropes H, which pass over pulleys I, placed in the upper parts of the slots in the posts A B, and pivoted to the said posts. To the other ends of the ropes H are attached weights J, of sufficient gravity to about balance the roof E F G, so that the said roof can be easily lowered by raising the weights J, and can be raised by drawing the weights J downward. The roof E F G can be locked from rising by inserting pins above the ends of the rafters F in holes in the bars A. The weights J can be made to hold the roof E F G down upon the stack by passing the ropes H around pins K, inserted in the posts A B below the rafters F, before passing the said ropes over the pulleys I. By this arrangement the gravity of the roof E F G and the gravity of the weights J act together to press the roof down upon the top of the stack to cause it to follow the said top of the stack as the hay or grain settles, and to prevent it from being raised by the wind.

If desired, bars L, of suitable size, can be laid upon each other against the inner sides of the posts A B, as indicated in Fig. 4, to form a corn-crib, so that the roof E F G can also be used for covering corn.

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

1. The combination, with the slotted posts A B and the roof E F G, of the ropes H, pulleys I, and weights J, substantially as herein shown and described, whereby the said roof can be readily raised and lowered, as set forth.

2. The combination, with the slotted posts A B, the roof E F G, and the ropes, pulleys, and weights H I J, of the pins K, substantially as herein shown and described, where-

by the gravity of the roof and weights will be made to act together to hold the roof down upon the stack, as set forth.

3. The combination, with the posts A B,
5 the roof E F G, and the ropes, pulleys, and weights H I J, of the bars L, laid with crossed ends against the said posts, substantially as

herein shown and described, whereby the stack-roof is adapted to serve as a corn-crib, as set forth.

FREDERICK WILLIAM KING.

Witnesses:

T. J. NASH,
H. MEEK.