

(No Model.)

2 Sheets—Sheet 2.

J. W. BROOK.
BUILDING.

No. 420,223.

Patented Jan. 28, 1890.

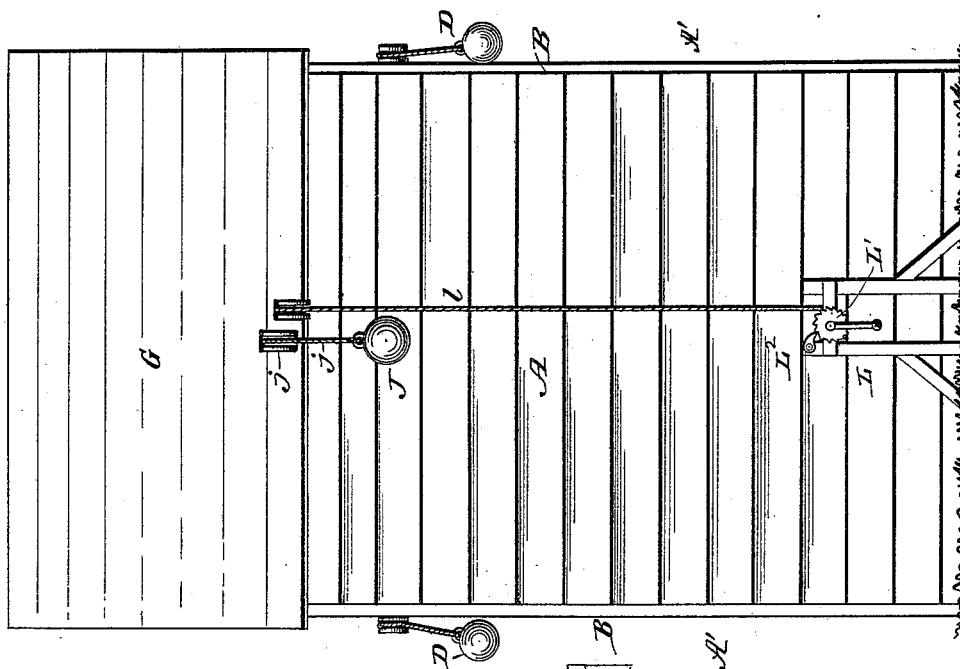


Fig. 4.

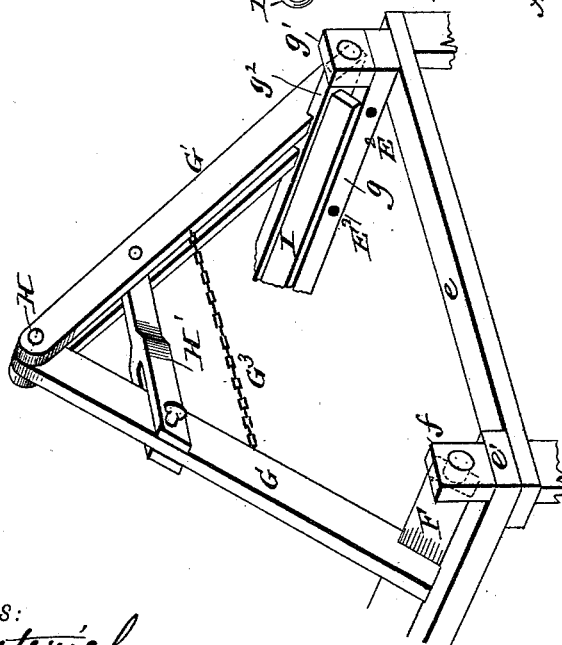


Fig. 3.

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BUILDING.

SPECIFICATION forming part of Letters Patent No. 420,223, dated January 28, 1890.

Application filed April 29, 1889. Serial No. 309,120. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. BROOK, of Lynchburg, in the county of Campbell and State of Virginia, have invented a new and useful Improvement in the Construction of Buildings, of which the following is a specification.

My invention is an improvement in the construction of buildings, seeking to provide improvements in the construction of ice-houses and other structures, as will be hereinafter described.

The invention consists in certain novel constructions and combinations of parts, as will be described, and pointed out in the claims.

In the drawings, Figure 1 is a side view of a building constructed according to my invention, the roof being unfolded. Fig. 2 is a side view showing the roof folded. Fig. 3 is a detail perspective view of a part of the roof. Fig. 4 is an elevation of one side of a building provided with my improvements, and Fig. 5 is a detail horizontal section showing one of the vertically-sliding side sections and the manner of supporting the same.

In carrying out the invention I make a suitable framing for the house, two sides A of which frame are closed in by weather-boarding, or in other suitable manner, while the two other sides A' of the frame are open, such sides A' being opposite each other. At the edges of these open sides A', I provide vertical guides B for the vertically-movable side sections C, which are suitably framed and weather-boarded, and are movable vertically in guides B. Where desired, such sides C may be counterbalanced by weights D, as shown, to render their movement easy and to enable them to be held in any desired vertical adjustment. At its top the house has what may be called a "top" or "plate" frame E, formed of plates or beams e and plates e', suitably framed together. On this top frame, at one side, I provide bearings f for the bar F, which is the base-frame bar of one side section of the roof. As the roof may be covered by shingles or tin, or in any suitable manner, it only seems necessary to describe its framing herein. I make the roof of two side sections G G', pivotally connected or hinged at H at the ridge of the roof, at one

edge. At its outer or lower edge the section G is hinged or pivoted to the house-frame, while the section G' is movable at its outer or lower edge to and from the hinged edge of section G. In hinging the section G it is preferred to provide it at its lower edge with a base-bar F, as before described, which base-bar is journaled in bearings f, as shown. I also prefer to provide the section G' at its lower or movable end with the carriage or slide section, consisting of a cross-bar g, sliding on the top frame, and provided with bearings g', in which the base-bar g² of section G' journals.

Now it will be seen that the sections G G' may be folded together at one side of the house-top by sliding the base of section G' over to that of section G, and the roof may be caused to cover the house by the reverse movement when the base of section G' is moved to its outermost position on the top frame. When so adjusted, the carriage or slide-bar of section G' abuts a stop block or bar G³ on the top frame to limit the opening movement of the roof-sections, and a chain or connection G³ is extended between the lower edges of such sections G G' to prevent them from spreading too far apart. To brace the sections G G' when opened, I provide a brace bar or bars H', pivoted or hinged at one end to one of the sections and detachably connected at its opposite end with the other section, so it may connect such sections when opened or be detached from one of the sections when it is desired to fold the roof.

In order to ease the strain on the bearings of the base-bars F and g² when the roof is opened, I provide on the said bars projections I, which may be cleats or blocks, as shown, or be pins driven in said bars and projecting at one end therefrom. These projections I bear, when the roof is open, on the bars below, and so in a measure support the roof-sections and relieve the bearings in which their base-bars journal. The plate e', having bearings for the roof-section G, is provided with a projection or projections E', which, when the roof is folded, enter sockets E² in the bar g of roof-section G' and serve to prevent the sections from blowing over. Now it will be seen that the lower end of one of the sections is hinged or pivotally connected with the framing of

the house and the other section is movable at its lower edge to and from the said hinged edge, the sections thus folding to uncover and opening to cover the house. When folded, it will be seen that the sections stand vertically up at one side of the top of the house, so that by arranging the roof to fold to the proper side of the house it may be utilized, when folded, as a shade to protect the interior of the house from the sun, which will be quite important in ice-houses.

It will be understood that a folding roof, substantially as described, will be quite useful in hay-houses, corn-houses, tobacco-barns, chicken or fowl houses, cow-houses, or in any other location where it may be desired to expose the interior of the house from above, either for the purposes of ventilation or for access to the interior of the house from above, or for other desired purposes.

To render the folding and unfolding of the roof easy, I provide weights J and K and a windlass L.

For convenience of reference I may term the side of the house and roof toward which the roof folds the "rear" side and the opposite side the "front" side. The weight J is arranged at said rear, and is connected with a rope *j*, which extends up over a pulley *j'* and connects with the lower moving edge of the roof-section, the function of such weight being to assist the folding of the roof-sections. The windlass L is also arranged at the rear and connects with the moving section by rope *l*, so it may be operated to fold the roof, being assisted by the weight J. The weight K is arranged at the front of the house and connects by rope *k* with the moving edge of the roof-section, being guided thereto by pulley *k'*. This weight, it will be seen, operates to open the roof and is assisted to such end by the weight of the roof-sections.

In practice the weight K may be made sufficiently heavy to open the roof against the action of weight J, such weight J being adapted to assist the windlass in overcoming the weight K in folding the roof.

The windlass-shaft L may have a ratchet-disk L', engaged by a stop-pawl L²; or other suitable detent mechanism may be provided to hold the roof folded. The roof projects laterally sufficiently far to cover the vertically-sliding sides C, which sides C may be raised and lowered when the roof is folded. In a large or long roof it may be divided transversely into a number of sections, each consisting of a section G and a section G', each of such sections being operated like the single one before described.

Having thus described my invention, what I claim as new is—

1. The combination of the house or framing and the roof hinged or pivotally connected at one side or edge with said house or frame and consisting of sections connected to fold, substantially as set forth.

2. The combination, with the framing, of the roof-sections hinged or pivoted together at one edge, one of such sections being hinged or pivoted at its other or outer edge to the framing, and the other section being movable at its outer edge to and from the hinged edge of the first section, substantially as set forth.

3. The combination, substantially as described, of the framing, the roof-section hinged at one edge to the framing, a second roof-section hinged at one edge to the first section and movable at its free edge toward and from the hinged edge of said first section, a brace hinged at one end to one of said sections, and a detachable connection between the opposite end of such brace and the other section, substantially as set forth.

4. The combination of the house-framing and a roof thereon, consisting of sections constructed to fold to one side of such framing and arranged to project up when so folded and form a shade at such side of the house, substantially as set forth.

5. The combination, with the roof formed of sections constructed to fold, of the windlass connected therewith by which to fold such sections, and the weight by which to assist in opening the roof, substantially as set forth.

6. The roof formed of sections constructed to fold, combined with the vertically-sliding side pieces and the framing, substantially as set forth.

7. In a structure, substantially as described, the roof-sections G G', pivotally connected or hinged together at one edge, and having at their opposite edges base-bars suitably journaled and provided on said base-bars with projections I, combined with the bars or beams below such base-bars, on which the projections I bear when the roof is open, substantially as set forth.

8. The combination of the top frame, the section G, journaled at its outer or lower edge thereto, the section G', journaled at one edge to the section G and provided at its opposite edge with journals, and the carriage or slide section having a cross-bar *g*, provided with bearings for the said journals of section G', substantially as set forth.

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Witnesses:

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