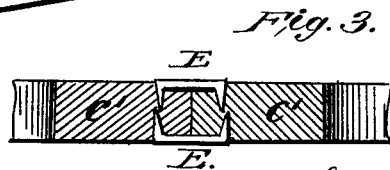
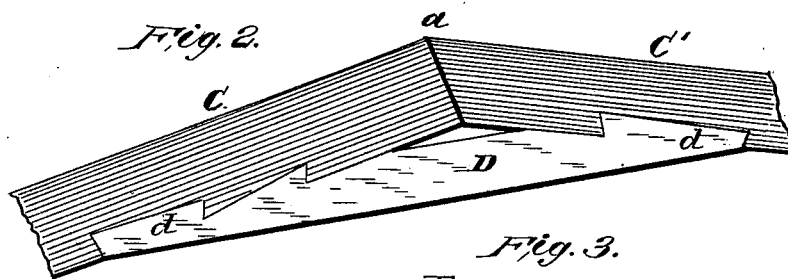
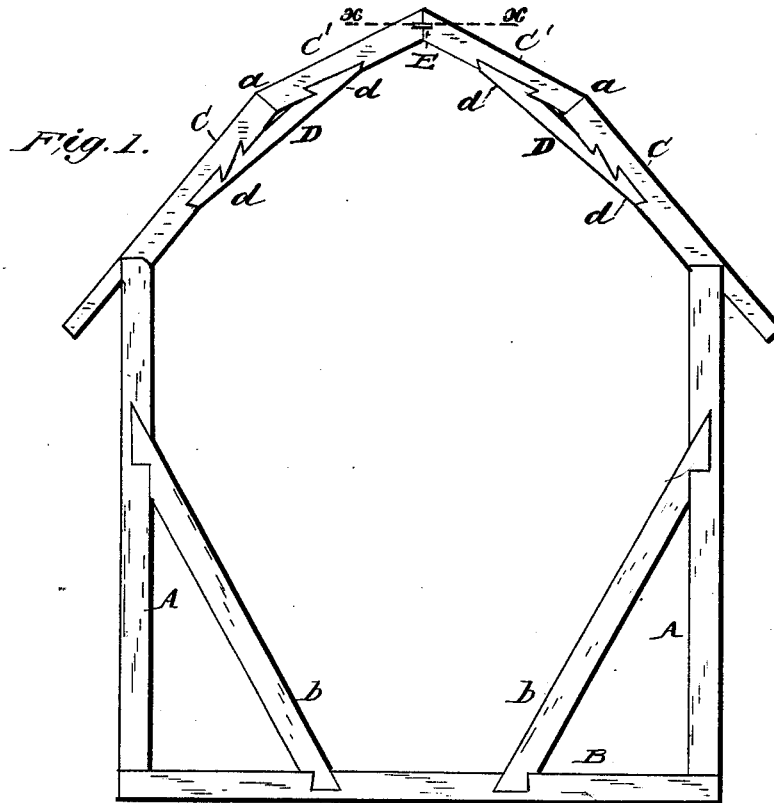


E. N. VAN RIPER & H. S. SEELY.
Bent for Frame Buildings.

No. 219,786.

Patented Sept. 16, 1879.



Witnesses
Fred. G. Dietrich
Jos. T. Power

Inventors
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UNITED STATES PATENT OFFICE.

EDGAR N. VAN RIPER AND HIRAM S. SEELY, OF HAYT'S CORNERS, N. Y.

IMPROVEMENT IN BENTS FOR FRAME BUILDINGS.

Specification forming part of Letters Patent No. **219,786**, dated September 16, 1879; application filed July 26, 1879.

To all whom it may concern:

Be it known that we, EDGAR N. VAN RIPER and HIRAM S. SEELY, of Hayt's Corners, in the county of Seneca and State of New York, have invented certain new and useful Improvements in Construction of Bents for Frame Buildings; and we 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, which form a part of this specification, and in which—

Figure 1 is an elevation of the center bent of a barn building embodying our invention. Fig. 2 is an enlarged view of the rafter-joint; and Fig. 3 is a section on line *xx*, Fig. 1, showing the application of the tie-staple at ridge, which forms a part of our improvement.

Similar letters of reference indicate corresponding parts in all the figures.

This invention has relation to the construction of the bents of frame structures, such as barns, dwelling-houses, churches, &c.; and it consists in the construction of a single and double dovetail tie at the joint of the rafters, the meeting ends of the upper rafters being united by a tie-staple to form the ridge or peak of the bent, substantially as hereinafter more fully set forth.

In the drawings, *A A* are the side posts, which are mortised into the bottom sill, *B*, and held firmly in place by dovetailed braces *b b*. *C C' C C'* are the rafters, each pair *C C'* of which is united at the joint *a* by a tie-brace, *D*, having two dovetail heads, *d d*, one at each end, which fit into dovetail mortises in the

rafter-sections *C C'*, as shown more clearly in Fig. 2 of the drawings.

The upper rafter-sections, *C' C'*, are united by a double tie-staple, *E E*, which binds the ends firmly and closely together, forming, with the dovetailed tie-braces *D D* and rafters *C C' C C'*, a very solid, rigid, and substantial roof frame or support, and doing away with purlin-plates, cross-beams, and girts.

We are aware that rafters have been united and supported by nailing pieces across both sides of the joints, or by braces or struts arranged under the joints; but this construction we do not claim, broadly. The piece *D* of our improvement is not merely a brace, but a joint tie or key, which makes it absolutely impossible for the roof to sag in the hip or in the center of the rafter, even if the nails used in its construction should give way.

Having thus described our improvement, we claim and desire to secure by Letters Patent of the United States—

The combination, in a bent for buildings, of the rafter-sections *C C' C C'*, united and made rigid at their angles *a* by tie-braces *D D*, dovetailed into position, and ridge tie-staple *E*, substantially as and for the purpose herein shown and set forth.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

EDGAR N. VAN RIPER.
HIRAM S. SEELY.

Witnesses:

W. F. SHARP,
P. P. POST.