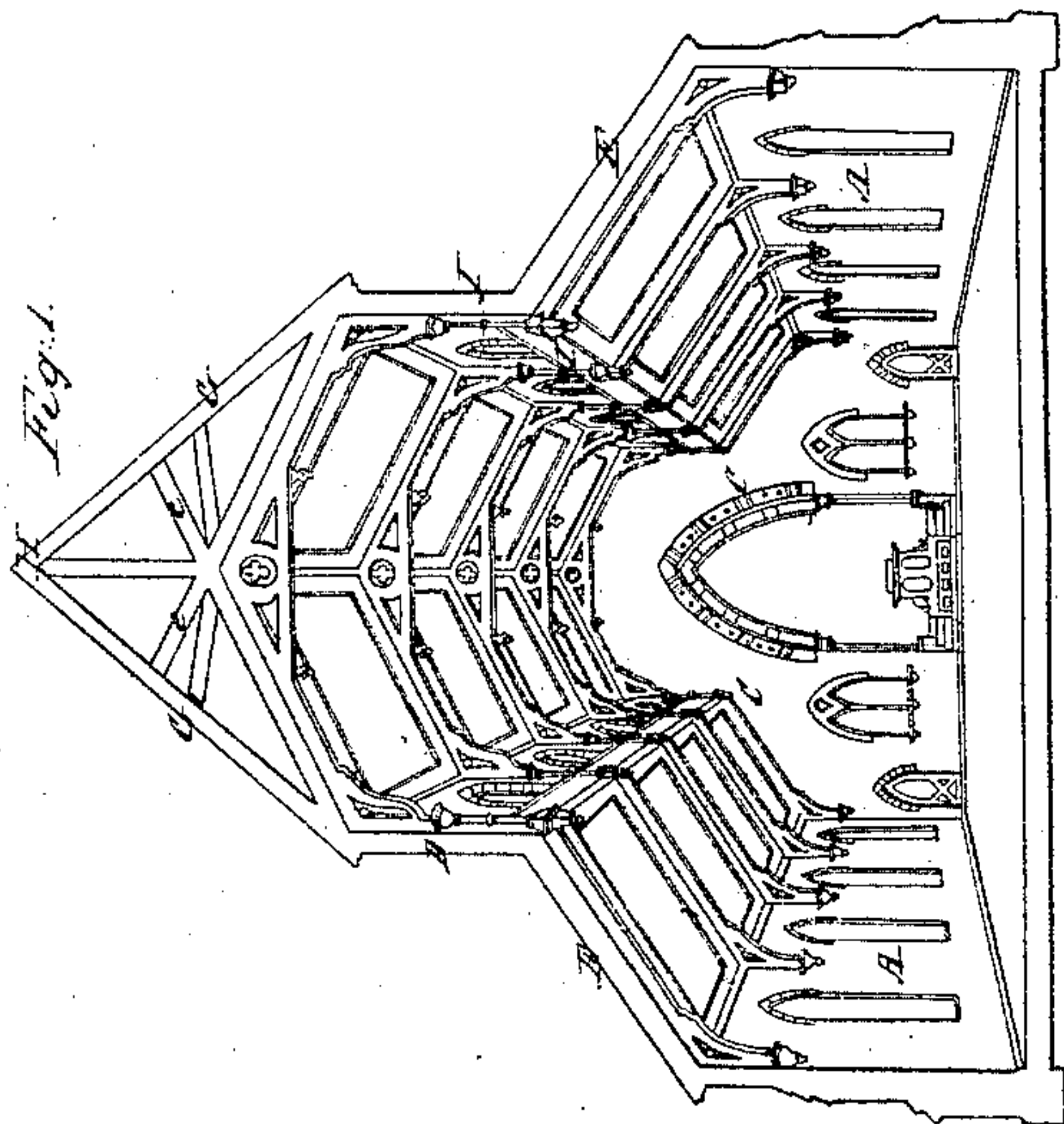
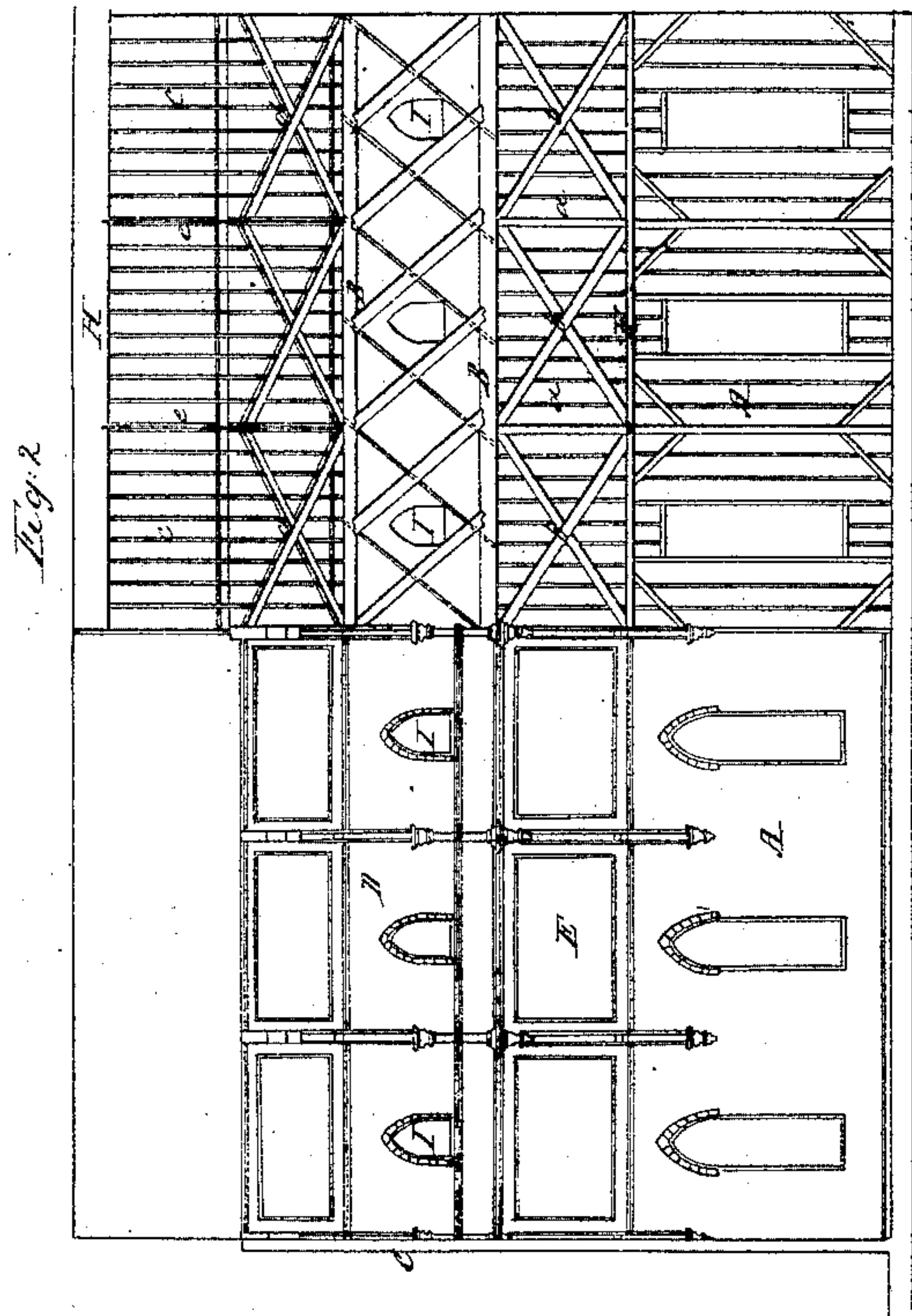


Woodcock & Meacham

Roof.

N^o 44,831.

Patented Oct. 25, 1864.



Witnesses

W. F. Fitch
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UNITED STATES PATENT OFFICE.

SHEPHERD S. WOODCOCK, OF SOMERVILLE, AND GEORGE F. MEACHAM,
OF WATERTOWN, MASSACHUSETTS.

IMPROVEMENT IN ROOFS OF CHURCHES.

Specification forming part of Letters Patent No. 44,831, dated October 25, 1864.

To all whom it may concern:

Be it known that we, SHEPHERD S. WOODCOCK, of Somerville, and GEORGE F. MEACHAM, of Watertown, both in the county of Middlesex and State of Massachusetts, have invented certain Improvements in Building Churches and other Similar Edifices; and we hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a view of the interior of a church, the "clear story" of which is supported according to our improved plan of construction; and Fig. 2 is an inside elevation, a part of the finishing being removed, showing the framing and our improved method of supporting the clear story.

In churches and other similar edifices in which a large open area is required on the lower floor, and which are constructed with a clear story, it has been necessary to support the roof by means of a series of columns on each side in the interior of the structure. These columns added materially to the cost of the building, occupied considerable space, and obstructed the view and light.

The object of our invention is to overcome these objections; and it consists in supporting the roof by means of a "truss" or trussed girder on each side of the building, properly supported in the end walls and stayed in place by means of "wind-braces" and "ties," which bind the roof together and prevent it from spreading and giving a lateral thrust to the truss, the whole weight of the roof being thus made to bear vertically upon it, by which construction we are enabled to dispense with the columns heretofore used, thus greatly lessening the cost of the building, and leaving an unobstructed area, which adds to the beauty and finish of the interior.

To enable others skilled in the art to understand and apply our invention, we will proceed to describe the manner in which we have carried it out.

In the said drawings, A represents the side walls of a church, constructed in the usual

manner. B is a truss or trussed girder extending the whole length of the building, (there being one on each side,) and supported at its extremities by the end walls, C. This truss B is of equal depth with and forms one of the vertical walls of the clear story D. The rafters *a* of the lower roof or "lean-to" E are secured to the wall-plate F and to the lower girder of the truss B, which is stayed and held firmly in place by means of the wind-braces *b*, also secured to the plate F and truss B, as seen in Fig. 2. The rafters *c* of the main roof G extend from the ridge H to the upper girder of the truss B, which is steadied and still further stayed by means of the wind-braces *d* and ties *e*, which bind the roof G together and prevent its giving a lateral thrust to the truss, upon which the whole weight of the roof is thus brought to bear vertically. The whole is then covered and finished, as seen in Fig. 1, the spaces between the braces of the truss B being occupied by the clear-story windows I. The roof is thus supported without the use of columns by the truss B, the depth and great strength of which precludes any possibility of its settling or sagging in the center of its length.

It will thus be seen that by the above-described method of supporting the roof we are enabled to combine the advantages of lightness, strength, and durability with great economy of construction, and the interior presents an open, unobstructed area.

We do not confine ourselves to the exact details here shown, as it is obvious that these may be varied without departing from the spirit of our invention.

What we claim as our invention, and desire to secure by Letters Patent, is—

Supporting the roof of a building by means of trusses B, steadied and held in place by wind-braces *b d*, in the manner substantially as set forth.

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GEO. F. MEACHAM.

Witnesses:

P. E. TESCHEMACHER,
N. W. STEARNS.