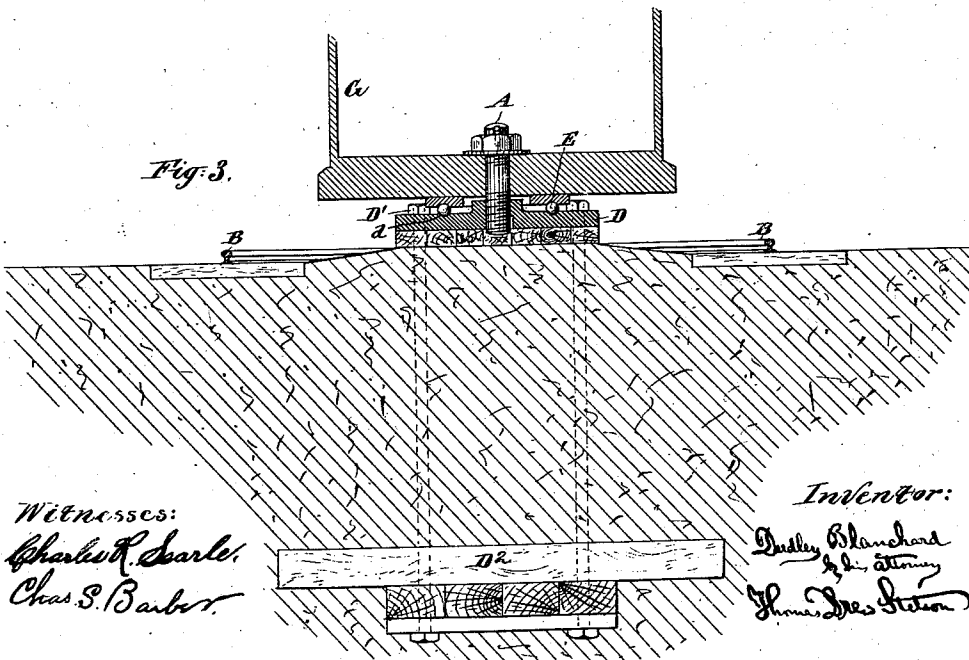
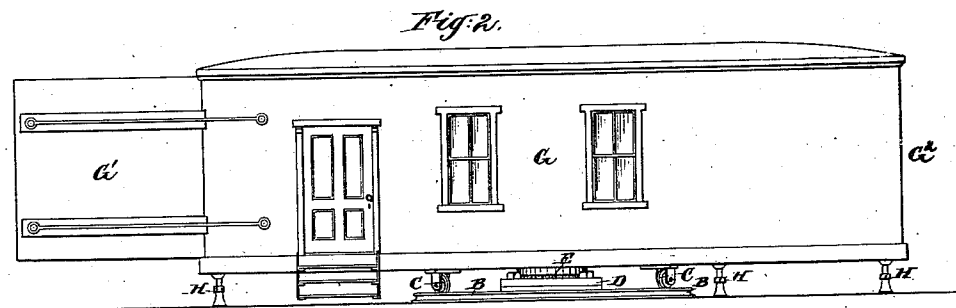
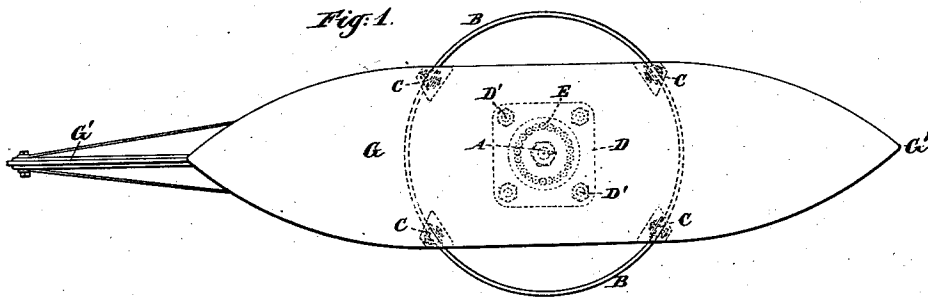


(No Model.)

D. BLANCHARD.  
TORNADO PROOF BUILDING.

No. 439,376.

Patented Oct. 28, 1890.



Witnesses:  
Charles F. Searle  
Chas. S. Barber

Inventor:  
Dudley Blanchard  
By Attorney  
Thos. Des. Stetson

# UNITED STATES PATENT OFFICE.

DUDLEY BLANCHARD, OF BROOKLYN, NEW YORK.

## TORNADO-PROOF BUILDING.

SPECIFICATION forming part of Letters Patent No. 439,376, dated October 28, 1890.

Application filed July 30, 1890. Serial No. 380,376. (No model.)

*To all whom it may concern:*

Be it known that I, DUDLEY BLANCHARD, of Brooklyn, Kings county, in the State of New York, have invented a certain new and Improved Building and Supports Therefor; and I do hereby declare that the following is a full and exact description thereof.

The object of the invention is to provide more perfectly than heretofore against injury from tornadoes or other violent storms. I construct a building in an elongated and sharpened form, adapted to part the current of air like the bow of a vessel, and provide means for automatically turning it to present that end in the direction from which a sufficiently strong wind is received. I also provide for holding the building stiffly under all ordinary conditions and setting it free to turn when the wind is violent.

The accompanying drawings form a part of this specification and represent what I consider the best means of carrying out the invention.

Figure 1 is a plan view. Fig. 2 is a side elevation, and Fig. 3 is a vertical cross-section of a portion on a larger scale.

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

A is a stout pivot-post of cast iron, steel, or other suitable material, stiffly held in an exactly perpendicular position.

B is a circular railway, and C are wheels running thereon.

D is a stout foundation-plate held down by bolts D' to anchors D<sup>2</sup>. In the upper surface of D is a circular groove d, in which runs a set of iron balls E.

G is a light strongly-braced building resting on the balls E and wheels C, steadied laterally by the pivot A. A large and strong wing or vane G' is fixed at one end, and both ends are wedge-shaped. When a tornado strikes the building, it turns on its pivot A and presents the wedge-shaped end G<sup>2</sup>, so that it receives and parts the current of air with little resistance.

H H are a set of jack-screws capable of being accurately adjusted under the building at many points, so as to hold it firmly under all ordinary conditions. The adjustable props

formed by these jack-screws H are narrow. They hold the building firmly until a very strong wind is received. When such is received, they continue to hold the building stationary if the wind comes in the direction for which the house is adjusted; but if it comes in any other direction the torsional force due to the action of the wind on the wing or tail G' will throw down the jack-screws H and set the building free to turn, and it will then by the force of the wind be turned until the end G<sup>2</sup> is presented toward the wind. These parts H constitute adjustable props.

In the structure of the house G, I can use wood or metal put together in any approved manner to promote the convenience of the occupants or the strength of the building to resist wind; or to attain both these ends I provide the end G<sup>2</sup> with a strong facing g<sup>2</sup>, adapted to resist impact such as might be received from flying debris from other buildings.

Modifications may be made by any good mechanic without departing from the principle or sacrificing the advantages of the invention. Part of the invention can be used without the whole. I can use narrow props of wood or other material adapted to be thrown down by a sufficient turning force without any screws or other provision for adjusting their height, or I can use the invention with some success without any props.

My tornado-proof building may be used alone as the only residence for the person or the family to be protected, or it may stand near another house of any ordinary or suitable construction, ready to be fled to when the emergency arises. When used thus as a place of temporary refuge, it may be less liberally provided with windows, chimneys, &c.

My swiveling building may be made of any size, and, if required, of more than one story. It may have all the accommodations for continuous and permanent residence. It is especially adapted for use as a hospital or as a hospital adjunct, the wheels being acted on by a pinch-bar or otherwise to turn the building at will, so as to present the sick-room to the sunshine during the whole of a long summer day, or to turn it so as to be in the shade all

day, or to present the rooms to receive the wind directly through in any desired manner in all cases of moderate wind. For such uses the large vane or wing G' should be retained, ready to serve if a tornado strikes the building; but the adjustable props H may be entirely dispensed with.

I attach importance to the fact that the building, with its vane G', is of greater length than breadth, and is pivoted out of the center, so that the excess of length on one side of the center will, when it is subjected to the force of a strong wind, cause it to turn automatically and present a narrow and sharp surface toward the wind.

I claim as my invention—

1. A swiveling house pivoted out of the center of length and arranged to turn with the force of a strong wind, so as to present one face always toward such wind, as herein specified.

2. The building G, having a sharpened end G<sup>2</sup>, adapted to divide a current of air, in combination with provisions, as the pivot A and circular track B, and wheels C running upon such track, and the vane G', for causing the building to be turned by the wind to present the end G<sup>2</sup> thereto, as herein specified.

3. Narrow props H, in combination with a swiveling building G, the props being adapted

to be easily thrown down by a turning motion of the building, as herein specified.

4. Narrow props adjustable in height by turning screws therein, in combination with a swiveling building and adapted to hold it stiffly under all ordinary conditions, but to set it free to turn when the wind is sufficiently strong, as herein specified.

5. The combination of the pivot A, circular track B, wheels C, and swiveling building G, having one end G<sup>2</sup> adapted to receive the current of air and the impact of fragments of other buildings, and the other end G' to receive the force of the wind laterally in case the building is not in the best position and to cause it to turn, in combination also with provisions, as the jack-screws H, for holding the building firmly under ordinary conditions and releasing it and allowing it to turn when the wind is sufficiently violent to require it, all substantially as herein specified.

In testimony whereof I have hereunto set my hand, at New York city, this 19th day of June, 1890, in the presence of two subscribing witnesses.

DUDLEY BLANCHARD:

Witnesses:

CHARLES R. SEARLE,  
CHAS. S. BARBER.