

M. P. TURNER.  
WALL FOR BUILDINGS.

No. 98,446.

Patented Dec. 28, 1869.

Fig. 2.

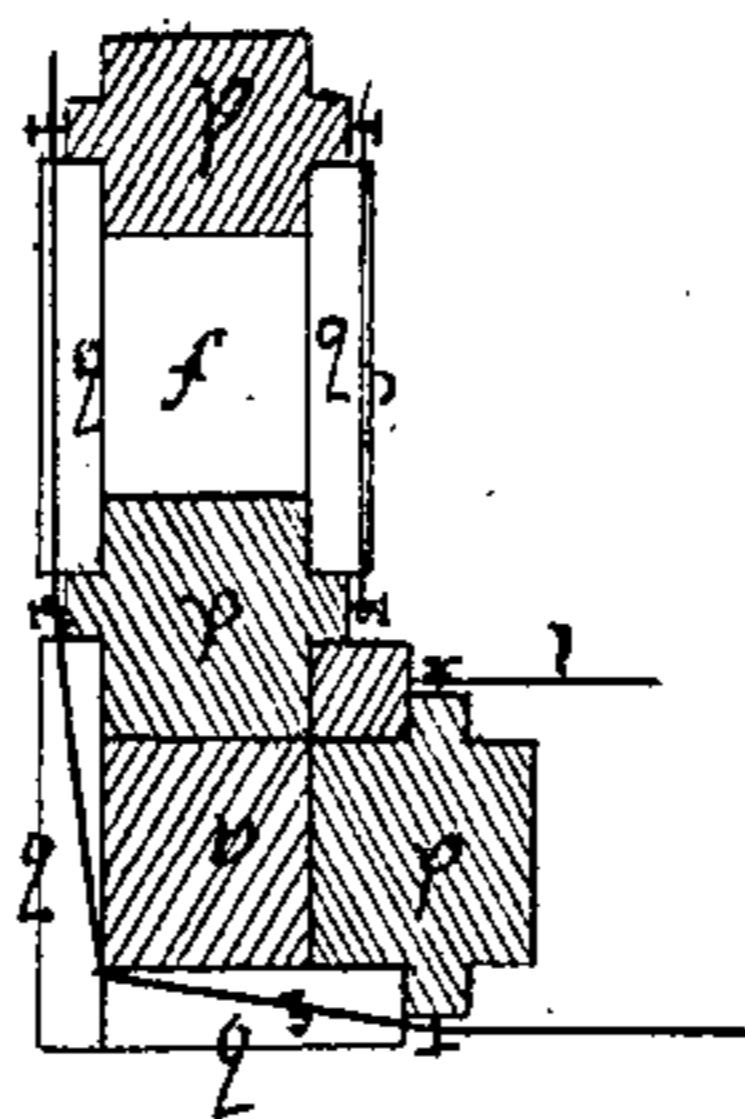
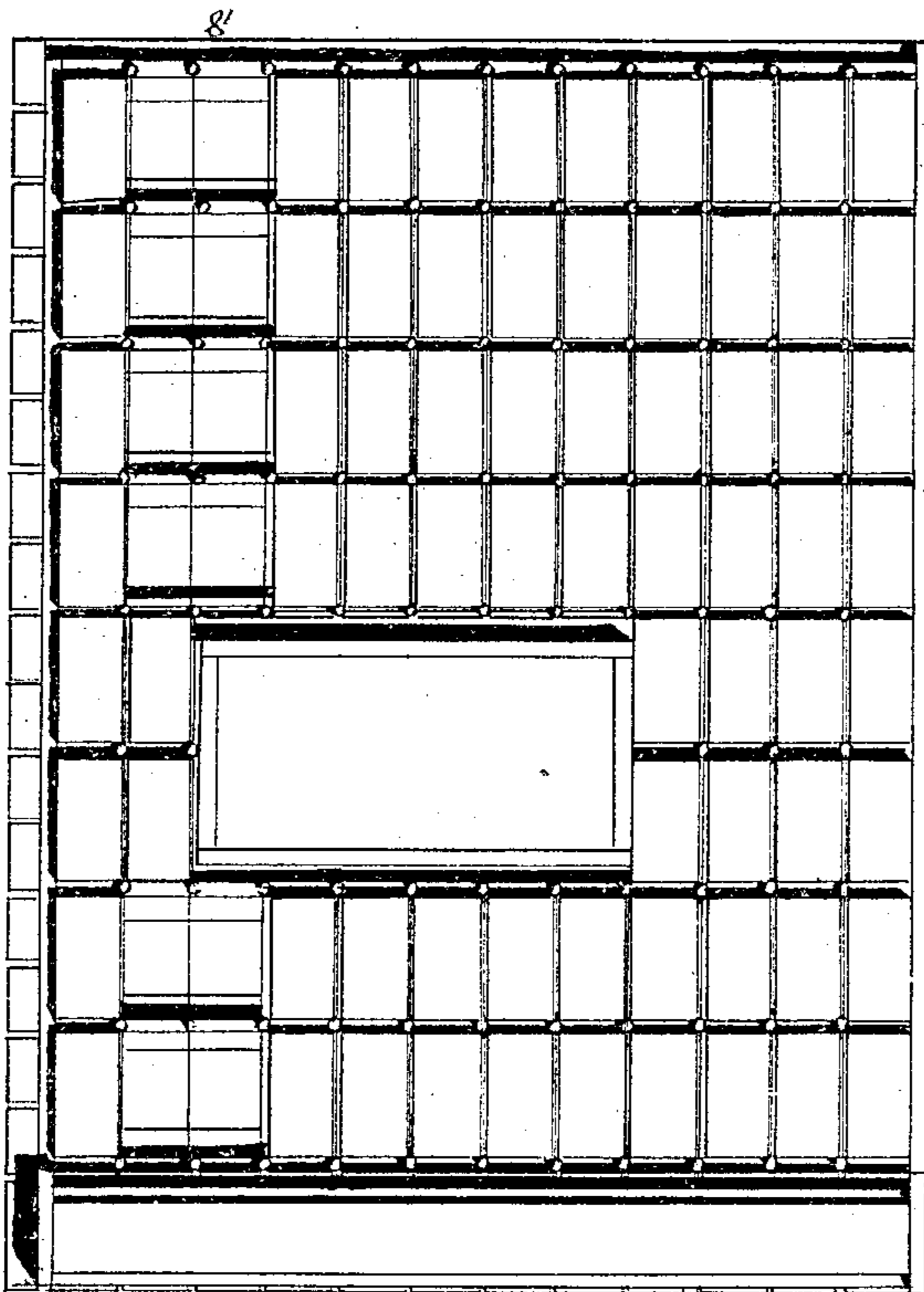


Fig. 1



Witnesses  
J. Lehmann  
C. L. Ever

Inventors  
M. P. Turner  
Frank A. Massie

# United States Patent Office.

M. P. TURNER, OF DES MOINES, IOWA.

Letters Patent No. 98,446, dated December 28, 1869.

## IMPROVED WALL FOR BUILDINGS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, M. P. TURNER, of Des Moines, in the county of Polk, and in the State of Iowa, have invented certain new and useful Improvements in Brick, Stone, Cement, Concrete, Wood, and other Walls; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in a cheap binding-principle, that will hold brick, stone, cement, concrete, and wooden walls, as well as rafters, to their place, by means of wire operating like a hoop.

In order to enable others skilled in the art to which my invention appertains, to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side view, and

Figure 2, a horizontal section.

The manner in which walls are laid with my binding-process is as follows:

First, beginning with the corner-post *a*, against which are set brick *b b* on the outside, and against the other two sides of the post *a* are placed studs *d d*, as seen in fig. 2; or, I may place half bricks on the inner sides of the corner-posts, and then place the studs, leaving an air-space between the inner and outer bricks.

The studs *d d* extend upward to the top of the first story, and are provided on both sides with battens or projections to keep the brick in position, and counteract the shrinkage of the wood.

A wire, *e*, of suitable size, and capable of sustaining about eight hundred pounds, is fastened at the corner-post *a* with a bolt, and extends, lying on the brick, to the outer edge of the stud *d*, and there bent once around a nail.

Studs *d d* are placed at regular intervals between each brick, forming an air-chamber, *f*.

The wire *e* then follows the line of the edge of the brick, within about half an inch of the outer edge, from stud to stud, and so on around the building, being imbedded in the mortar when the next course of brick is laid.

The inside wire *i* is laid in the same manner, except that it lies close to the edge of the brick, and so on with each course of brick until the wall is completed.

The brick may be laid solid against the posts and

studs, or with mortar, but the space on the outside, caused by the studs not quite reaching to the outer line of the brick, will be filled with mortar.

The studs may be of any desired thickness.

The design is that the outer wall shall present the appearance of all brick, laid on edge, or flat, as is usually the case. The inside surface will be smooth enough to require but little plastering, unless a second air-chamber should be desired. Then, by extending the stud about half an inch on the inside, and boring holes through it for the wire, (or nailing cleats over the nails holding the wire to the stud on the inside, perpendicular, and lath and plaster over that,) or sufficient for lathing-purposes, making one or two air-chambers, as may be desired.

It will be observed that every block, brick, stud, or other material, acts as a brace and counterbrace to the wall, binding all together like a hoop on a barrel.

By repeated experiments, I have demonstrated that a house built in this way may be handled like a barrel, and therefore I called it an earthquake-proof wall, whether of wood, brick, or other material.

For a frame house, the weatherboarding, of course, covers up the wires; still, the strength is there. The wires are entirely concealed and preserved by the mortar, and the projecting of the brick with crevices filled with mortar, hides all wood, and renders it fire-proof. The wire forms a net-work around the building. Its relation to every other material used is such that all contribute to the common strength, and each individual piece is self-sustaining.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. A wall for buildings, constructed as described, by placing the brick on their edges, their ends separated by vertical wooden studs, and bound with wire placed horizontally between each layer of brick, substantially as herein set forth.

2. The combination of the corner-post *a*, brick *b*, studs *d*, and wires *e i*, all arranged substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing, I have hereunto set my hand, this 28th day of August, 1869.

M. P. TURNER.

Witnesses:

D. J. GELL,

GILES H. TURNER.