

S. TOYE.  
BUILDING CONSTRUCTION.  
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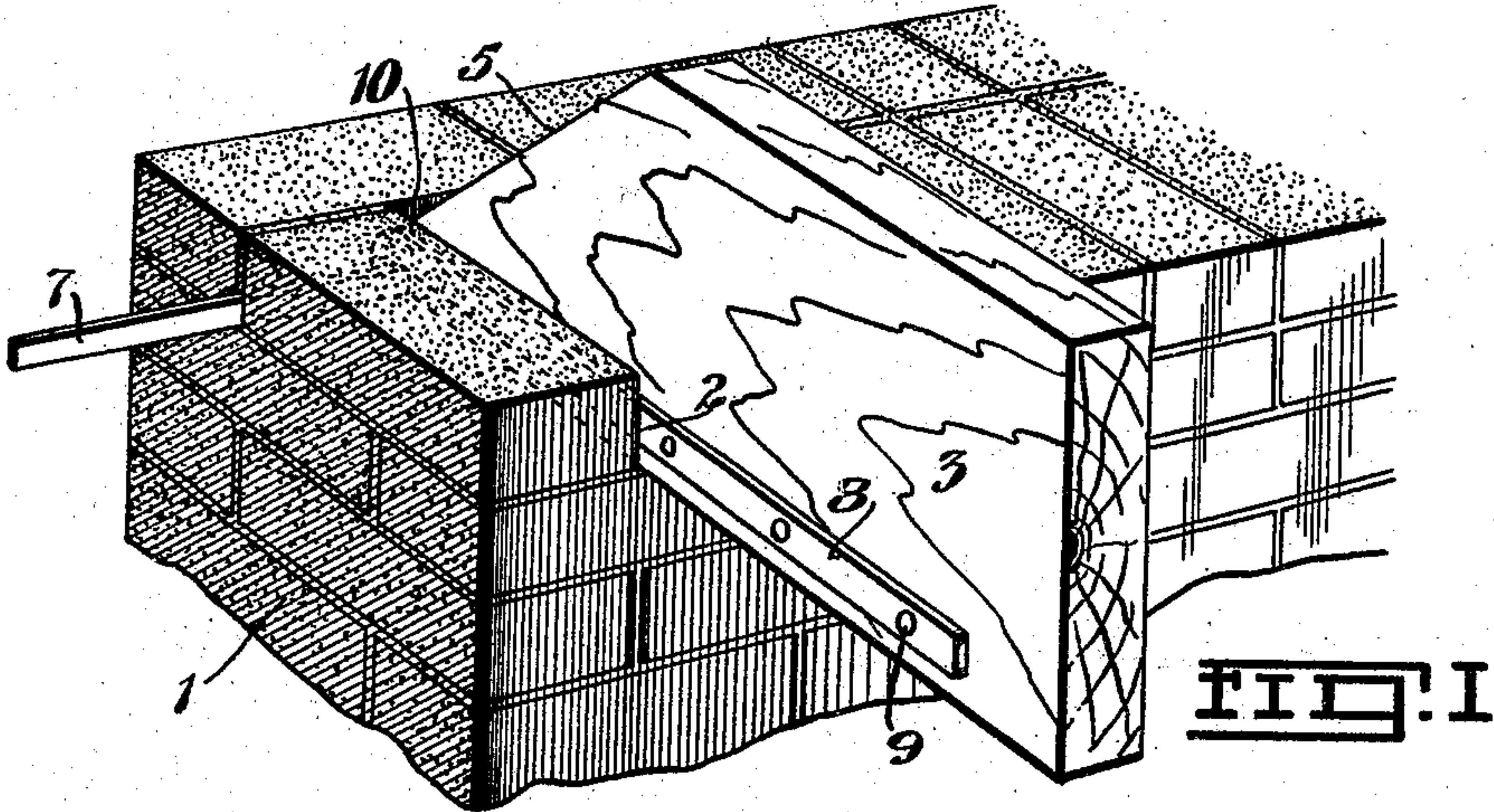


FIG. 1

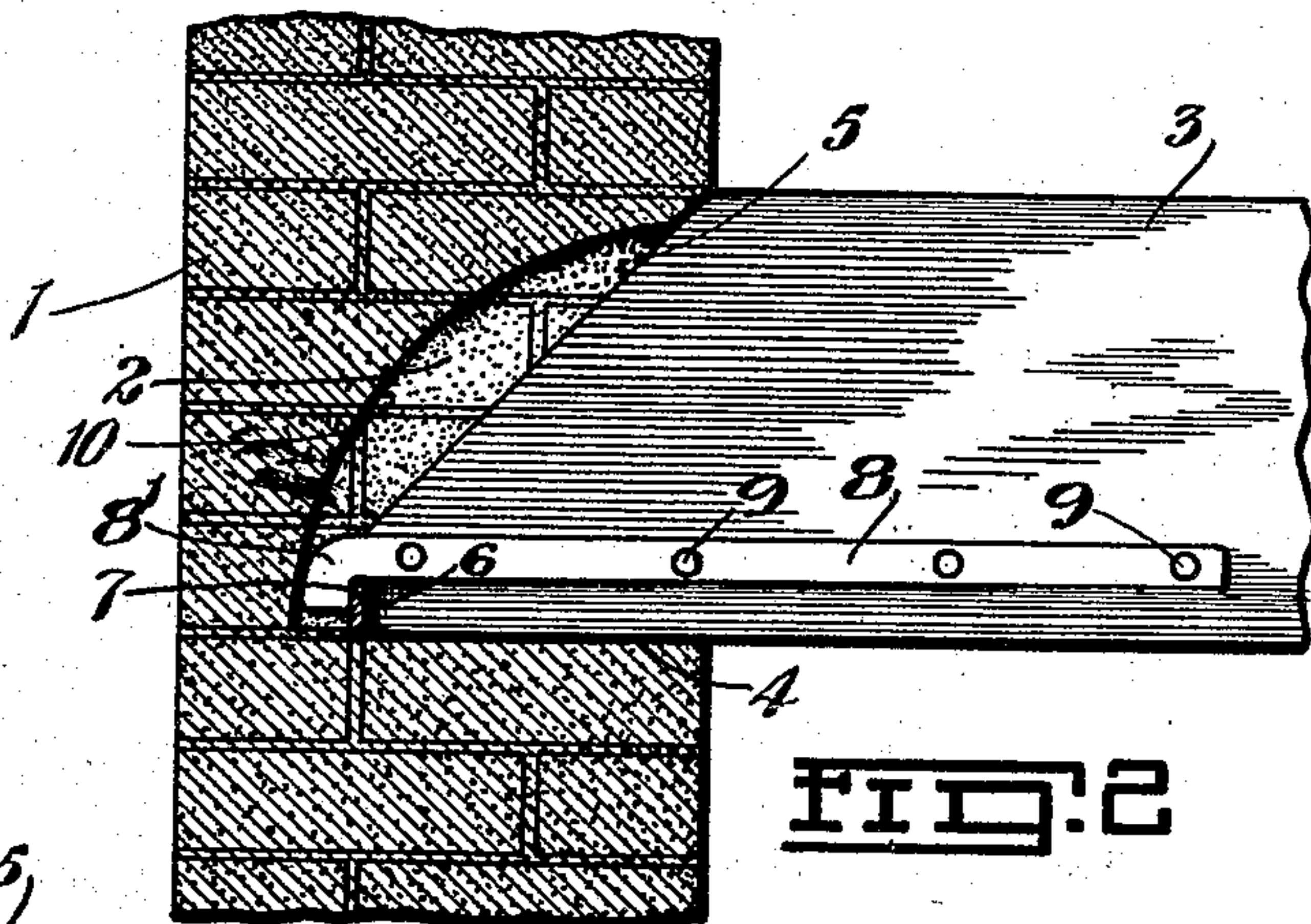
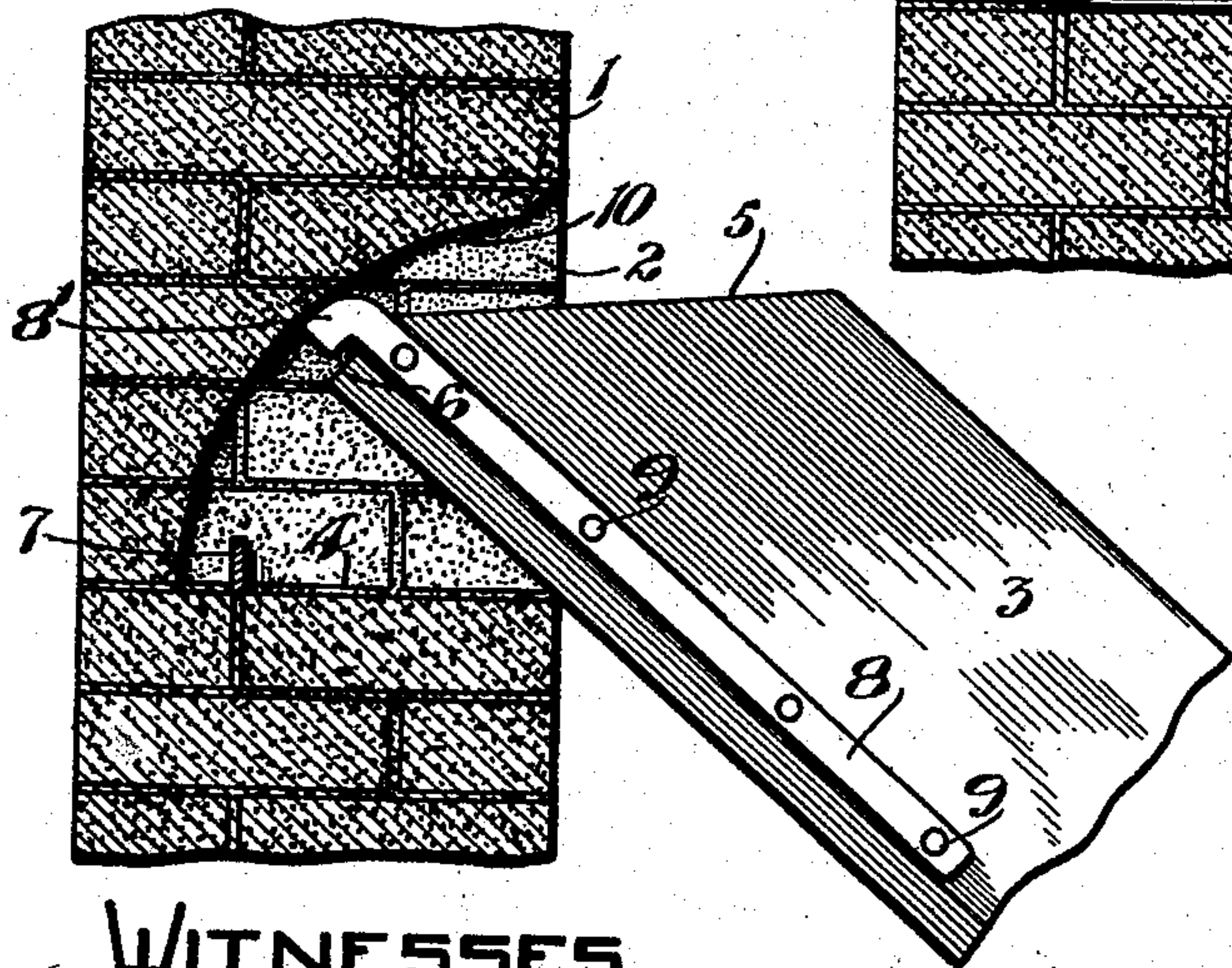


FIG. 2



WITNESSES  
Jas. M. Fabley  
Gerald S. Rockburgh

INVENTOR  
Smith Toye

By *Frank S. Luntz* *H. A. Otter*



# UNITED STATES PATENT OFFICE.

SMITH TOYE, OF WINNIPEG, MANITOBA, CANADA.

## BUILDING CONSTRUCTION.

No. 915,908.

Specification of Letters Patent.

Patented March 23, 1909.

Application filed March 30, 1908. Serial No. 424,203.

*To all whom it may concern:*

Be it known that I, SMITH TOYE, of the city of Winnipeg, in the Province of Manitoba, Canada, have invented certain new and useful Improvements in Building Construction, of which the following is the specification.

My invention relates to improvements in building construction, especially to the manner in which the joists are anchored to the walls of the building, and the objects of the invention are to provide a self releasing joist anchor which will be strong and inexpensive, which will bind the building together and prevent spreading, and which will further prevent the walls from being torn down in event of displacement of the joist.

A further object is to provide an anchor for joist which will adjust itself to the settling of the building, in this wise preventing breaking the bond of the material from which the wall is constructed.

The invention consists essentially in providing within a recess in the wall a stationary cross bar and in attaching to the joist to be anchored, a hooked bar adapted to hook over the cross bar when the joist is in position, the joist being cut at its end so that it will clear the recess when it is swung downwardly, the parts being arranged and constructed as hereinafter more particularly described.

Figure 1 represents a perspective view of a portion of a wall and a joist, the joist being held in position by means of my invention. Fig. 2 is a vertical sectional view through the wall of a building, the section being taken through the recess and showing a joist in side elevation held in position by my bars. Fig. 3 is a sectional view corresponding to Fig. 2, the joist being shown in a turned position.

In the drawings like characters of reference indicate corresponding parts in each figure.

1 represents the usual masoned wall which is shown as being constructed from brick.

2 is a recess formed in the wall to receive the end of the joist 3 which rests with its under face 4 abutting the brick work forming the lower wall of the recess. The recess is constructed in width so that it will receive the joist snugly and it extends within the wall a distance which will give sufficient bearing for the end of the joist on the brick work, and also allow for the insertion of my

bars, later explained. The end 5 of the joist entering the brick work is cut at an angle from the outer end of the joist to the inside of the wall leaving a vertical face at 6 for a purpose shortly to be explained.

7 is a cross bar preferably made of steel or other such strong metal and it is inserted in the wall on its edge with its ends passing between the rows of bricks thereby holding it permanently in position. The central portion of the bar passes across the recess with its lower edge resting on the brick work forming the lower face of the recess.

8 is a hooked bar fastened by bolts 9 or other such means firmly to the joist, and the hooked end 8' of the bar passes slightly beyond the squared end 6 of the joist. When the joist is placed in position the cross bar 7 is received tightly within the space between the hooked end 8' of the bar and the squared end of the beam and in this way the beam is prevented from longitudinal displacement.

The bricks forming the inner wall 10 of the recess are cut away so that in event of the beam being turned or thrown downwardly it will not engage with the wall, this being best shown in Figs. 2 and 3, where in Fig. 3 the hook is disengaged from the cross bar.

In applying my hooked bar to a metallic joist the joist would necessarily need to be drilled for the reception of bolts and the bar could be shaped to accommodate existing circumstances.

In anchoring a joist in actual construction the wall would be brought or built up to a perfectly level mark as shown in Fig. 1, the lower portion of the recesses being formed in the wall by spacing the bricks apart. The cross bar 7 would be built in between the bricks with its central portion passing across the recess and bearing on the lower wall as already described. The joist 3 would then be inserted the end having been previously cut at an angle, and the vertical face 6 would be placed against the cross bar. The hooked bar would then be placed over the cross bar and immediately spiked or bolted to the side of the joist. As soon as this had been done the remainder of the wall would be built up, the recess being left therein, the form of it being as already described.

It is well known that the joist anchors now in use are so permanently and solidly attached and fixed to the wall that if the joist were broken or destroyed by fire or other causes, the weight pressing on the broken,



burned, or weakened joist would cause the  
anchored end of the joist to break away from  
the wall and consequently break the wall,  
thereby weakening the complete structure.  
5 and possibly causing a dangerous collapse.  
With my joist, in event of such circumstances  
as these, it would free itself immediately  
from the wall without tearing or breaking  
and avoid any collapsing of the walls and  
10 their consequent dangers.

What I claim as my invention is:

In a device of the class described, the combination with the wall having a recess therein  
and a joist adapted to enter the recess, one

corner of the joist being cut off at an angle so 15  
as to leave a short vertical face, 6, a cross bar  
set on edge and passing through the recess  
adjacent its inner face, and a bar secured to  
the joist and having its end hooked, the  
hooked part passing beyond the end of the 20  
joist and forming with the face 6 a recess into  
which the cross bar fits.

Signed at Winnipeg, in the Province of  
Manitoba, this 16th day of March 1908.

SMITH TOYE.

Witnesses:

GILBERT THOMSON,  
GERALD S. ROXBURGH.