Jan. 2, 1923.

1,440,545.

J. LALLY.

FIREPROOF BUILDING CONSTRUCTION.

FILED MAR. 25, 1920.

Fig. 1.

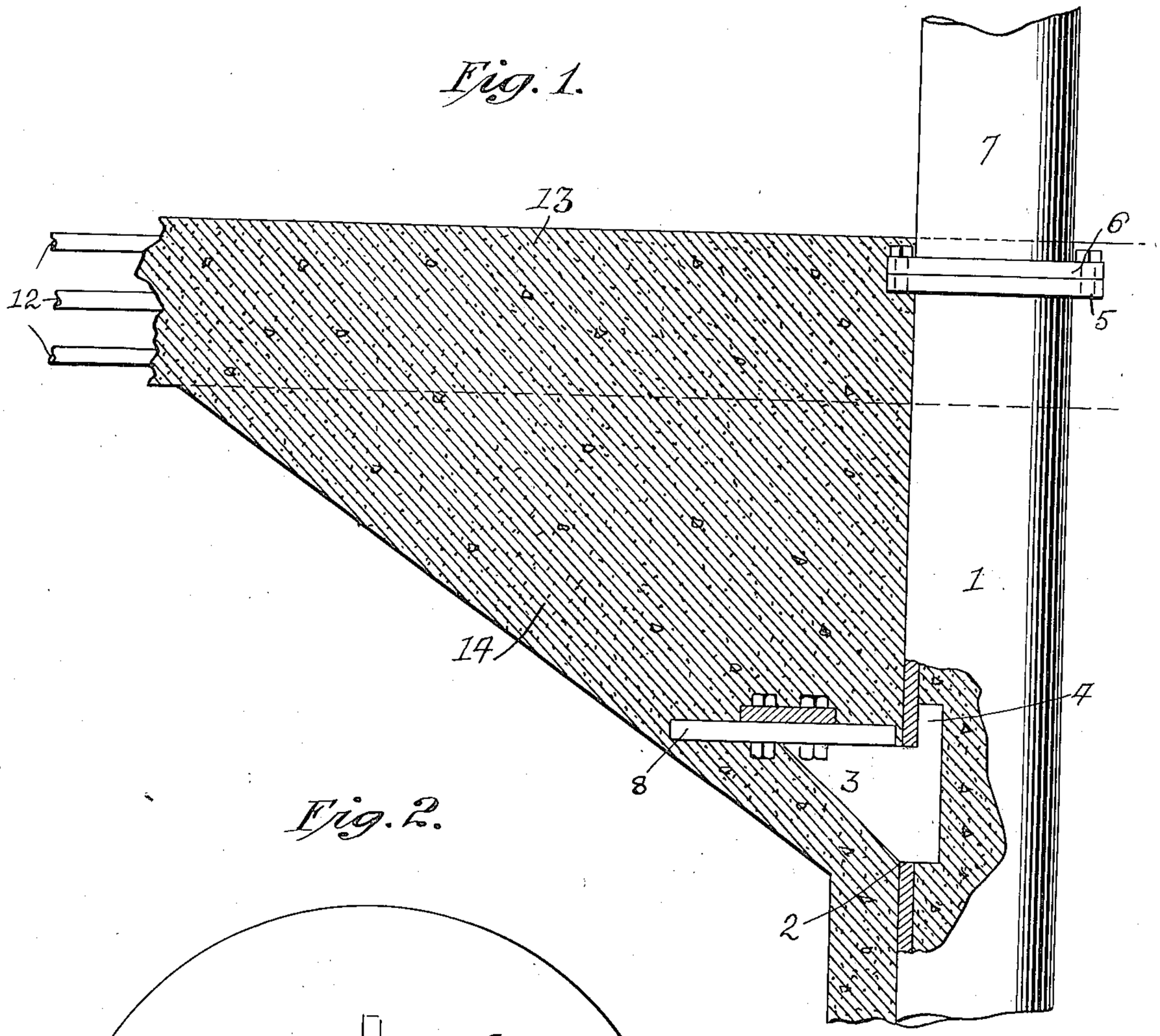
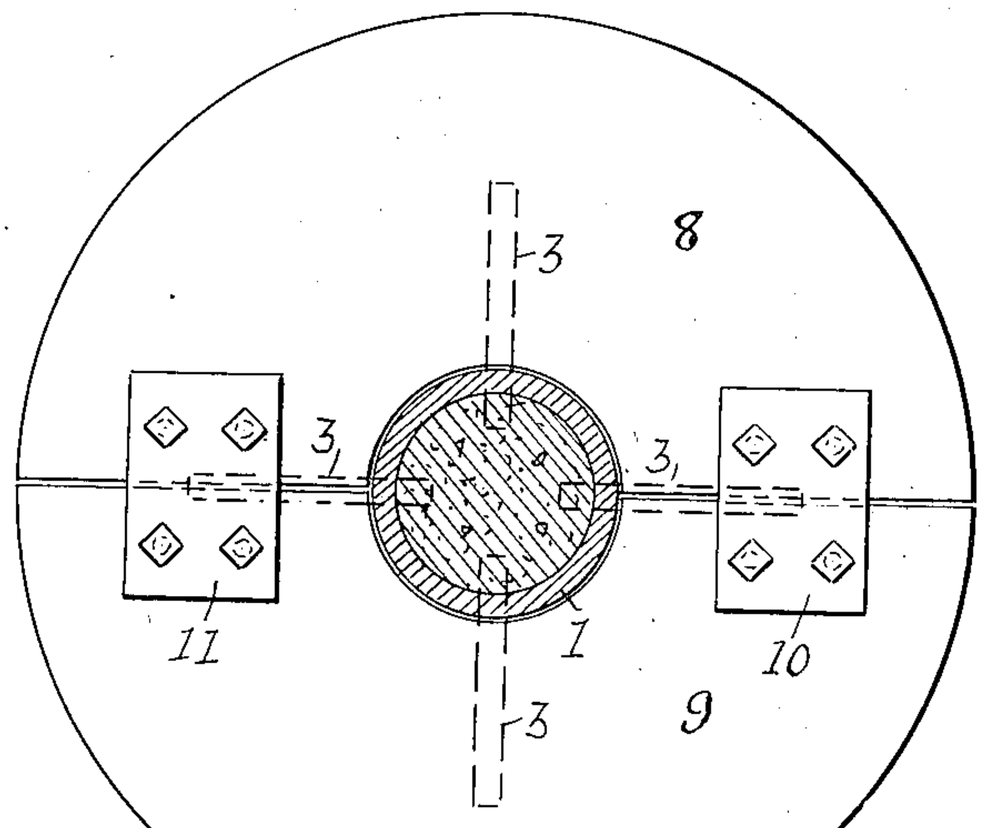


Fig. 2.



John Lally
Inventor:

by Robert B Killgore
Atty.

Patented Jan. 2, 1923. 1,440,545

UNITED STATES PATENT OFFICE.

JOHN LALLY, OF BOSTON, MASSACHUSETTS.

FIREPROOF BUILDING CONSTRUCTION.

Application filed March 25, 1920. Serial No. 368,778.

To all whom it may concern:

Be it known that I, JOHN LALLY, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Fireproof Building Constructions, of which the following is a specification.

My invention relates to improvements in fireproof building construction of the type in which hollow metal columns are filled with plastic material and utilized to carry floors of plastic material, concrete being commonly used.

It is my object to simplify the construction so that it can be easily and cheaply produced and erected, be possessed of great strength and avoid waste of valuable floor space by confining the loss to the bare diameter of the metal shell of the column.

One method of accomplishing these results is shown in the accompanying drawing in which Fig. 1 is a view, partly in section of an embodiment of my improved construction and Fig. 2 a top view of the column bracket.

In the preferred form of construction shown in the drawing the usual metal column casing 1 is slotted near the top at 2 and a bracket plate 3, with the upwardly extending lug 4 on its rear edge is hooked through the slot, the column then being filled with plastic material which not only strengthens and fireproofs the columns but also locks the bracket plates in position. In practice a plurality of these brackets are employed.

These bracket plates may be welded or brazed in place or may be attached to the column in any desired manner without departing from my invention.

A tie plate 5 may then be secured to the upper end of the column and a corresponding tie plate 6 secured to the lower end of the superimposed column 7.

The columns in a line are then erected and the top and bottom tie plates are bolted together as shown.

A supporting plate, preferably made in two sections 8 and 9 is laid on the brackets 3, encircling the column 1 and the parts are tied together with the splice plates 10 and 11 bolted thereto.

The floor reinforcing rods 12 (if used) are placed in position and the plastic material is poured to form the floor 13 and bracket 14 of the column, embedding the tie plates 5 and 6, bracket plates 3, supporting plate 8—9 and splice plates 10 and 11 forming a concrete bracket running from the plate 8—9 and supported by the same up to the floor, with which it is integral, thereby forming a support for the floor and concentrating the load on the supporting plate 8—9.

By this method of construction the metal parts of the bracket construction are all below the floor level and the only floor space lost is the actual diameter of the column casing.

The columns themselves may be manufactured complete and filled with concrete and then carried to the job and erected thereby simplifying building operations.

I claim:—

1. Fireproof building construction comprising a metal column casing, brackets on the outside thereof near one end, a horizontally disposed supporting plate encircling, and juxtaposed to, the casing and resting on the brackets, the brackets, supporting plate and casing end being adapted to be embedded in concrete whereby a column capital is formed supported at its base by the casing encircling plate.

2. Fireproof building construction comprising a metal column casing slotted near one end, brackets engaging the slots and extending outside the casing, a tie plate on the end of the casing adapted to engage a superimposed column, a horizontally disposed supporting plate encircling, and juxtaposed to, the metal casing and resting on the brackets, the casing end, tie plate, brackets and supporting plates being adapted to be embedded in concrete whereby a column capital is formed supported at its base by the casing encircling plate.

3. Fireproof building construction comprising a metal column casing slotted adjacent its end, brackets provided with up-

wardly extending lugs engaging the slots with the lugs within the casing and above the slot ends, a tie plate on the end of the casing adapted to engage a superimposed column, a horizontally disposed supporting plate encircling and juxtaposed to, the casing and resting on the brackets, the casing end, tie plate, supporting plate and brackets being adapted to be embedded in concrete whereby a column capital is formed supported at its base by the casing encircling plate.

In testimony whereof I have affixed my signature.

JOHN LALLY.