

G. MASCHINO.  
CONCRETE CHIMNEY CONSTRUCTION.  
APPLICATION FILED JAN. 27, 1909.

933,774.

Patented Sept. 14, 1909.

Fig. 1

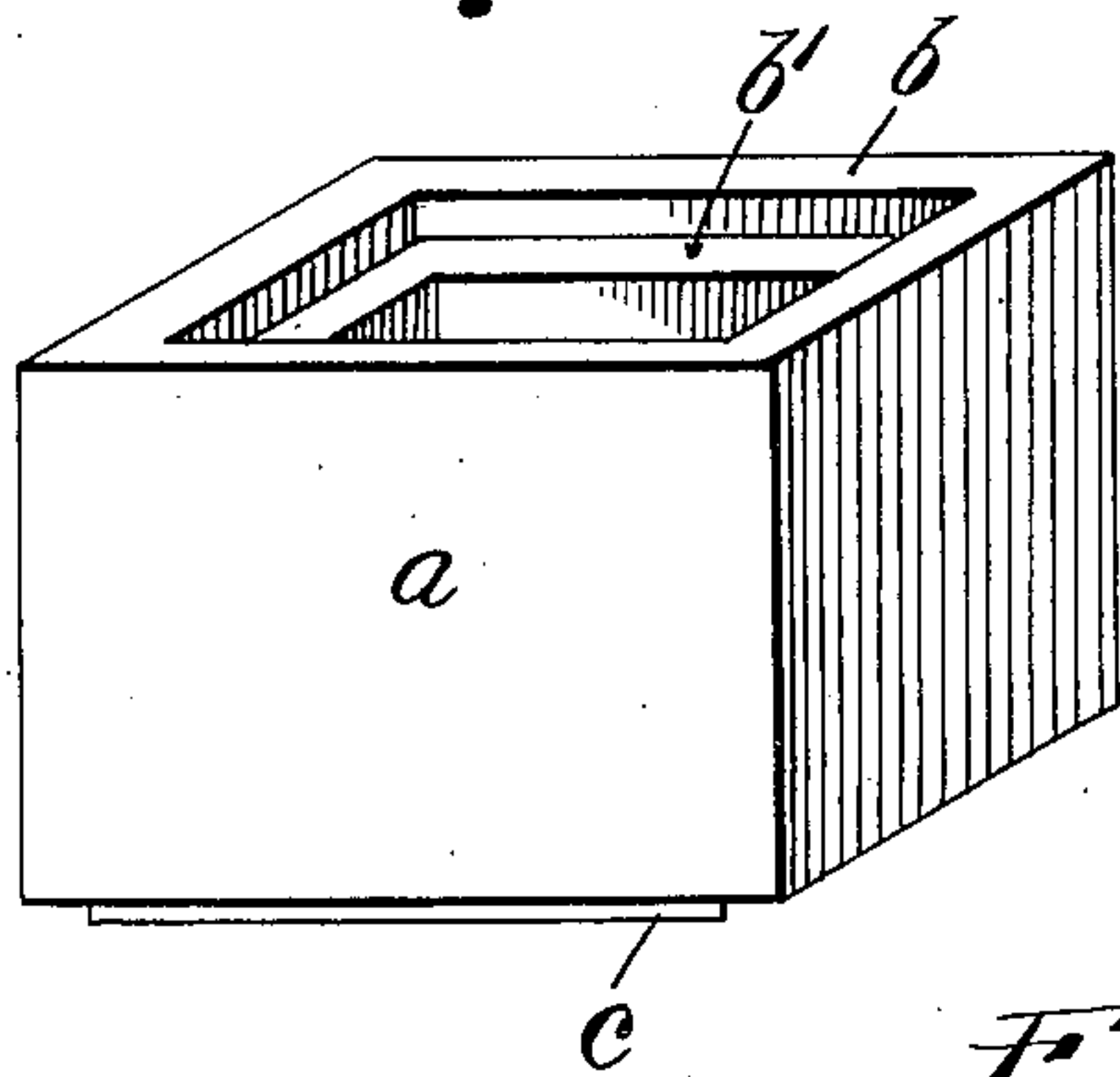


Fig. 2.

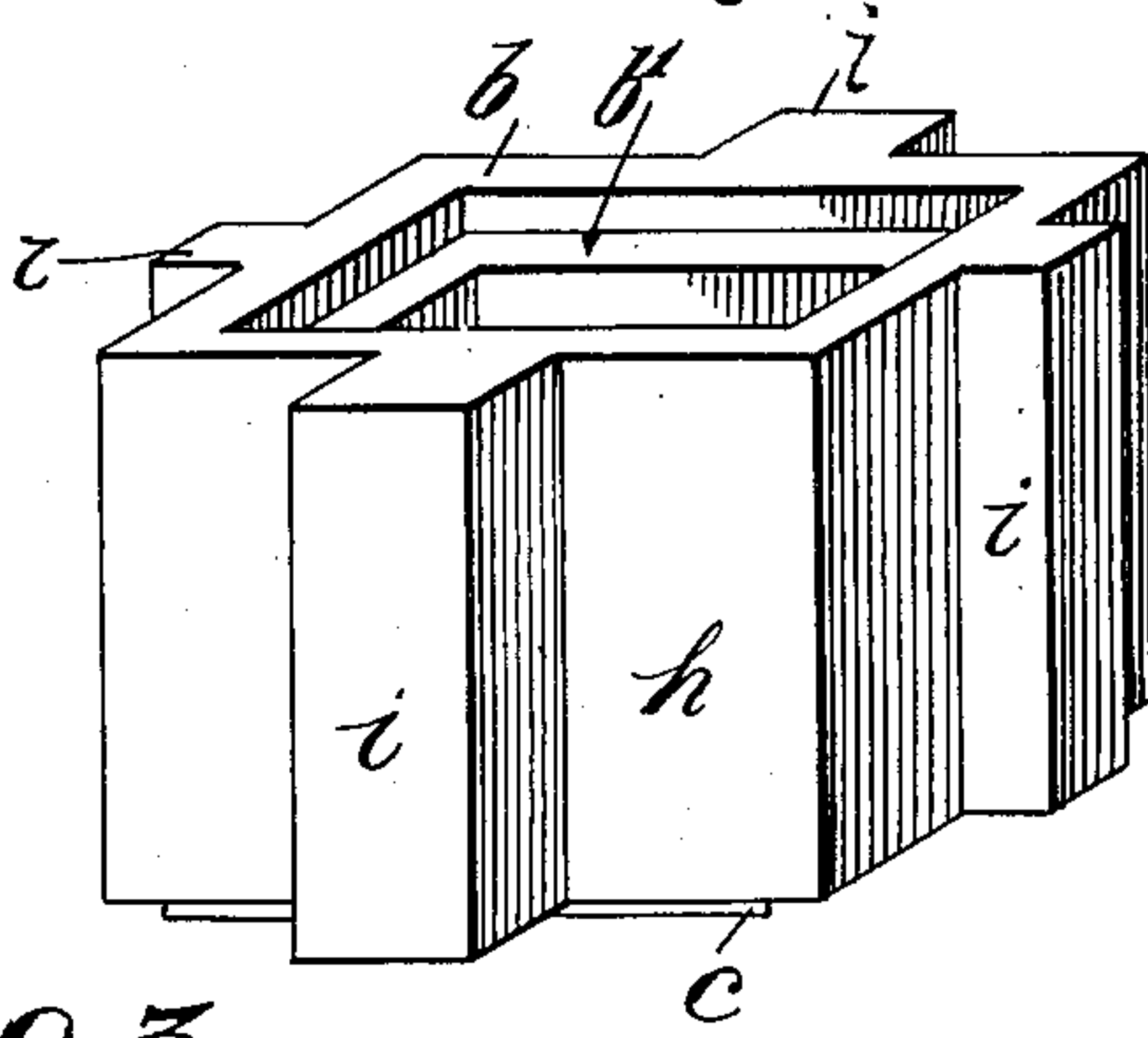


Fig. 3.

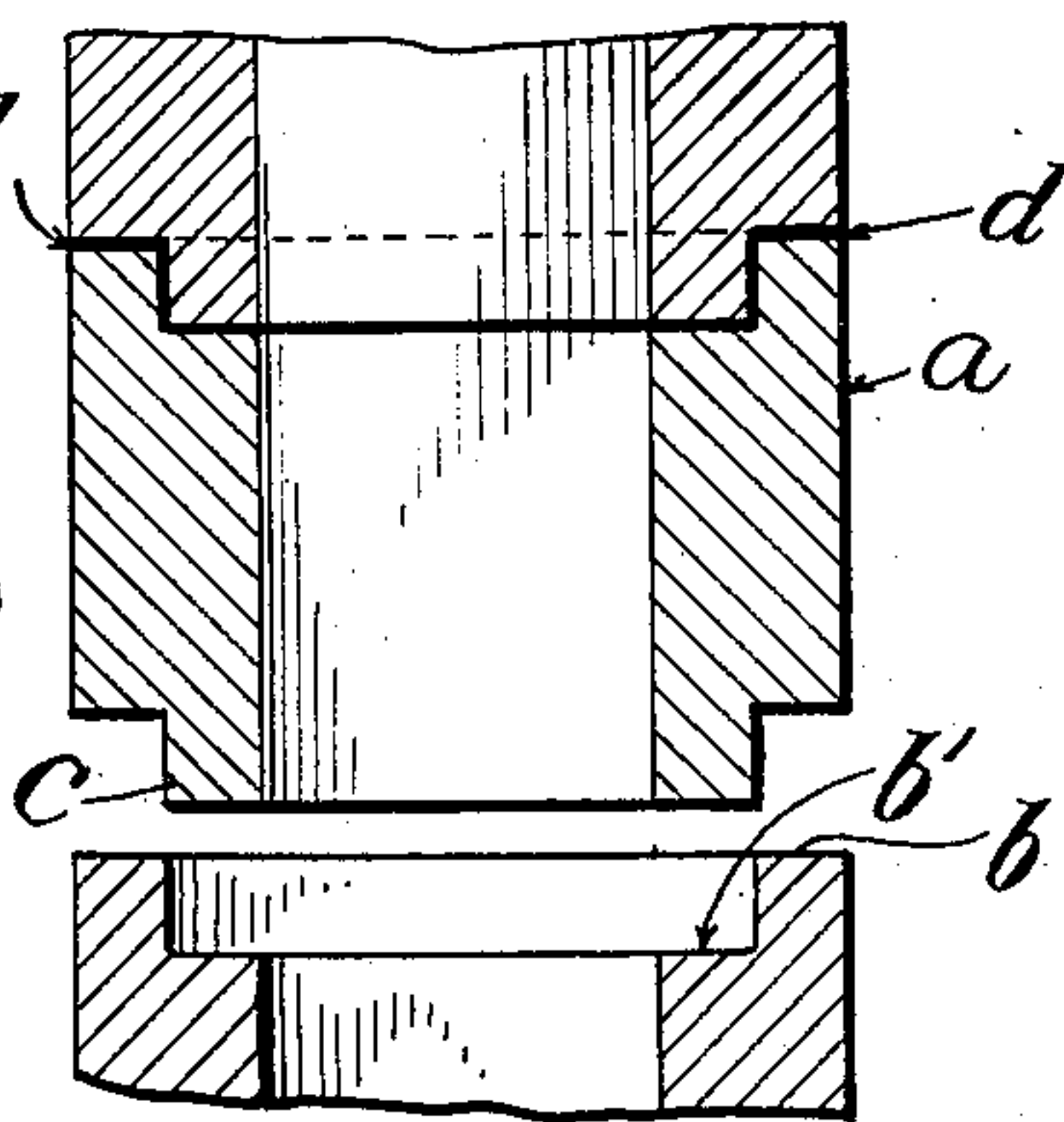


Fig. 5.

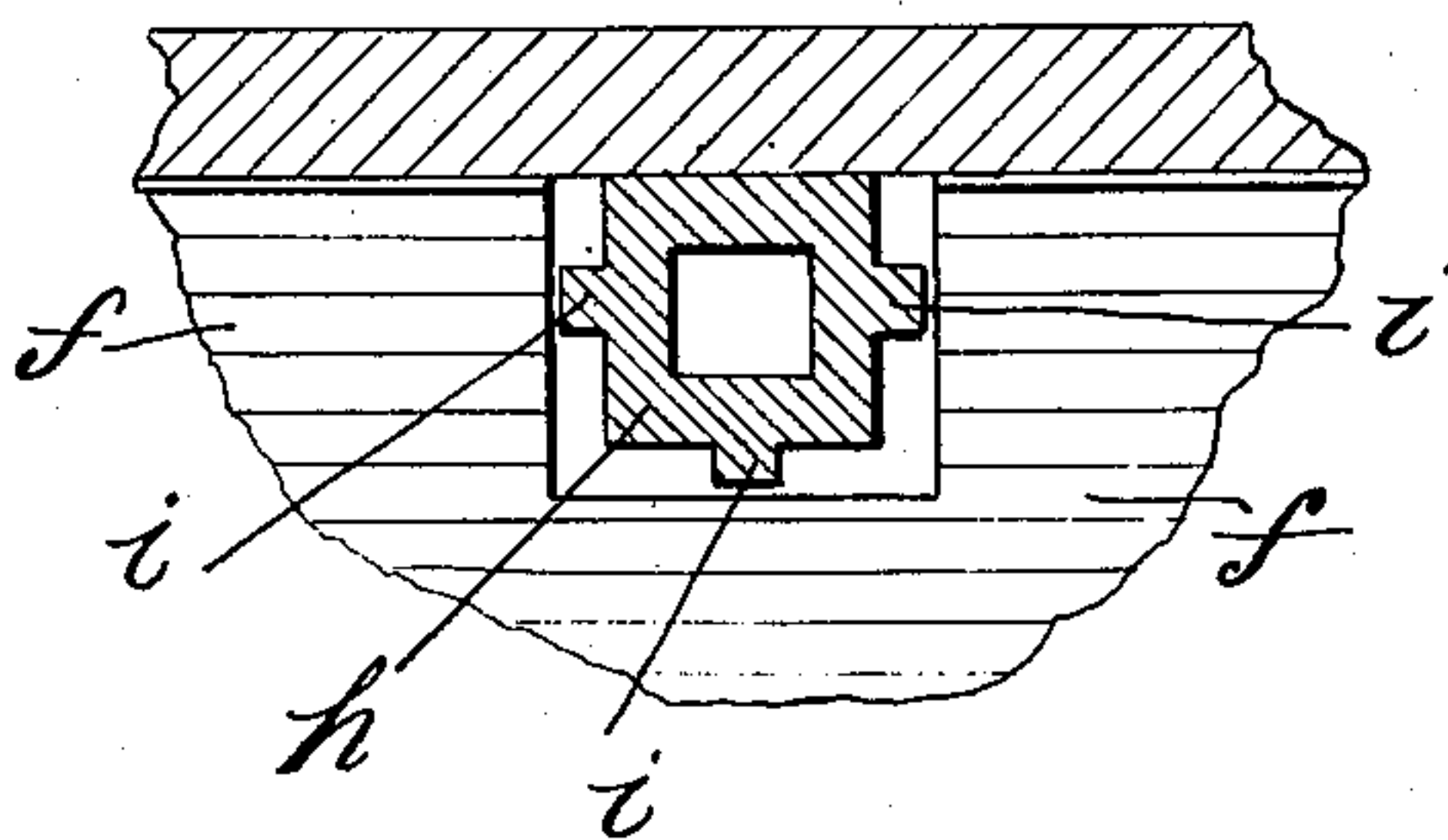
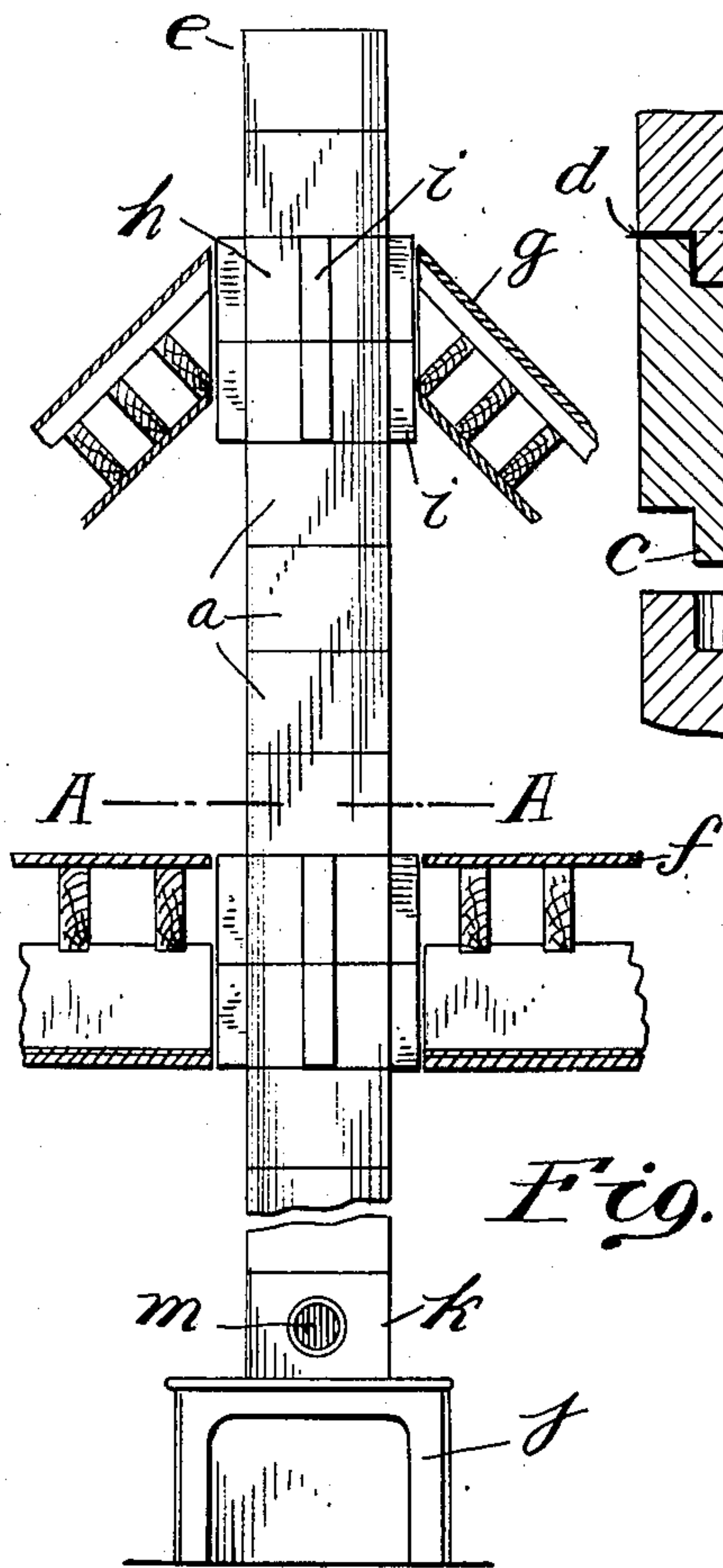


Fig. 4



Witnesses:  
*Harry C. Herbig*  
*M. E. Campion*

*George Maschino* Inventor  
By *his Attorney*  
*James Hamilton*



# UNITED STATES PATENT OFFICE.

GEORGE MASCHINO, OF BOSTON, MASSACHUSETTS.

## CONCRETE CHIMNEY CONSTRUCTION.

933,774.

Specification of Letters Patent. Patented Sept. 14, 1909.

Application filed January 27, 1909. Serial No. 474,369.

*To all whom it may concern:*

Be it known that I, GEORGE MASCHINO, 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 Concrete Chimney Construction, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in chimney construction and particularly to improvements in chimneys made up of concrete or cement blocks; and an object of my invention is to provide a chimney which will be free from defects and which will require no flue lining.

Another object of my invention is to provide a chimney which will be simple and comparatively cheap in construction and which will be susceptible of being rapidly built.

Briefly described, my new chimney is built up of hollow concrete blocks each of which is formed with a shank or tenon on one end and a cavity or recess on the other end, which recess or mortise receives the tenon of the block above. These blocks support their own weight and the total weight of the chimney is supported by a strong concrete foundation. In building the chimney, the cost of the usual timber framework is saved and there is a further saving in the cost of labor, in the cost of mortar and in the cost of the chimney material itself. Further, the cost of the flue lining is saved and the danger resulting from defective flues is avoided, since the box-joint between the blocks prevents escape of flame. In the ordinary brick chimney the flue lining is liable to fall out of place and the mortar between the bricks is liable to crumble and then become displaced, whereby an opening is left for the escape of fire to the woodwork surrounding the chimney. Further, it frequently occurs that a brick itself is defective, or becomes crumbly or friable and then gives away, thereby leaving a hole in the chimney between the partitions and floors, where it cannot be seen. Danger of fire from these causes is removed in my new chimney.

In the drawings illustrating the principle of my new invention and the best mode now known to me of applying that principle, Figure 1 is a perspective view of one of the intermediate chimney blocks used in the construction of my new chimney; Fig. 2 is a

perspective view of a floor block which is used where the chimney passes through the roof or the floors; Fig. 3 shows in section two blocks assembled and a third block in line with but separated from the assembled blocks; Fig. 4 is an elevation of a chimney constructed of my new blocks, the floors and roof being shown in section; and Fig. 5 is a section on the line A—A of Fig. 4.

As shown in Figs. 1 and 2, the chimney blocks are hollow. The intermediate chimney block *a* is formed at its upper end with a rim *b* which forms the wall of a recess or mortise *b'*, and at its lower end with a tenon or shank *c*. The latter fits snugly in the recess or mortise *b'* in the upper end of the block below it and is held therein by the rim *b* and by a layer of cement *d*.

In constructing the chimney *e*, where the latter passes through the floors *f* and the roof *g*, floor blocks *h* are used. These are formed with the recess *h* and tenon *c* for the same purpose as in the case of the intermediate block *a*. The floor-blocks are further formed with outwardly-extending ribs *i*, which serve to permit the circulation of air between the floor *f* and the chimney and to give rigidity and thereby prevent tipping of the blocks or buckling of the chimney. The base of the chimney rests upon a concrete formation *j* and the base-block *k* is formed in the mold with an aperture *m* for the reception of the pipe or flue, thereby avoiding the necessity of breaking out a hole to receive the stove-pipe as is usually done in the case of the ordinary brick chimney. Should it be necessary to straighten my new chimney, that may be done by increasing the thickness of the cement layers *d* on one side. The box-joint between the blocks is air-tight and avoids all danger of the escape of flame. The box-joint is further a firm connection between the adjacent blocks and dispenses with the expense and complexity of construction entailed by the use of locking devices and bracing or supporting devices. The ribs *i* insure the circulation of air and the cooling of the chimney at the points where ignition due to overheating is most likely to occur.

I claim:

A plurality of hollow chimney blocks of cementitious material; each of said blocks having a recess in its top and a shank projecting from its bottom; the shank of one of said blocks fitting snugly in the recess formed in the other of said blocks; and each of said

blocks being further formed with an integral  
rib centrally disposed on each of its lateral  
faces, the ribs on one of said blocks lying in  
prolongation of the ribs on the other of said  
5 blocks and serving to coöperate with the  
walls of said recess and the shank therein  
mounted to prevent buckling.

In testimony whereof I have hereunto set

my hand at said Boston, Mass., this 25th day  
of January, A. D., 1909, in the presence of 10  
the two undersigned witnesses.

GEORGE MASCHINO.

Witnesses:

GEORGE M. NAY,  
EDWARD N. CARPENTER.