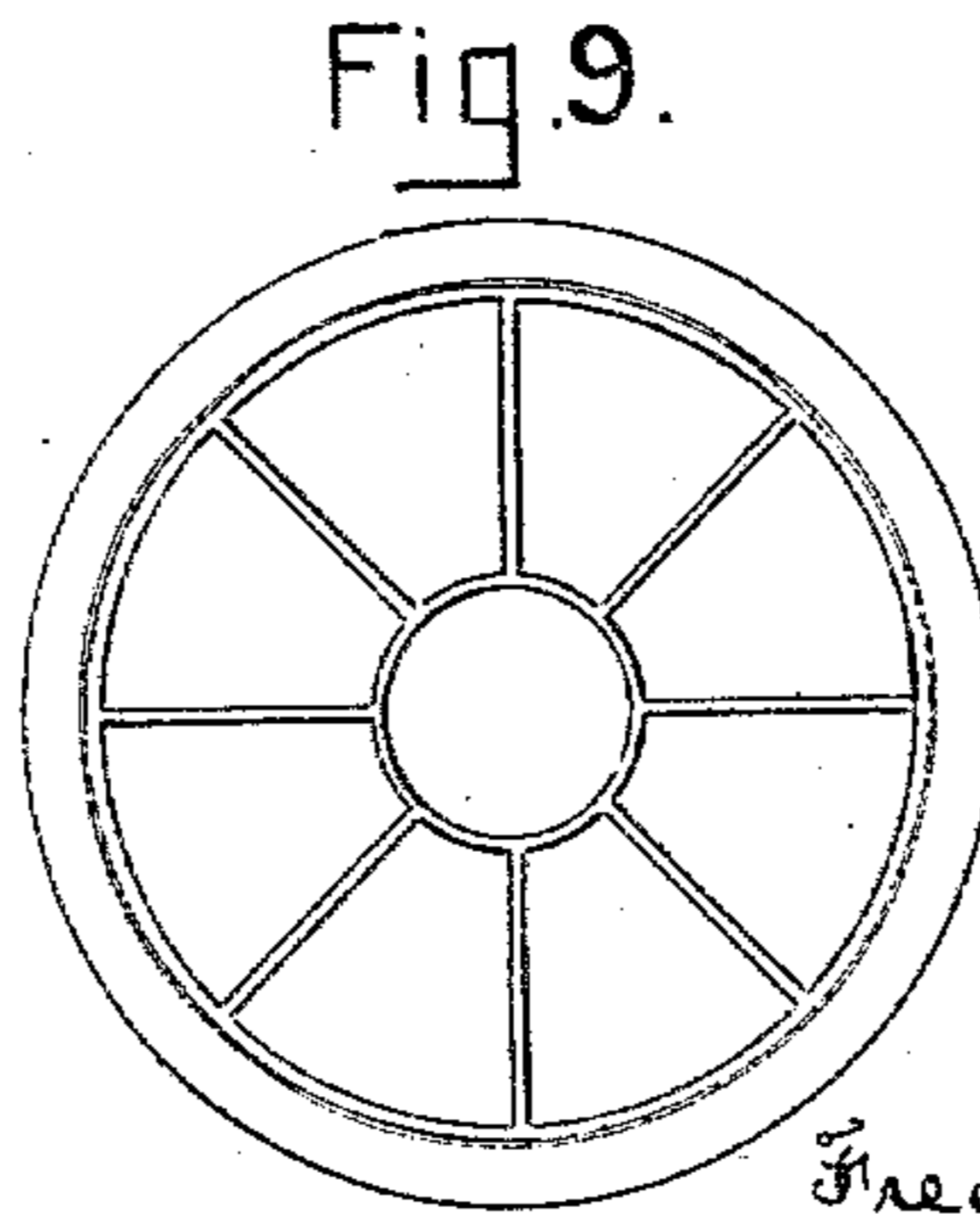
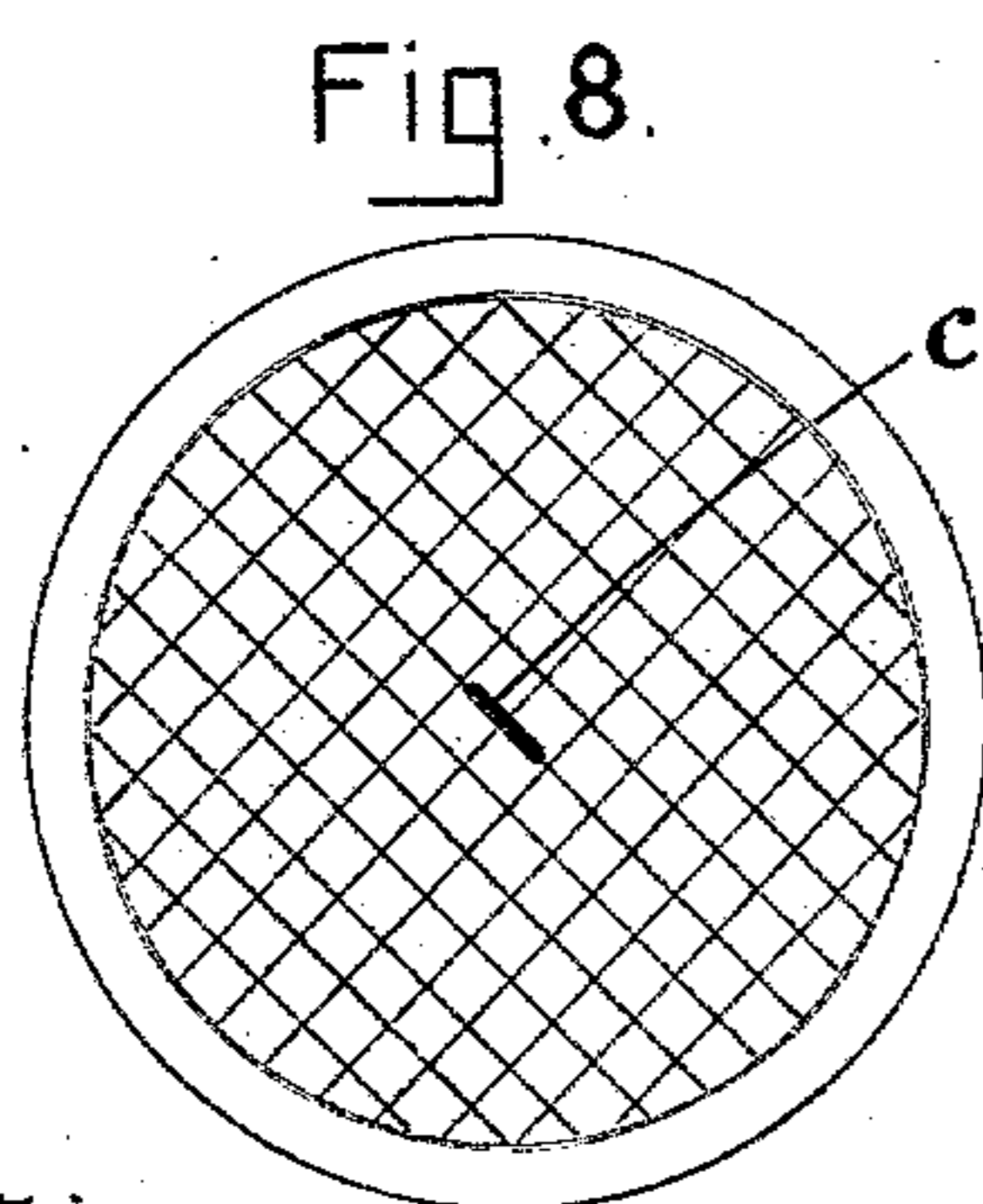
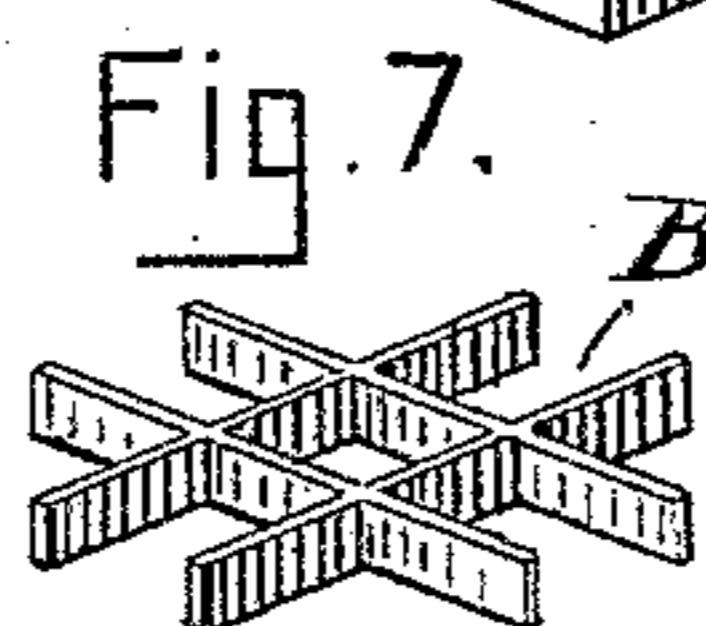
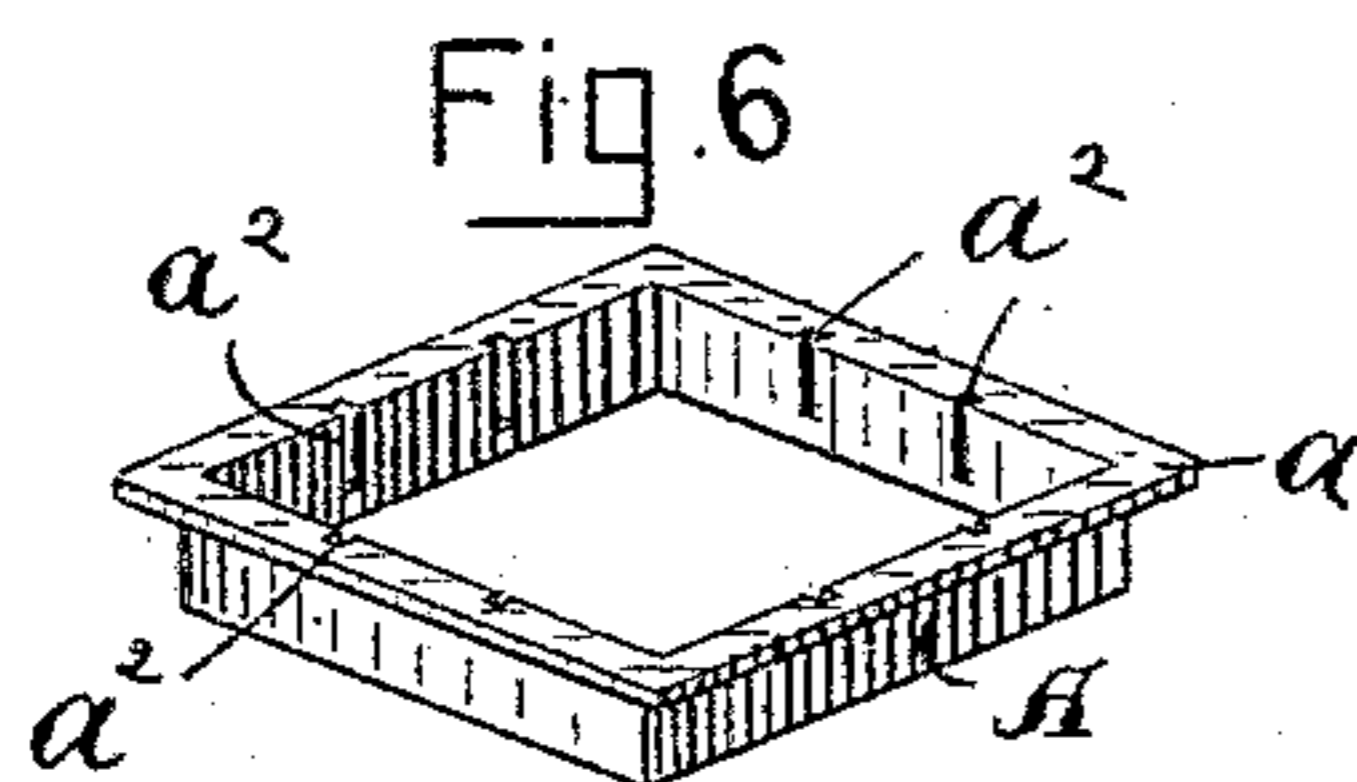
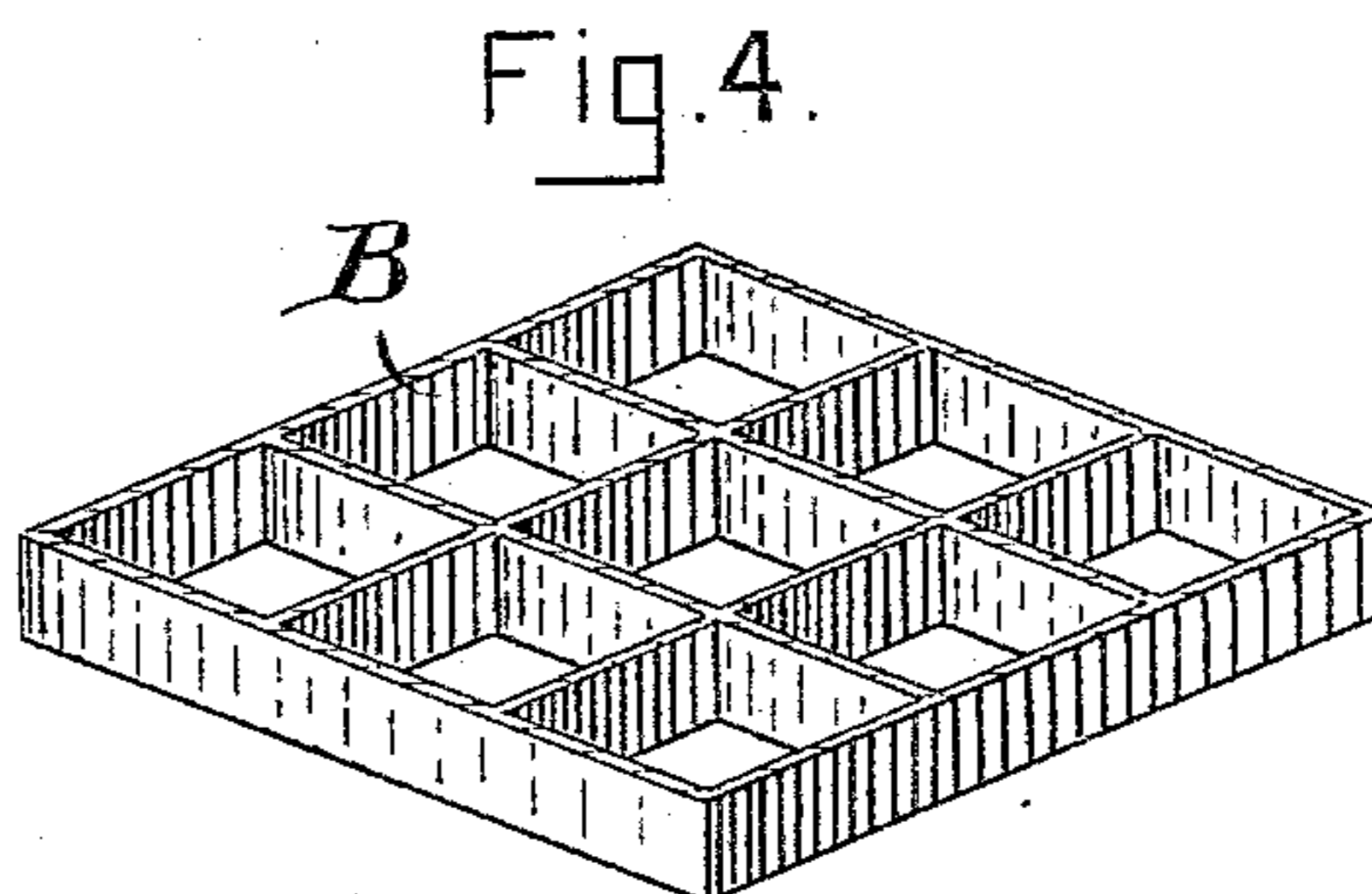
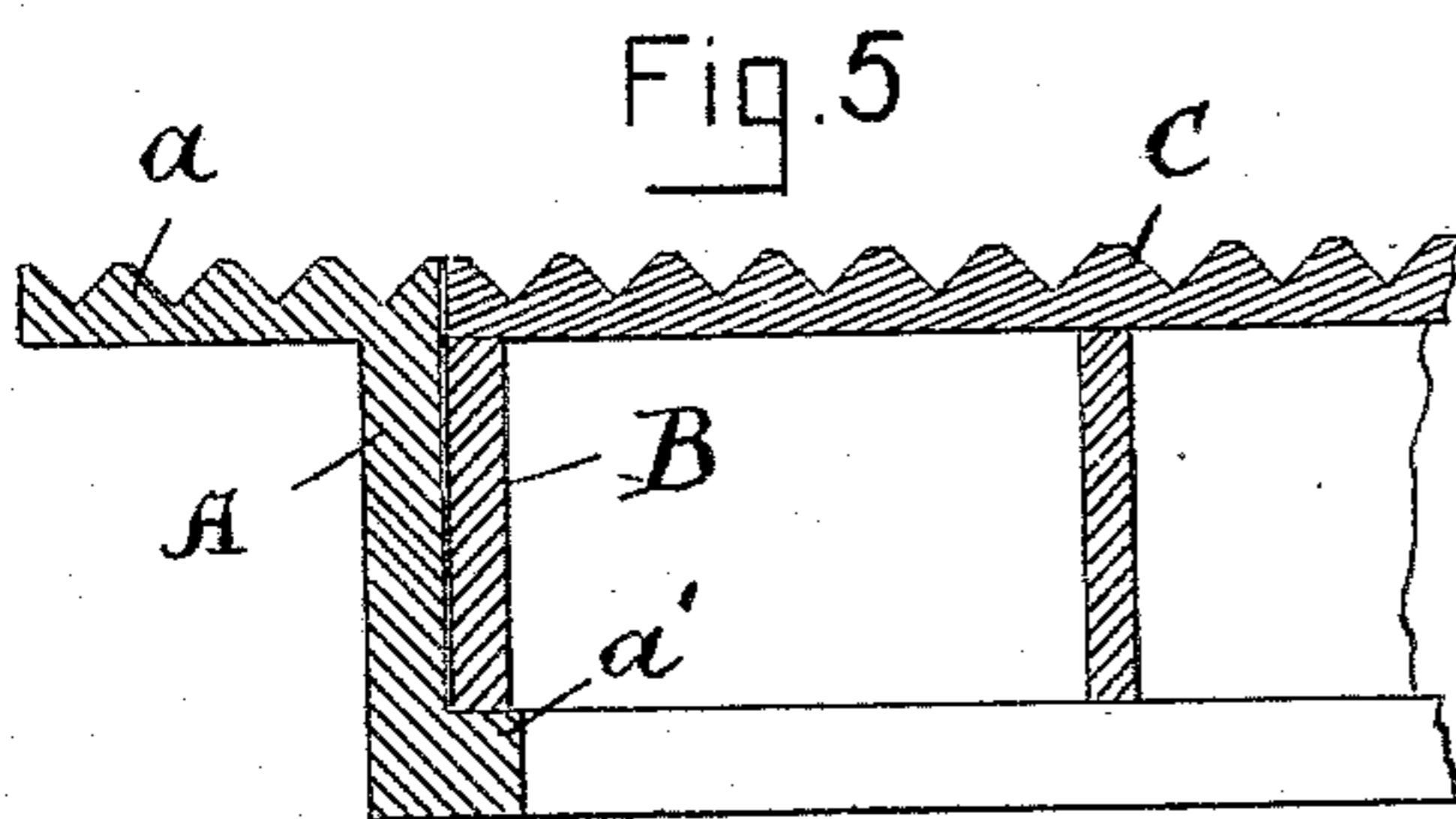
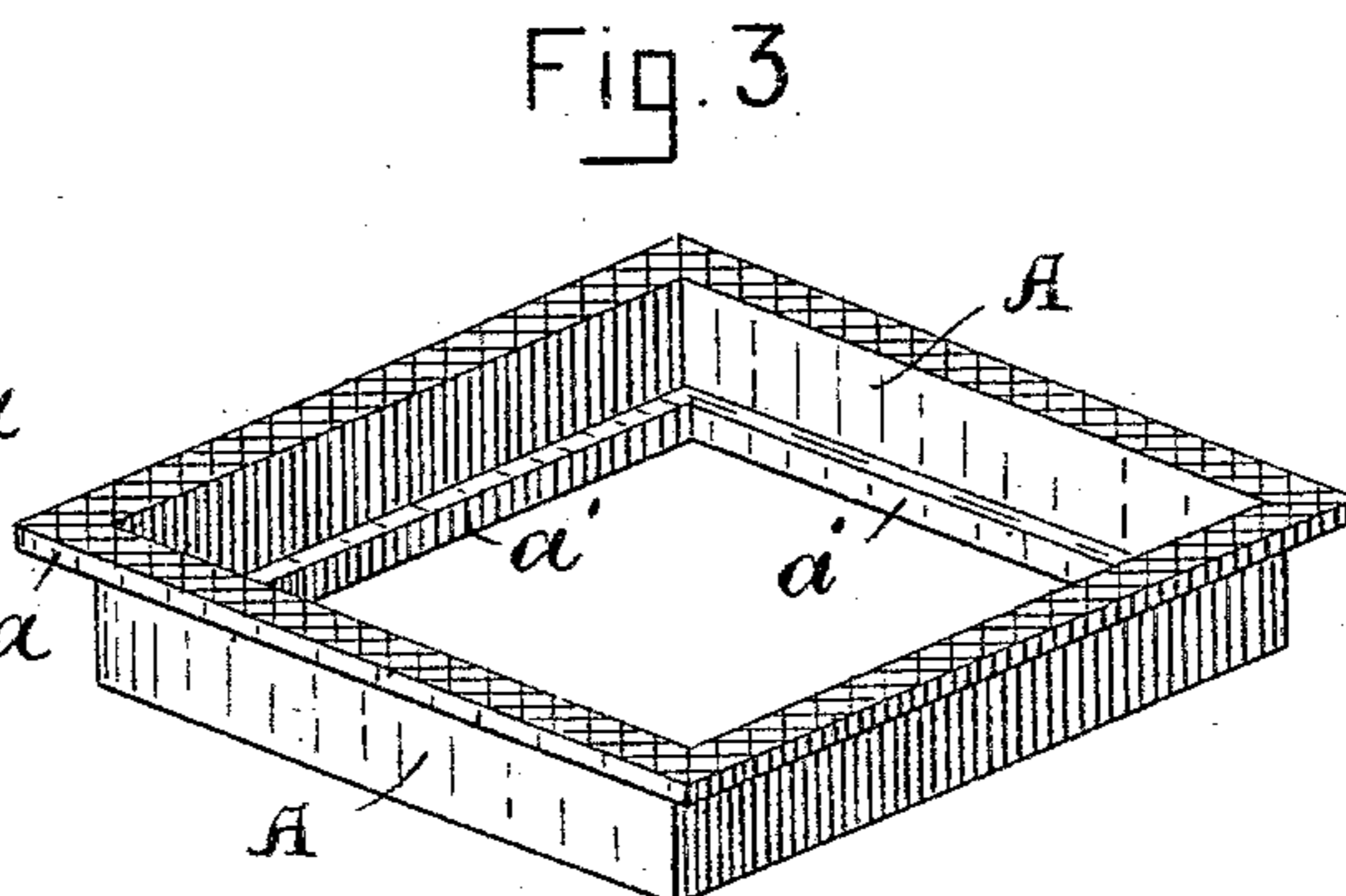
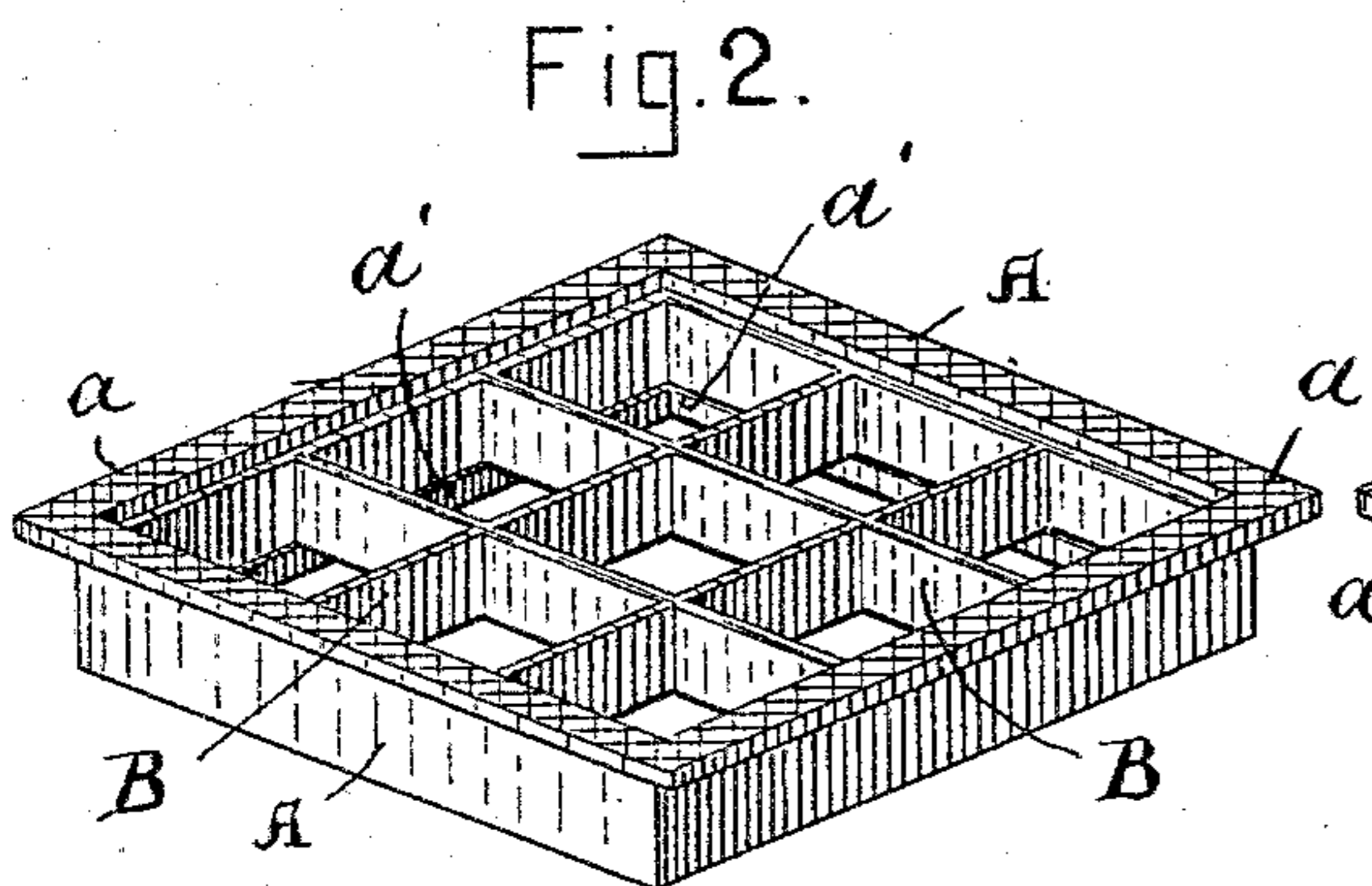
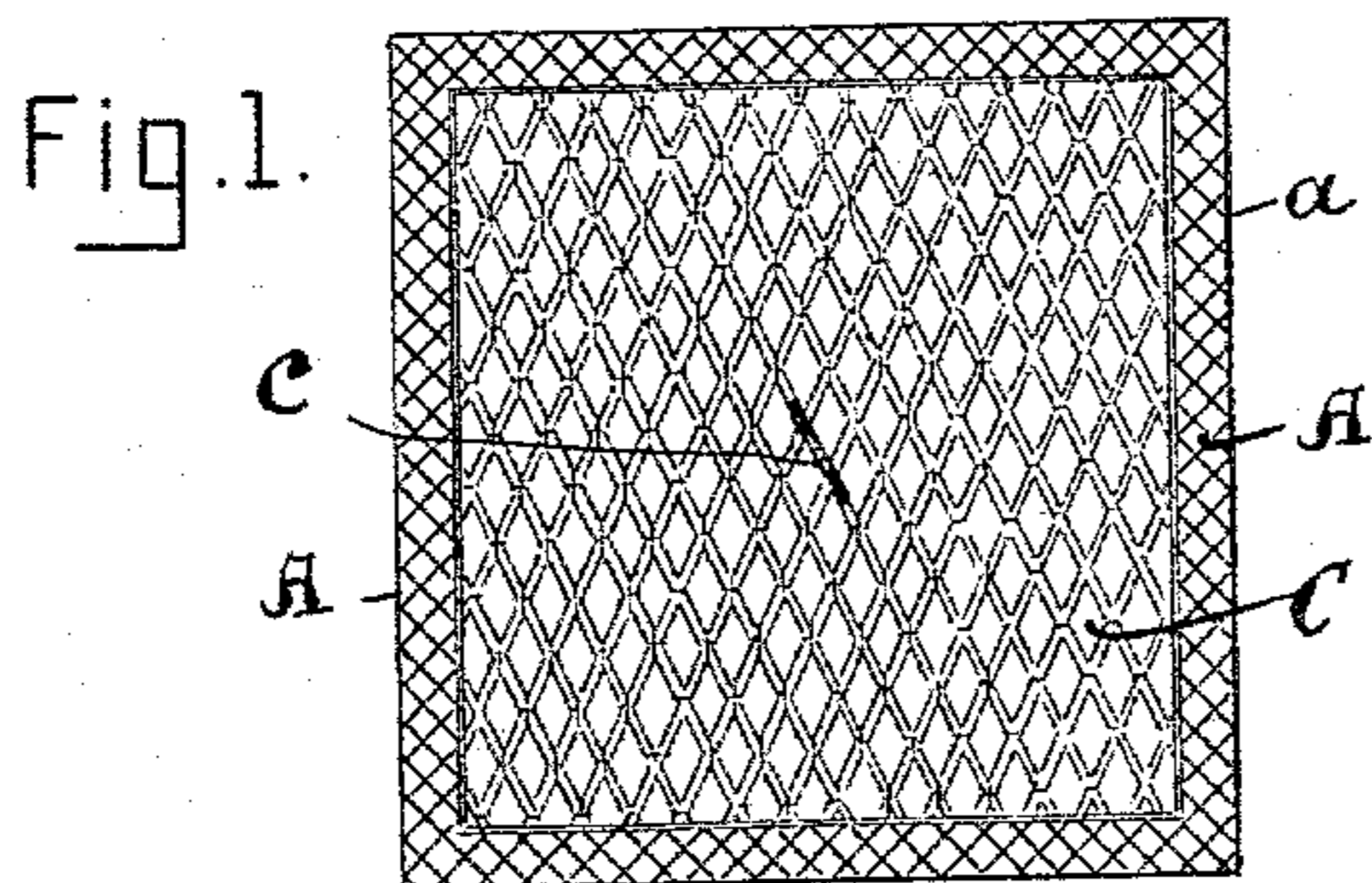


(No Model.)

F. H. MOORE.  
SAFETY COVER FOR COAL HOLES, &c.

No. 556,894.

Patented Mar. 24, 1896.



Witnesses.  
Wm. S. Kewin.  
Caleb H. Swan

Inventor.  
Frederic H. Moore  
by Edwin Planta.  
Attorney.

# UNITED STATES PATENT OFFICE.

FREDERIC H. MOORE, OF BOSTON, MASSACHUSETTS.

## SAFETY-COVER FOR COAL-HOLES, &c.

SPECIFICATION forming part of Letters Patent No. 556,894, dated March 24, 1896.

Application filed May 1, 1894. Serial No. 509,652. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERIC H. MOORE, 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 Safety-Covers for Coal-Hole and other Vault Openings, of which the following, taken in connection with the accompanying drawings, is a specification.

"Safety-covers," so called, for coal-hole and other vault openings as heretofore made have been raised wholly or in part above the level of the sidewalk, and when thus raised are an obstruction to freely putting coal or other material into the vault below, and at the same time persons in passing are liable to run against the said raised cover or slip into the opening.

The object of my invention is to overcome these objections and to provide such protection to coal-hole and other vault openings in sidewalks, areas, and passage-ways that will with ordinary care permit persons to pass safely when the outside cover is removed and coal or other material is being put into the vault beneath.

The invention consists of a frame and a grating fitted within same, and a cover that rests upon the grating so that all will be just level with the sidewalk or pavement, as hereinafter fully described and pointed out in the claim.

Referring to the accompanying drawings, Figure 1 represents a plan or top view of a coal-hole cover embodying my invention. Fig. 2 is a perspective view of the frame and grating, the cover being removed. Fig. 3 is a view of the frame, and Fig. 4 is a view of the grating. Fig. 5 is a vertical section of a portion of the frame grating and cover. Figs. 6 and 7 show modifications of the frame and grating. Fig. 8 is a top or plan view of a round coal-hole cover. Fig. 9 is a view of same, the cover being removed to show the grating.

A represents a frame, which may be of any desired form, having at its upper end an outwardly-projecting flange *a*, which rests in a recess cut in the paving, and an inwardly-projecting flange or shoulder *a'* at its lower end.

B is a grating that fits within the frame A and rests upon the flange *a'* and extends up to within a short distance of the top of said

frame, and C is a cover that fits within the frame A and rests upon the top of the grating B. This cover is provided with a loop *c* for securing it underneath by a chain, and also with a means for raising said cover out of the frame.

I prefer to make the grating as shown in Figs. 2 and 4, the opening being about four inches square; but instead of having an outer rim the grating might be formed as shown in Fig. 7, in which case the outer ends of the cross-bars would rest upon the flange *a'*, or, if desired, the said ends might fit into grooves *a''* in the sides of the frame, as shown in Fig. 6, in which case the flange *a'* would not be required, as the bottom of the groove would form the shoulder. In Figs. 8 and 9 I have shown a circular cover, which is practically of the same construction as before described, only the grating is formed of a central ring and radial arms.

By the above construction the grating is brought almost on a level with the pavement, so that should a person inadvertently step into the opening when the cover is removed his foot will be arrested by the grating and prevent him from falling down the opening. In some cases, if required, the grating might rest directly upon the brick or stone curbing, thus dispensing with the outer frame A.

Should it be desired to put in or take out a body larger than the openings in the grating, then the grating could be entirely removed for the time being and again replaced.

What I claim is—

A cover for coal-holes and other vault-openings, consisting of a frame having an outwardly-projecting flange at its upper end and a shoulder upon its inner surface near its lower end, a removable grating upon the shoulder, the top of which extends nearly to the top of the frame, a removable cover resting upon the top of the grating, the upper surface of which is even with the top of the frame, substantially as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 30th day of April, A. D. 1894.

FREDERIC H. MOORE.

Witnesses:

CHAS. STEERE,  
EDWIN PLANTA.