

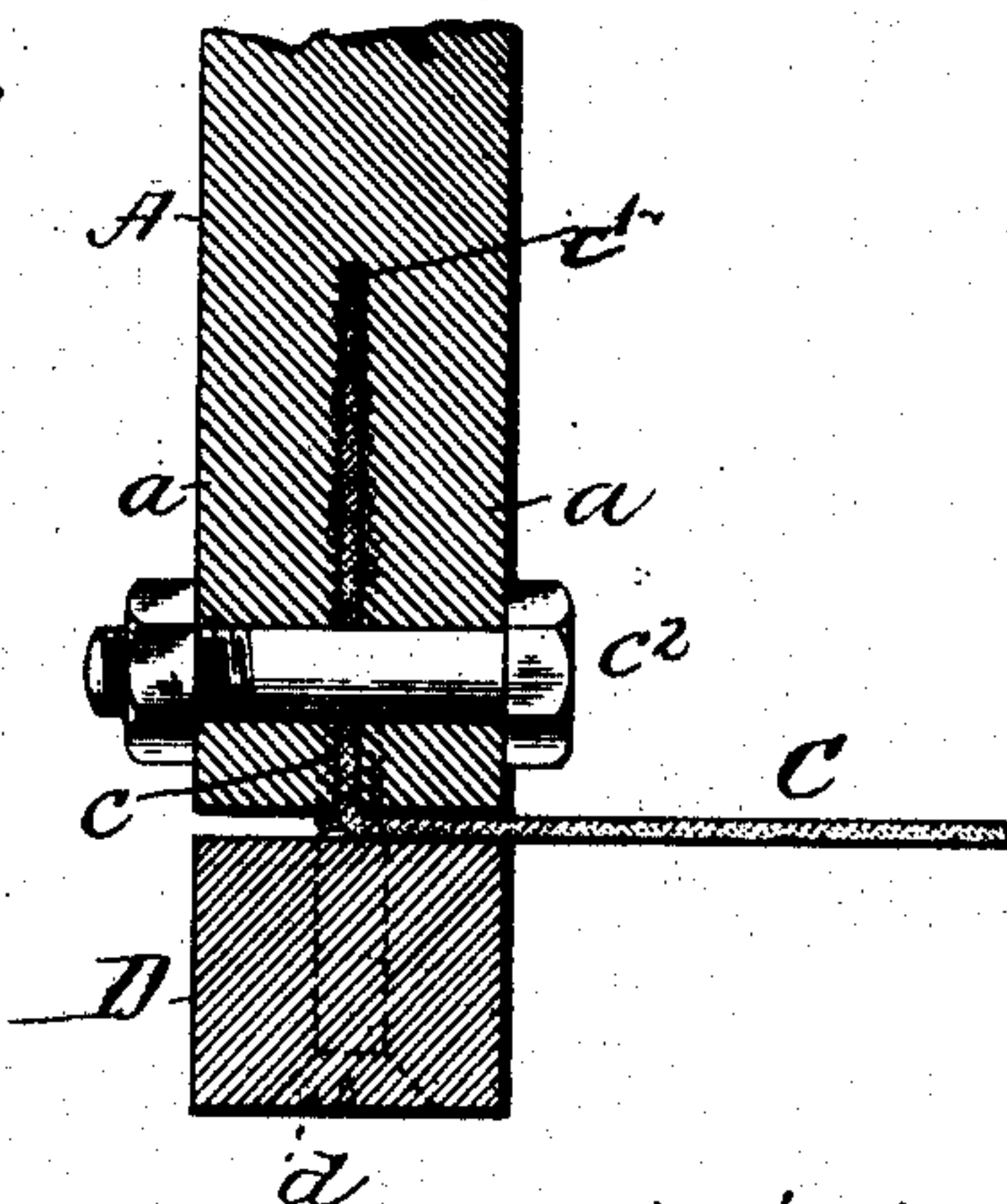
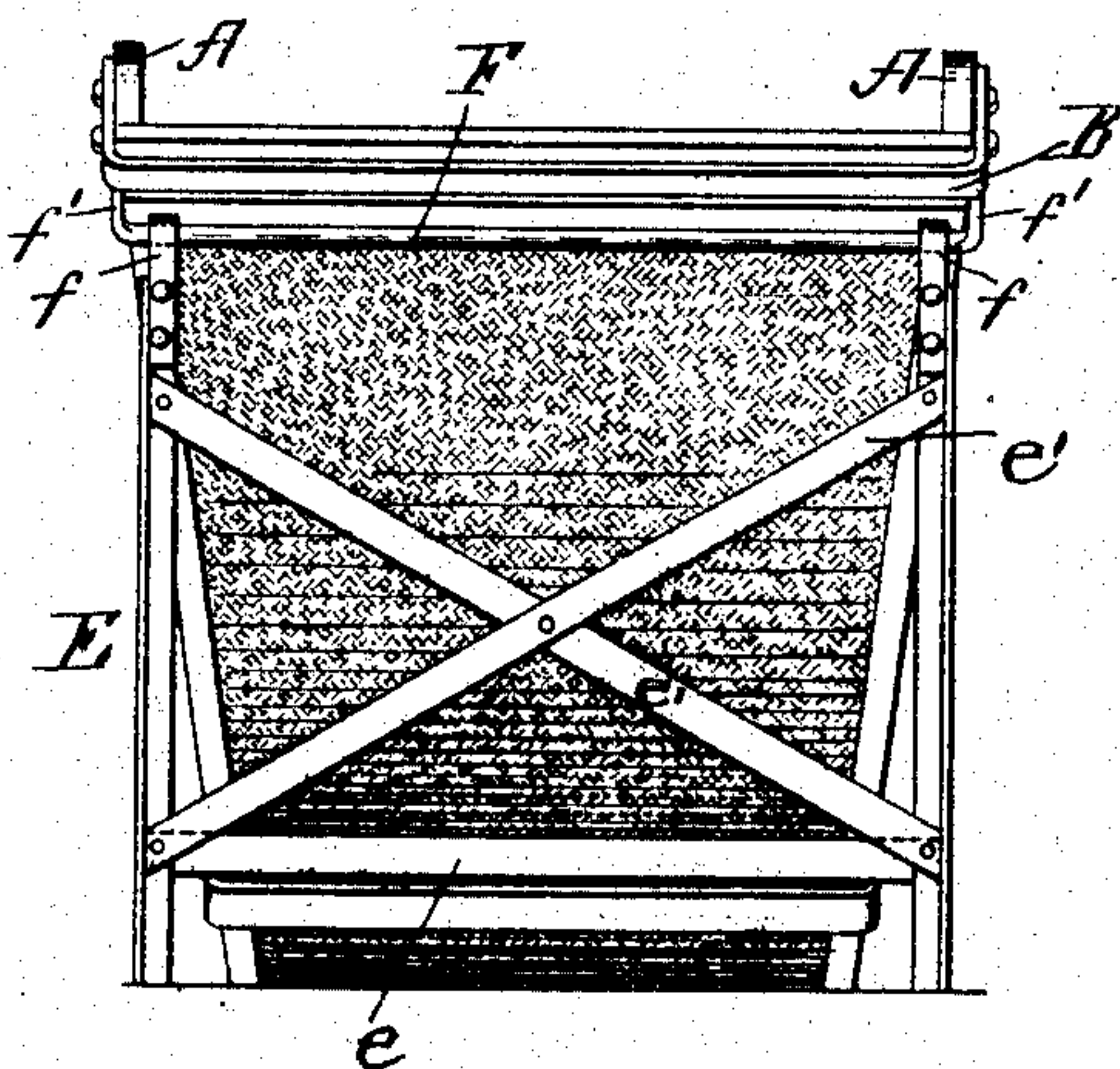
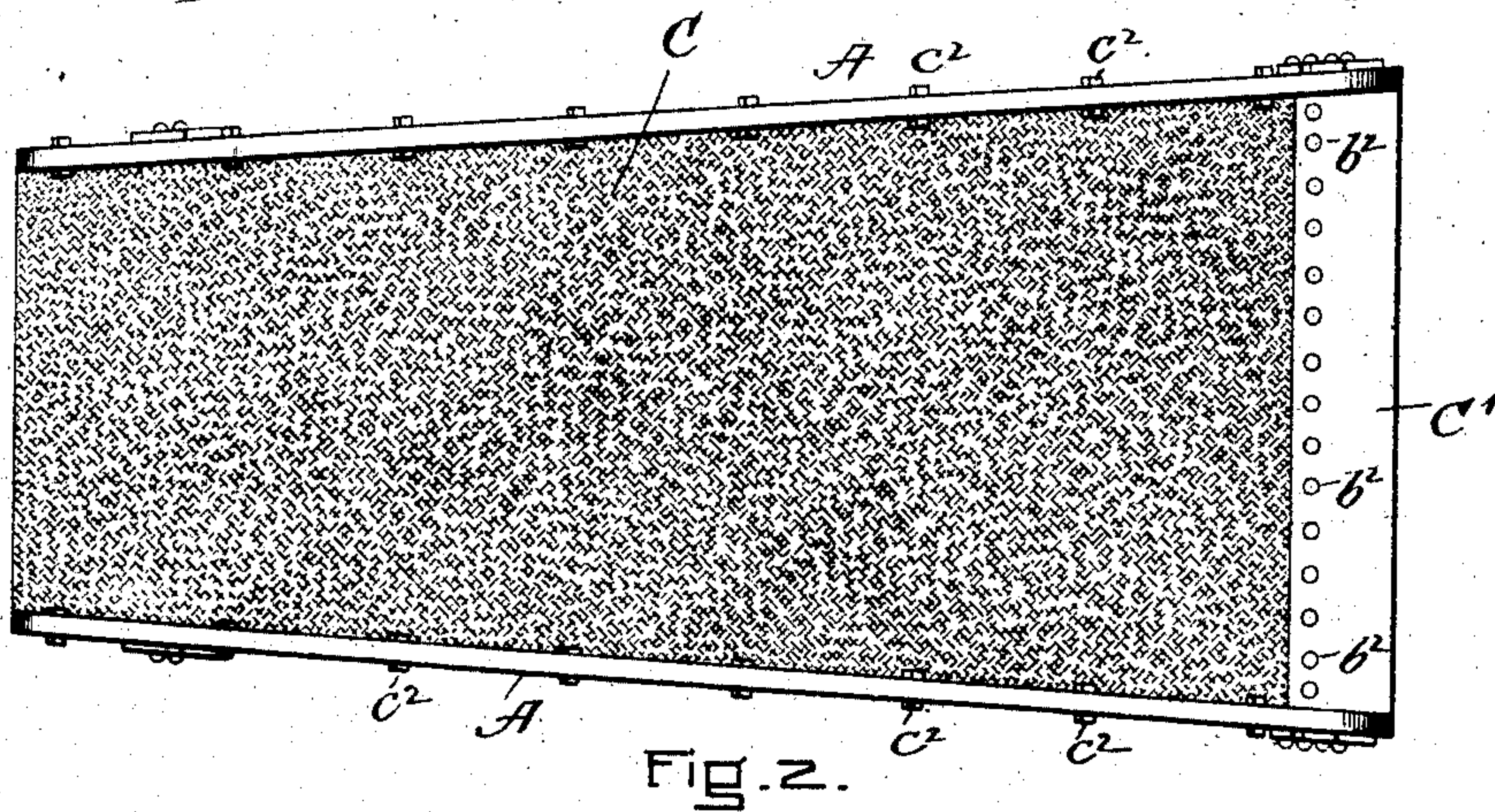
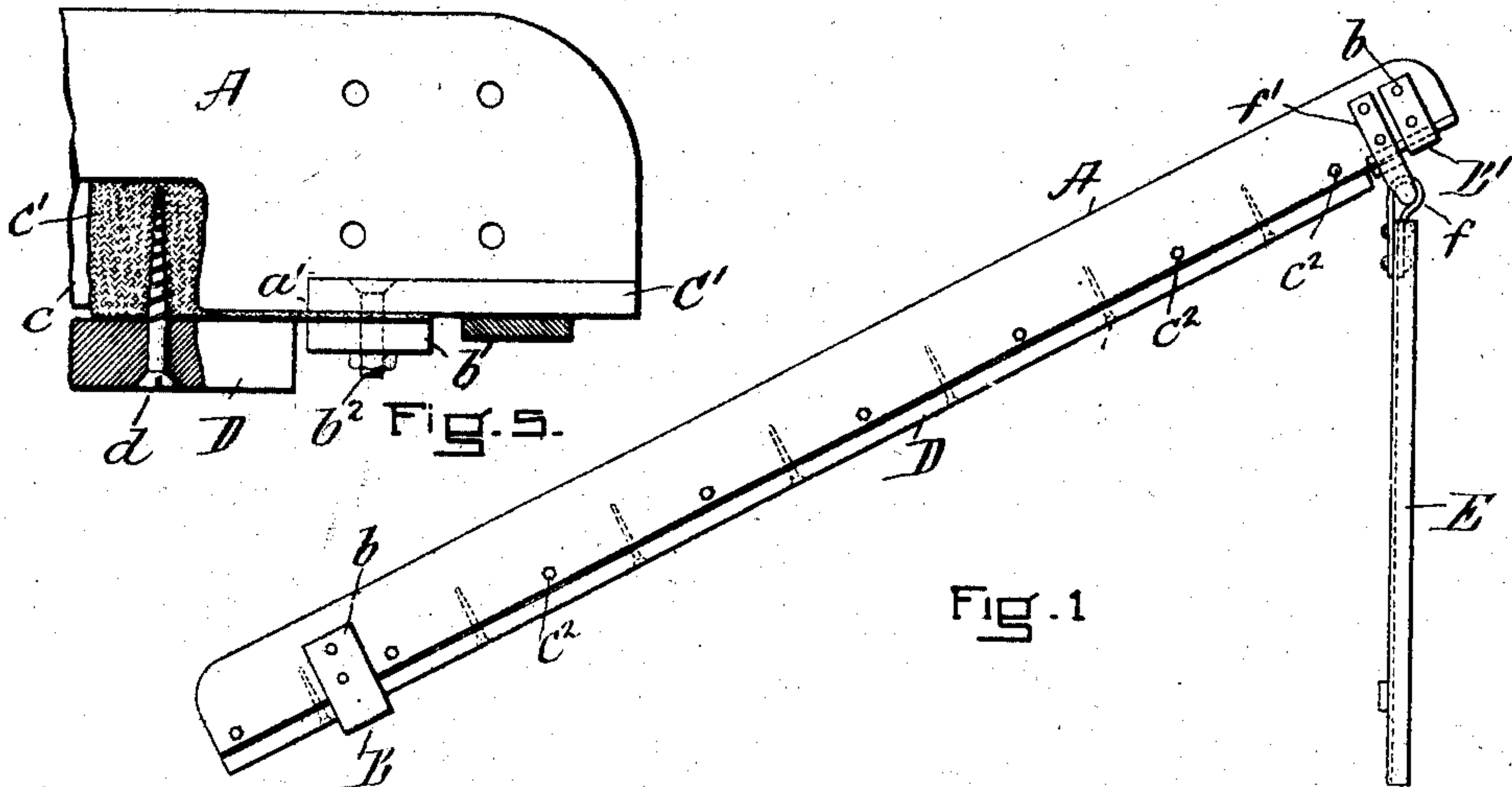
No. 864,408.

PATENTED AUG. 27, 1907.

J. CAMPBELL.
COAL CHUTE.

APPLICATION FILED MAY 10, 1906.

2 SHEETS—SHEET 1.



WITNESSES
H. E. Flaherty
M. V. Foley

Fig. 3.

Fig. 4. INVENTOR

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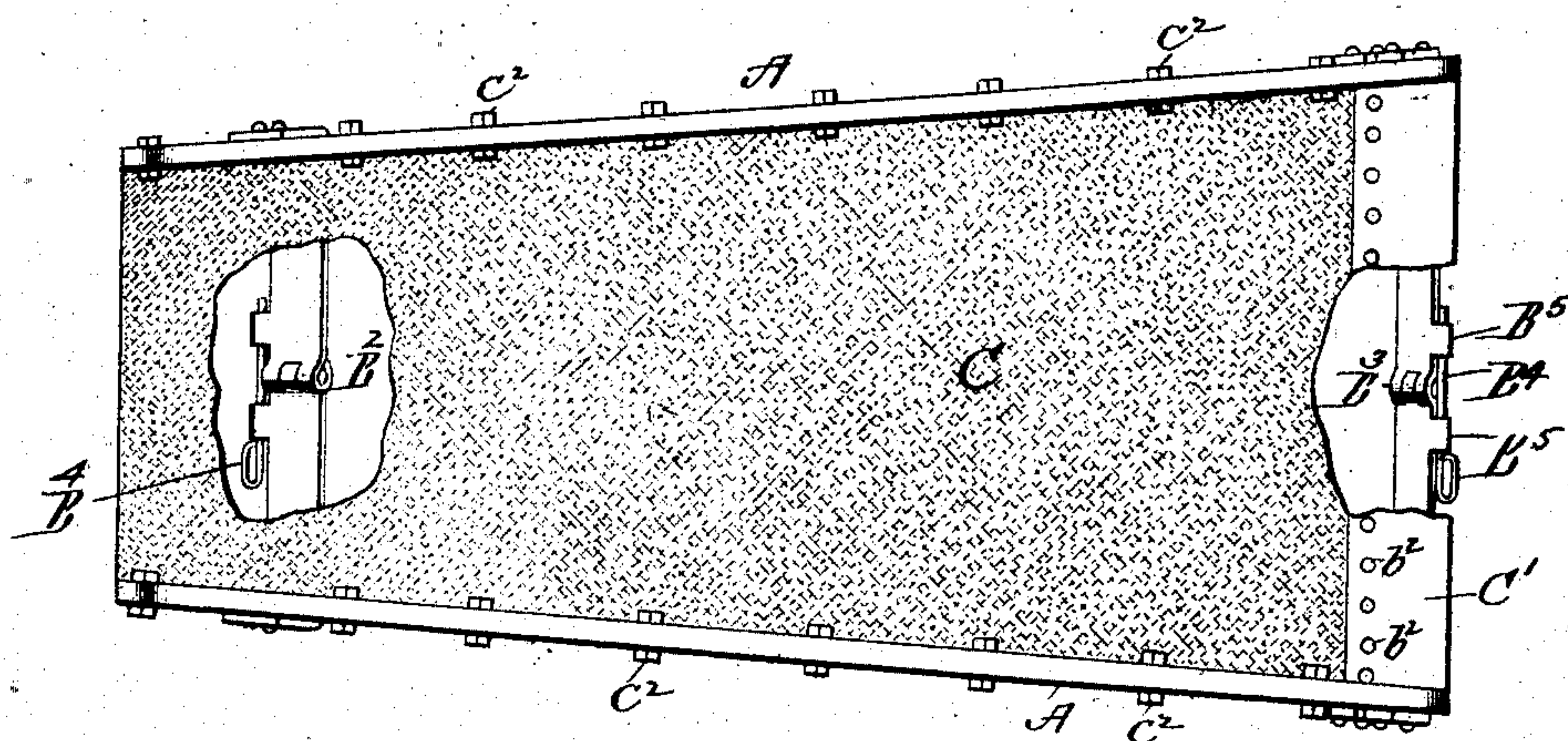


Fig. 6.

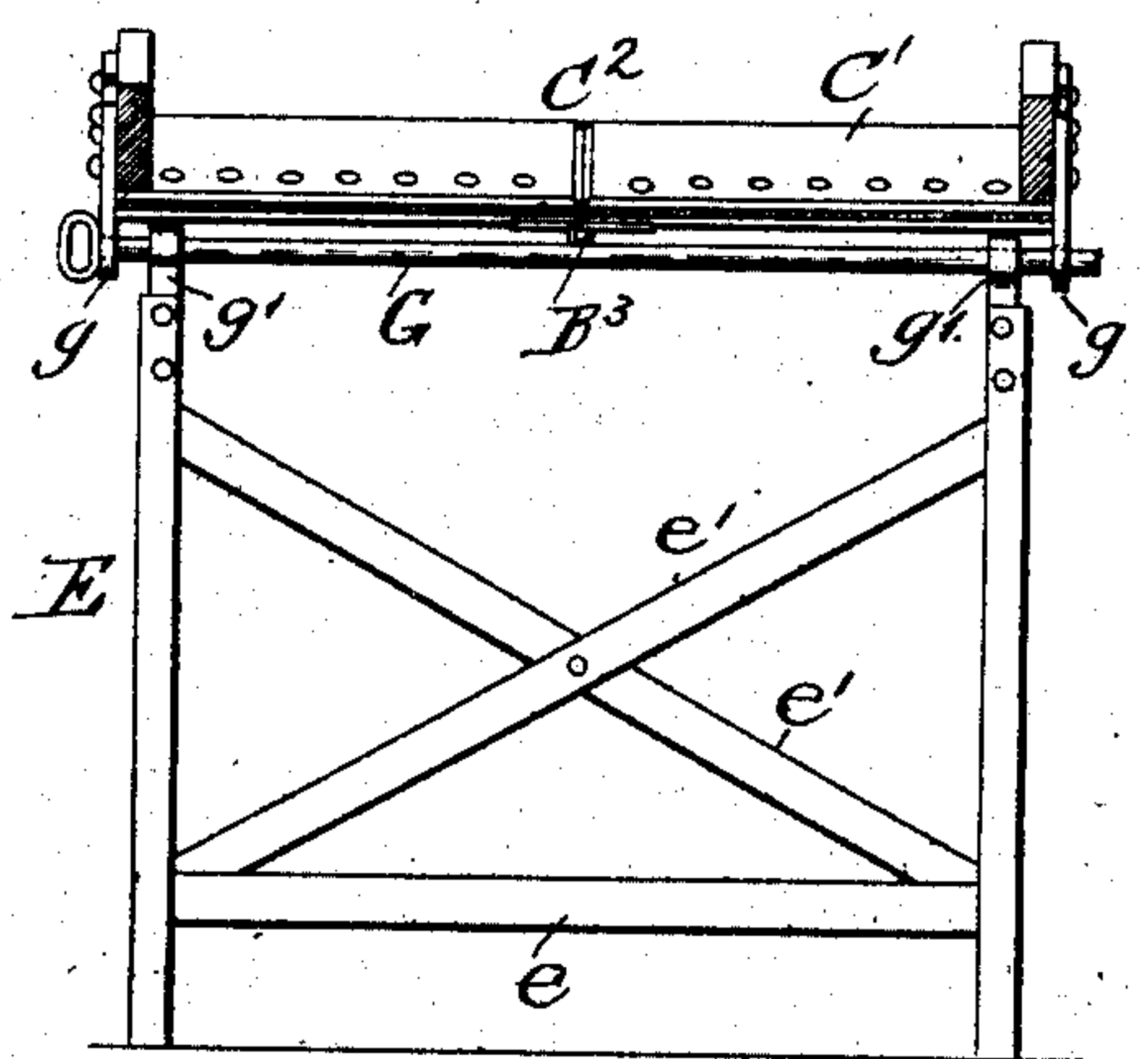


Fig. 7.

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UNITED STATES PATENT OFFICE.

JEREMIAH CAMPBELL, OF PROVIDENCE, RHODE ISLAND.

COAL-CHUTE.

No. 864,408.

Specification of Letters Patent.

Patented Aug. 27, 1907.

Application filed May 10, 1906. Serial No. 316,062.

To all whom it may concern:

Be it known that I, JEREMIAH CAMPBELL, of Providence, in the county of Providence and State of Rhode Island, a citizen of the United States, have invented a new and useful Improvement in Coal-Chutes, of which the following is a specification.

My purpose is to do away with the noise caused by the rattling of coal down the sheet iron chute now so generally used for the purpose of discharging coal from wagons, and my purpose is accomplished by providing a chute in which the sides are rigid, and while in use the chute itself comprises a rigid frame within which is stretched a flooring of heavy canvas or the like on which the coal slides down, the chute being either collapsible or not as may be desired.

I have shown in the drawings a simple construction for such chute, the chute being made in two forms in each of which when in use, the canvas is stretched upon a rigid frame, in one case the frame being a knock-down frame, so that the chute may be folded for transportation.

My invention will be understood from the drawings, in which—

Figure 1 is a side elevation of a chute embodying my invention in position for use; Fig. 2 being a plan; Fig. 3 a rear elevation; Fig. 4 a detail showing the means of attaching the canvas to the chute; Fig. 5 a detail of the upper end of the chute, the braces being omitted; and Figs. 6 and 7 showing a modification to be described below.

The chute comprises a frame having rigid sides A, A, braced by metallic straps B, B¹, having upturned ends b which are bolted to the sides A and serve to brace them apart.

C is the flooring of the chute which is made of canvas or other like flexible material of sufficient strength to serve the purpose of the chute without being noisy. As shown, this canvas is attached at its upper edge to a cross plate C¹ by bolts b² which also pass through a clamp b¹ between which and the end of the apron the canvas is clamped. The brace B¹ holds the plate C¹ up against the under edge of the sides A, which are cut away to form a shoulder a¹ against which the lower edge of the plate rests.

The canvas bottom C of the chute is preferably attached to the two sides of the chute in the following manner: Each side has a slit c running up from its under edge along its entire length forming jaws a between which an edge c¹ of the canvas piece is forced, and the two parts are clamped together by bolts c². In addition to this means of holding each edge of the canvas strip in place I provide a clear D of a width equal to the width of the side A, which is screwed to its under edge by screws d which screw into the slit

c and assist in drawing the canvas taut so that the flooring of the chute is substantially flat.

In addition to the parts above described I provide a support for the upper end of the chute, this support being preferably a frame comprising legs E, a horizontal bar e near their bottom and cross braces e¹ which serve to firmly brace them together. To the upper end of each leg E I attach an eye f through which passes a rod F having upturned ends f¹ which are screwed to the sides A. This serves as a convenient means of supporting the upper end of the chute and one which can be folded against the bottom of the chute for convenience in transportation.

The chute shown in Figs. 6 and 7 is similar to that shown in Figs. 1 and 2 except that the cross bars, while performing the functions of the cross bars B, B¹, in Figs. 1 and 2, are hinged as shown at B², B³, by a common hinge, and are each provided with an ordinary sliding bolt B⁴ which runs in eyes B⁵, this construction being such that when the bolt is withdrawn the parts may be folded and when it is desired to use the chute the parts are opened and the bolts thrown into the position shown in Fig. 6, so that the chute when in use is supported by a rigid frame. The plate C¹ in this case is provided with a similar hinge, C². In this case, also, the support must be removable. I have shown in Fig. 7 such a support, which is in all respects like that shown in Fig. 3. It is attached to the chute, however, by means of a bolt G passing through eyes g suspended from the upper end of the two sides of the chute and eyes g¹ upon the upper ends of the legs E.

It is believed from the above description that my invention will be fully understood.

So far as I know, a chute comprising a rigid frame and flexible flooring has never before been used and its convenience both for the purpose of deadening noise and for the purpose of easy transportation will be very easily understood, and it will also be understood by those skilled in the art that the attachment of such a flooring to the frame may be made in other ways than that above described.

What I claim as my invention is:—

1. A coal chute having a flexible flooring and a knock-down frame adapted to support the same in an operative position.

2. A coal chute having a flexible flooring, rigid sides, and rigid cross bars adapted to be knocked down, whereby said chute may be collapsed.

3. A coal chute having a flexible flooring, rigid sides, knock-down cross bars, and a support adapted to be temporarily attached to one end of said chute, as set forth.

4. A coal chute having rigid sides and a flexible flooring, each side being slotted along its under edge, and means for holding the edge of the flexible material forming the bottom of said chute within said slot, as described.

5. A coal chute having rigid sides and flexible flooring,
each side having a slot along its under edge, each edge of
the flexible material forming said flexible flooring being
located within one of said slots, and bolts passing through
5 the lower portion of said sides and said flexible material,
as described.

6. A coal chute having rigid sides and a flexible flooring,
and means for holding the material forming said flexible
flooring to said rigid sides comprising slots in said sides,

bolts passing through said sides, said slots and flexible 10
material of which said bottom is composed, cleats running
the length of the lower edges of said sides, and screws
passing up through said cleats and slots in said sides and
engaging the edges of the flexible bottom.

JEREMIAH CAMPBELL.

In presence of—

M. E. FLAHERTY,

M. V. FOLEY.