

(No Model.)

W. F. B. FISHER.
CUT-OFF FOR CONDUCTORS.

No. 289,821.

Patented Dec. 11, 1883.

Fig. 1.

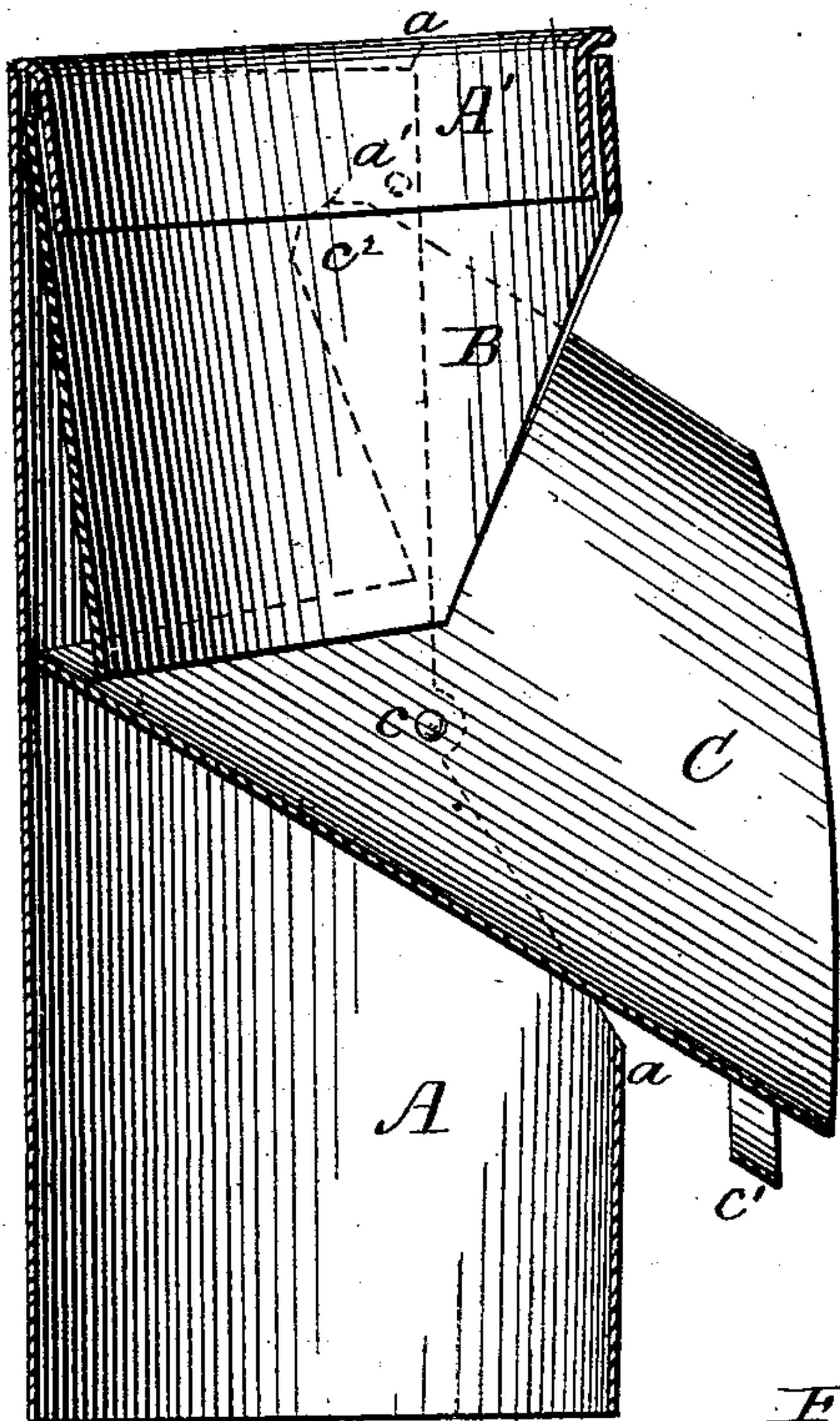


Fig. 2.

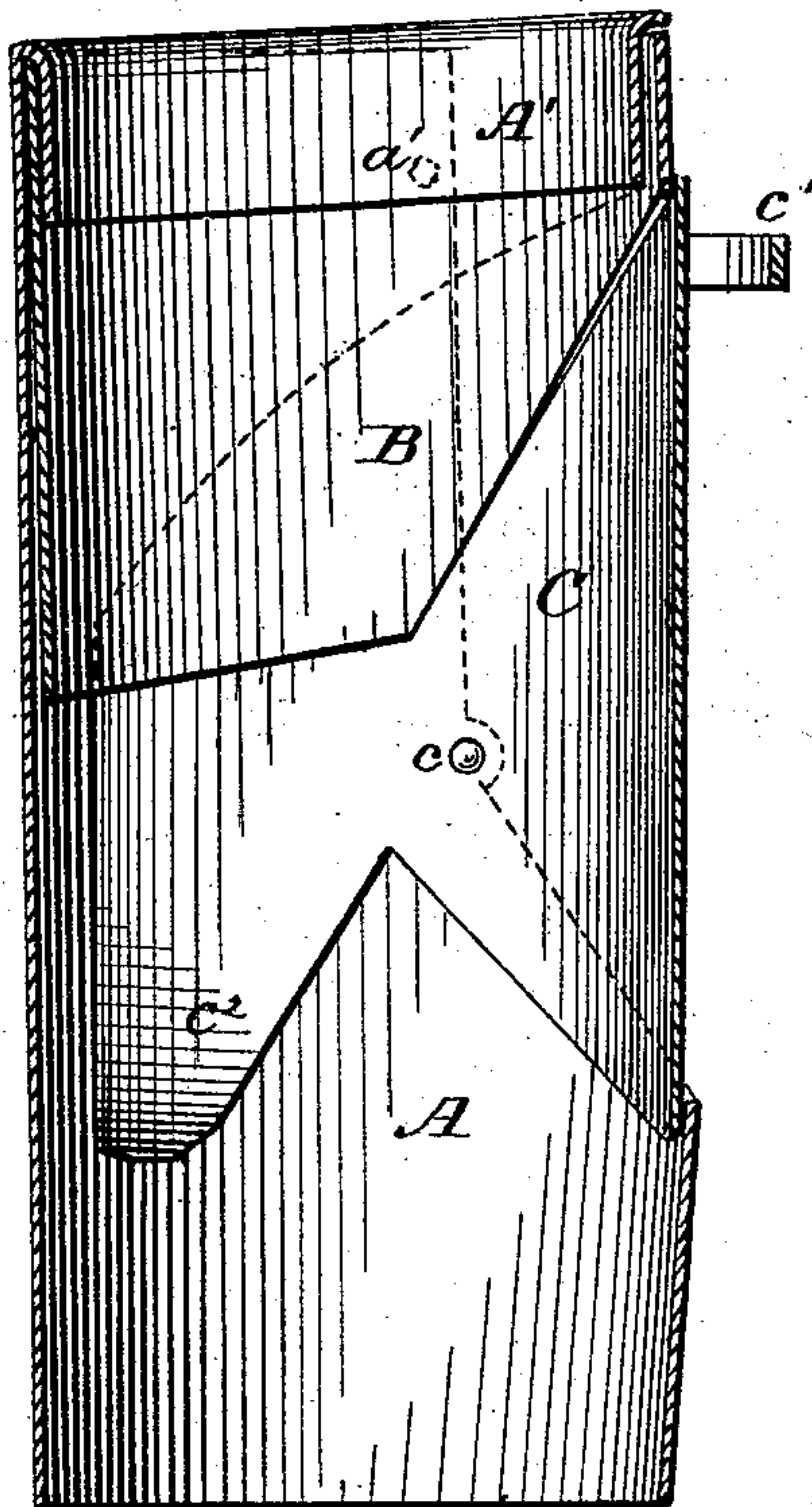


Fig. 3.

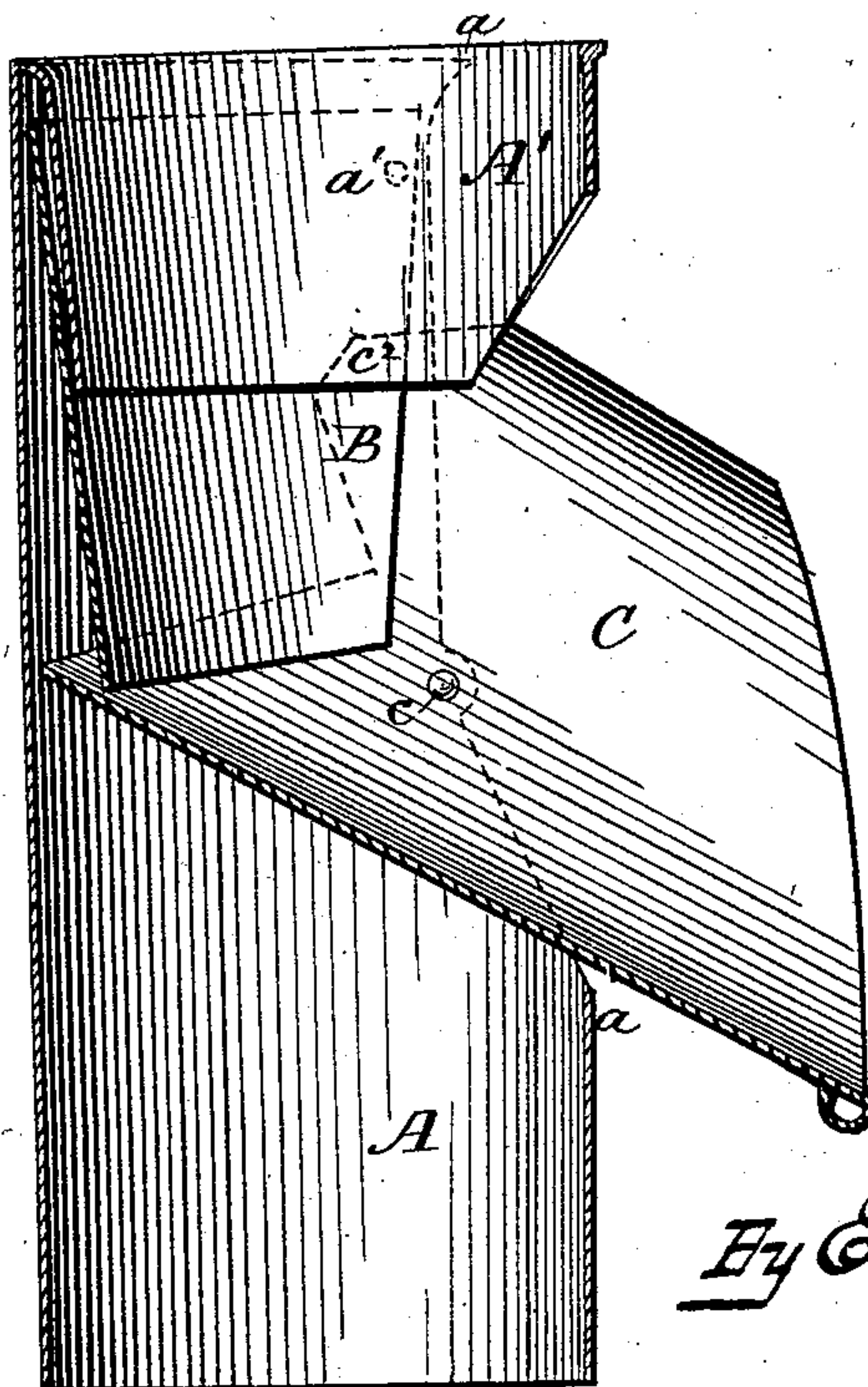
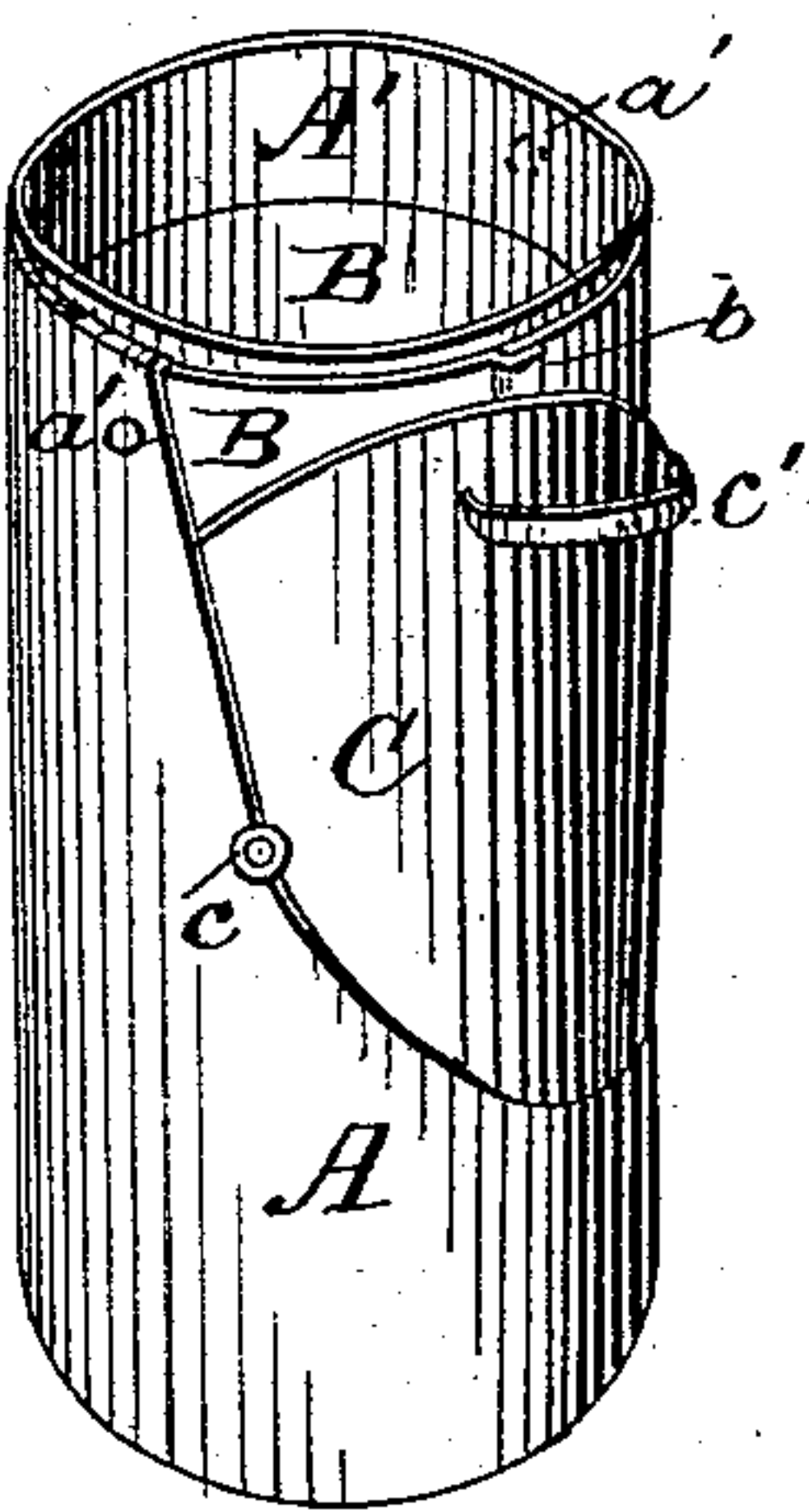


Fig. 4.



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UNITED STATES PATENT OFFICE.

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CUT-OFF FOR CONDUCTORS.

SPECIFICATION forming part of Letters Patent No. 289,821, dated December 11, 1883.

Application filed August 23, 1883. (No model.)

To all whom it may concern:

Be it known that I, W. FRANK B. FISHER, a citizen of the United States, residing at Springfield, in the county of Clarke and State of Ohio, have invented certain new and useful Improvements in Cut-Offs for Conductors, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figures 1, 2, and 3 are central vertical sections, and Fig. 4 is a perspective, (reduced,) of a cut-off constructed in accordance with my invention, Figs 1 and 3 representing the same open, and Figs. 2 and 4 closed.

Like letters refer to like parts in all the figures.

The object of my invention is to provide a cut-off for use, principally, as a part of a pipe connecting the eaves of a building with a cistern or other receptacle for water; but it is also applicable for use in connection with any system of conductors for liquids, and the main characteristics in view are simplicity, serviceability, and, when closed, an appearance similar to an ordinary length or section of the conductor of which it forms a part, and, when open, an effective operation, resulting in a complete change in the direction which the water or other liquid passing through the conductor shall flow.

A represents the body of the cut-off, which is adapted to receive at its upper end a section of the conductor, and at its lower end to enter into or be received by another section of the conductor, so that when thus connected the body A forms a part or section of the conductor, as is usual in this class of devices.

At the upper end of the body A is a collar, A', which is secured to the body throughout substantially one-half its perimeter, which is flanged as shown. The collar A' serves to render the connection of ordinary pipe with the cut-off easy and effective, and by being secured to the body A at only the rear half of its upper end it allows of contraction and expansion of the unconnected portions of these two elements and a free movement of the deflecting-plate B between them. Substantially one-half of the body A, throughout a portion of its length, is removed, as indicated by the line *a a*, forming a curved outline adapted to receive and fit a portion of the periphery of a

cylinder of substantially equal diameter to that of the body portion.

Between the collar A' and the body A is supported, upon oppositely-located pivots *a' a'*, a deflecting plate or tube, B. In Figs. 1, 2, and 4 this deflector is shown as a tube and appears partially exposed outside of the collar A', and is constructed with the usual joint, *b*. In Fig. 3 the deflector is simply a plate curved to agree in formation with the body and collar, and terminating at the pivots *a'*. In this modified construction the collar A' constitutes the exposed surface at the upper end of the cut-off.

C represents the cut-off section proper, and it consists of a plate shaped, located, and arranged to complete the periphery of the cut-off section as a whole—that is, to close the opening formed in the body and on the line *a a*, as hereinbefore described. The plate C is pivoted to the body at *c c*, and is provided with a handle or loop, *c'*, by which it may be opened and closed, and with extensions or arms *c''*, which are curved inwardly to adapt them to bear against the inner surface of the body A, and to pass between it and the deflecting plate or tube B when the cut-off proper is opened, so that the deflecting-plate is tilted or swung upon its pivots *a'*, and its lower edge is moved away from the body and projects over and above the inner end of the cut-off proper. When the parts are in this position, which is clearly illustrated in Figs. 1 and 3, it will be seen that a column or stream of water or other liquid is deflected by the plate or tube B upon the cut-off C, and by this is directed out of the course which the water or liquid would pursue were the cut-off closed, as shown in Figs. 2 and 4. By reference to the latter figure, it will be seen that when the deflector is made in the form of a tube the exposed portion thereof prevents the cut-off from assuming as completely a position, when closed, which agrees with the general outline of the cut-off body; and therefore, to secure a more finished outer appearance when the cut-off is closed, I prefer to construct the deflector in the plate form rather than as a complete tube, though each form is equally effective in operation with the other.

When the cut-off is closed, the friction of its sides or edges upon the deflector forces it back

against the inner surface of the body A, so that there is no obstruction to the passage of liquids through the conductor.

I am aware that it is not broadly new to provide a conductor with a cut-off which, when in operative position, changes the direction of the flow of water, and I do not claim such, broadly, as of my invention; but, having described my invention and its operation, I deem it proper to add that I do not limit myself to the exact construction herein shown, but I may vary the same so far and in such particulars as mechanical skill may suggest, and I may, as before stated, employ a deflector made in the form of a plate or a tube, as desired, and when in the latter form the exposed portion may be cut away, as shown, or it may be extended to substantially the same distance, or be of the same length as its inner or unexposed portion, and the cut-off may have but one arm, c^2 .

What I claim is—

1. In a cut-off of the character described, the combination, with the cut-off C, provided with arms or extensions c^2 , adapted to bear yieldingly against the body A, of a tilting or

pivoted deflector, B, substantially as specified.

2. In a cut-off, the combination of the body A, collar A', secured as described, and tilting deflector B, arranged between the body and the collar, substantially as shown and described.

3. The combination of the body A, cut away on the line $a a$, the cut-off C, having an arm or arms, c^2 , the deflector B, and the collar A', secured throughout half its circumference to the body, substantially as shown and described.

4. In a cut-off, the combination of a tilting deflector and a cut-off having a curved arm or arms adapted to bear against the inner surface of the body of the cut-off, whereby the cut-off proper is held in an open position against the tendency of the water falling thereon back of its pivots to close the same, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

W. FRANK B. FISHER.

Witnesses:

W. J. RILEY,

WM. M. ROCKEL.