

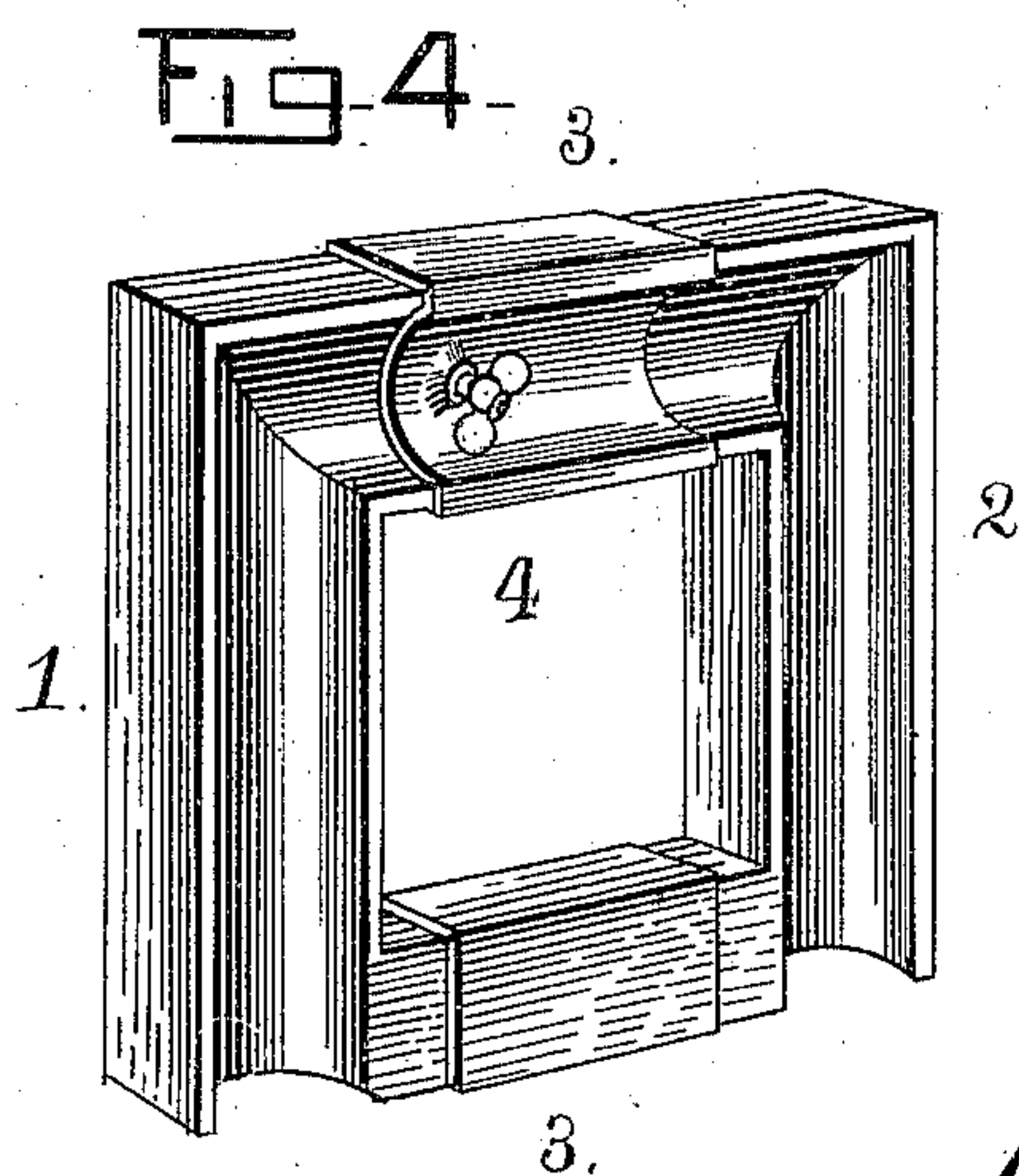
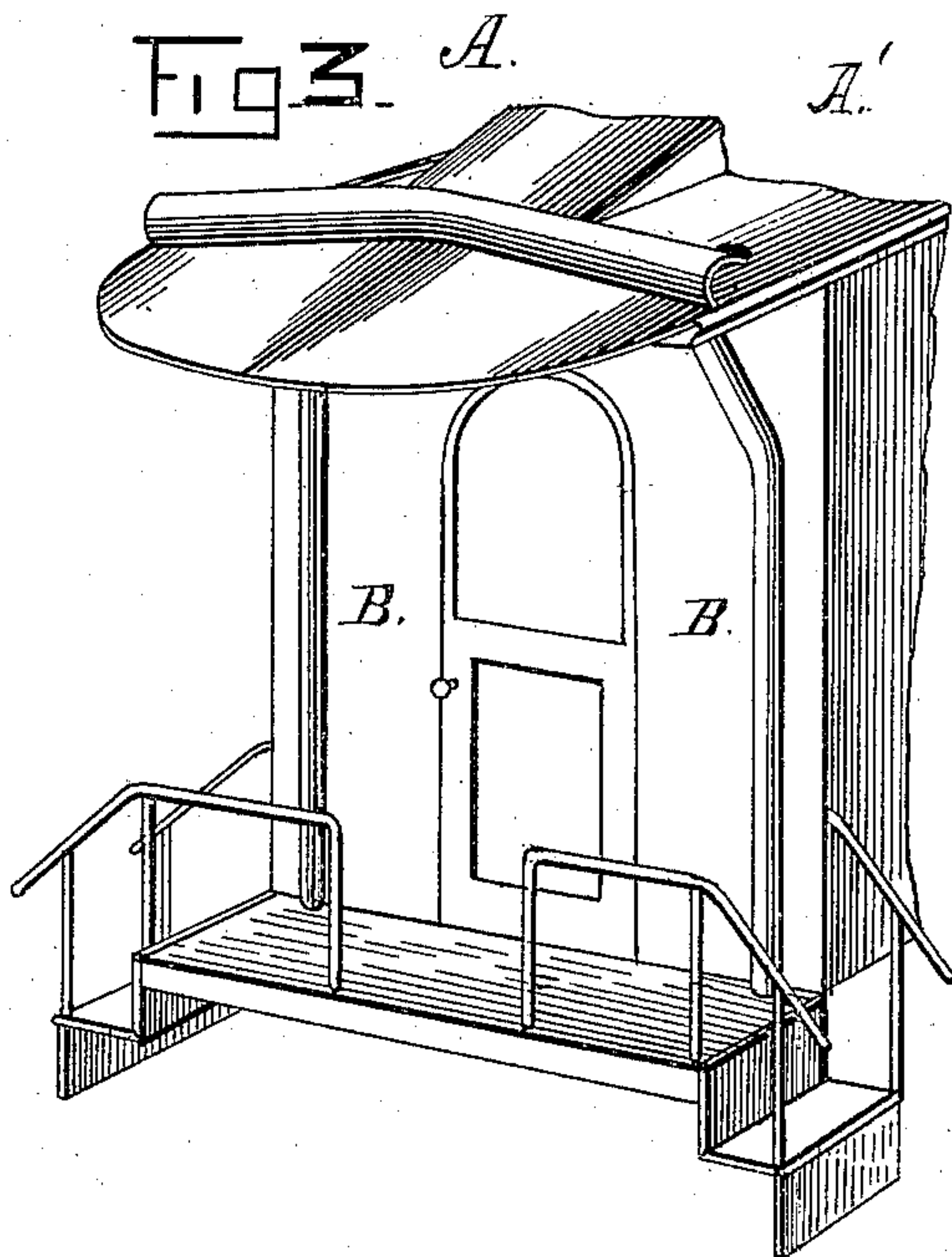
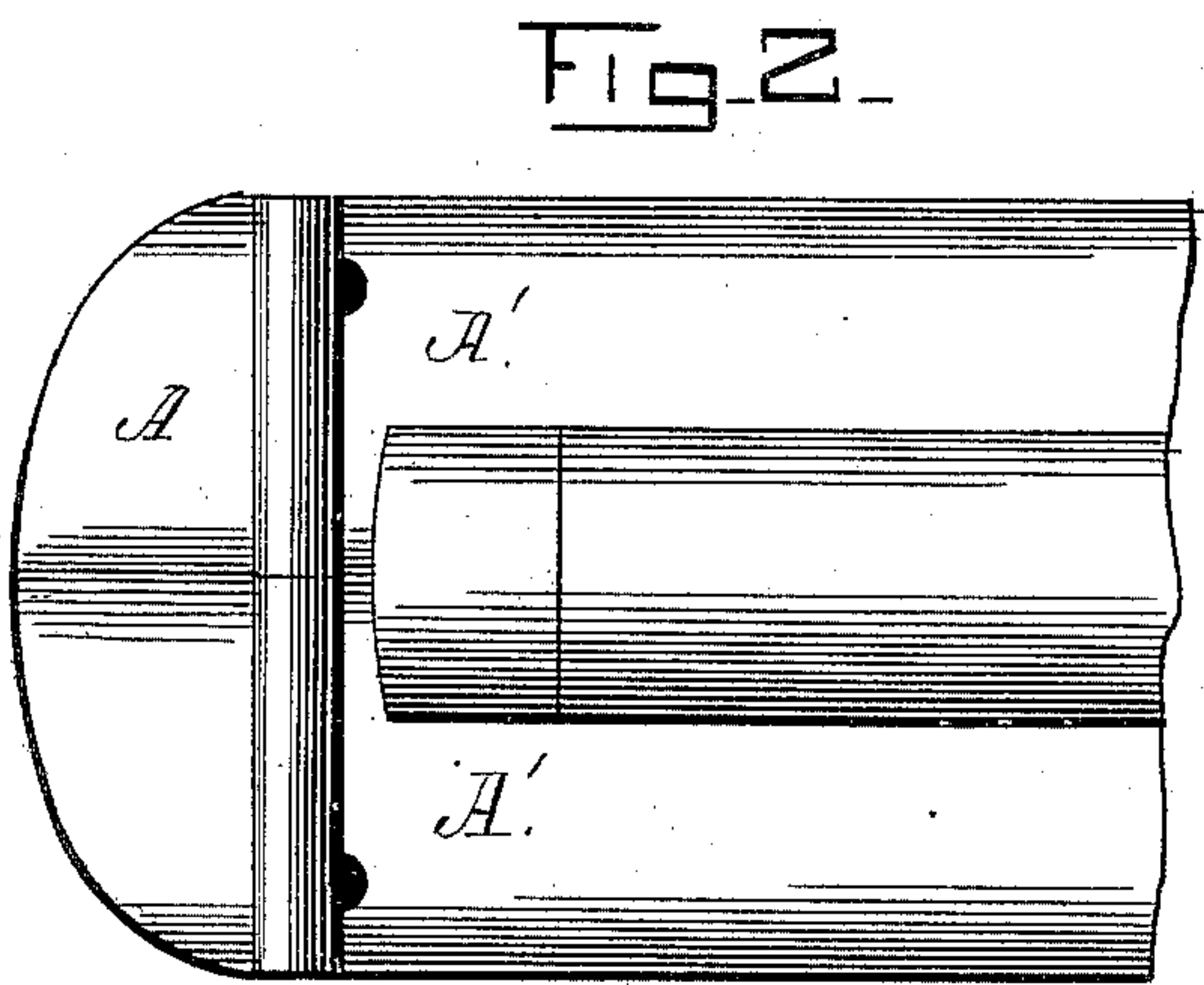
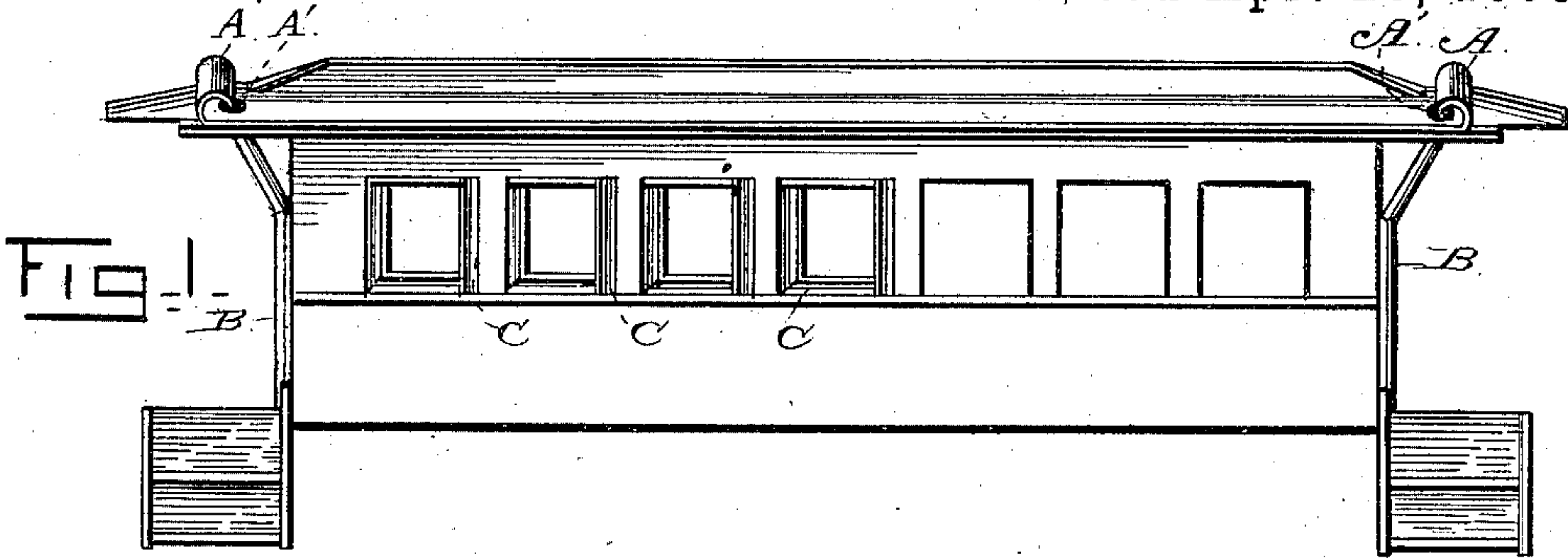
(No Model.)

2 Sheets—Sheet 1.

R. J. TRUESDAIL.
DUST GUARD FOR CARS.

No. 316,583.

Patented Apr. 28, 1885.



WITNESSES:

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INVENTOR,

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By R. S. & A. P. Lacey
ATTYS

(No Model.)

2 Sheets—Sheet 2.

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Fig. 5.

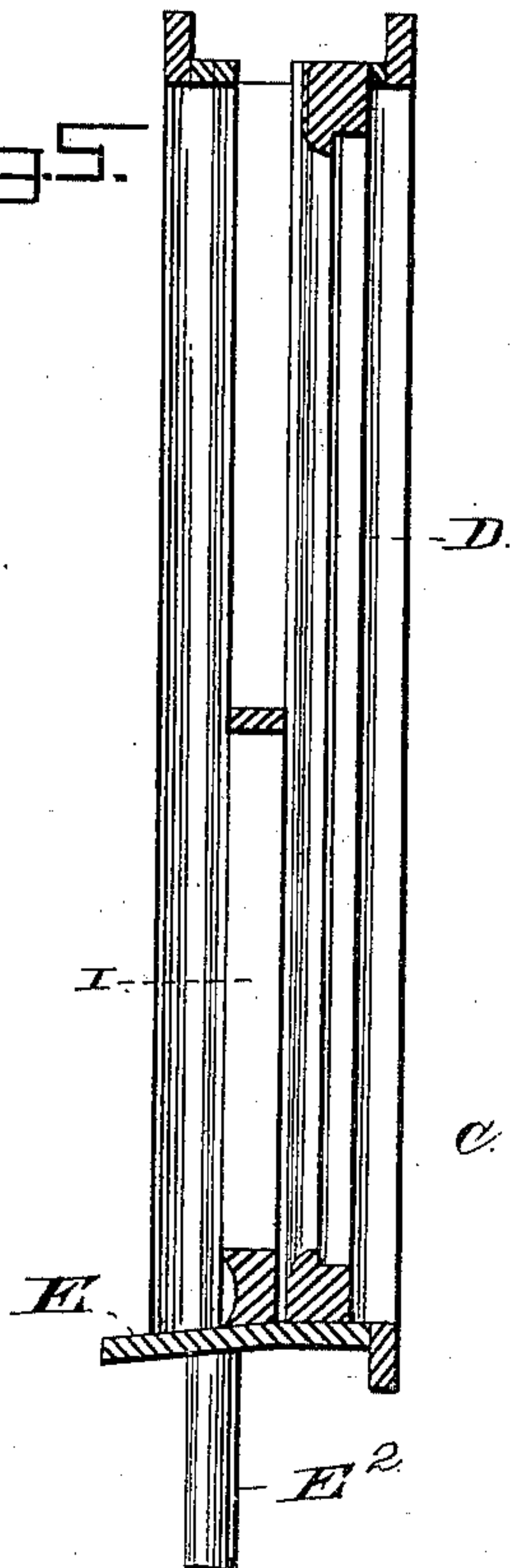


Fig. 6.

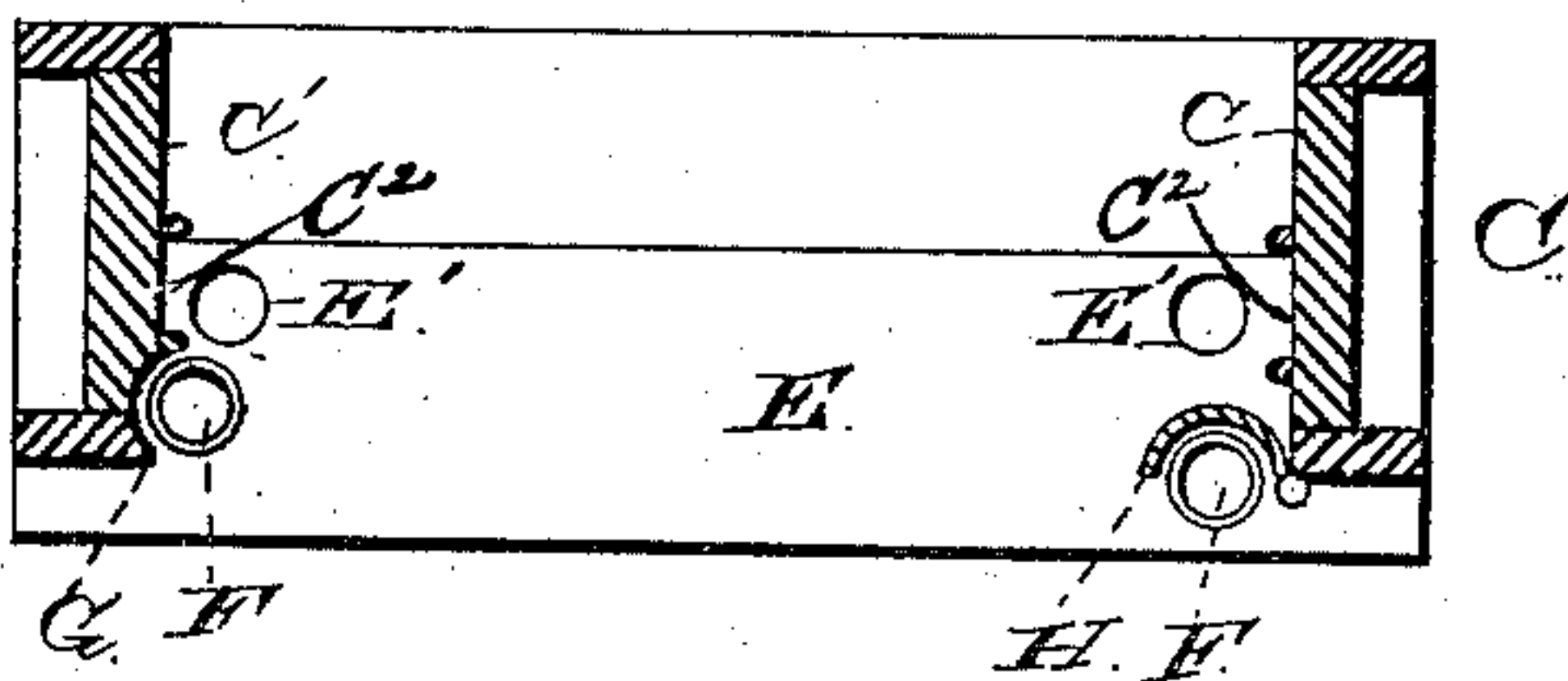


Fig. 8.

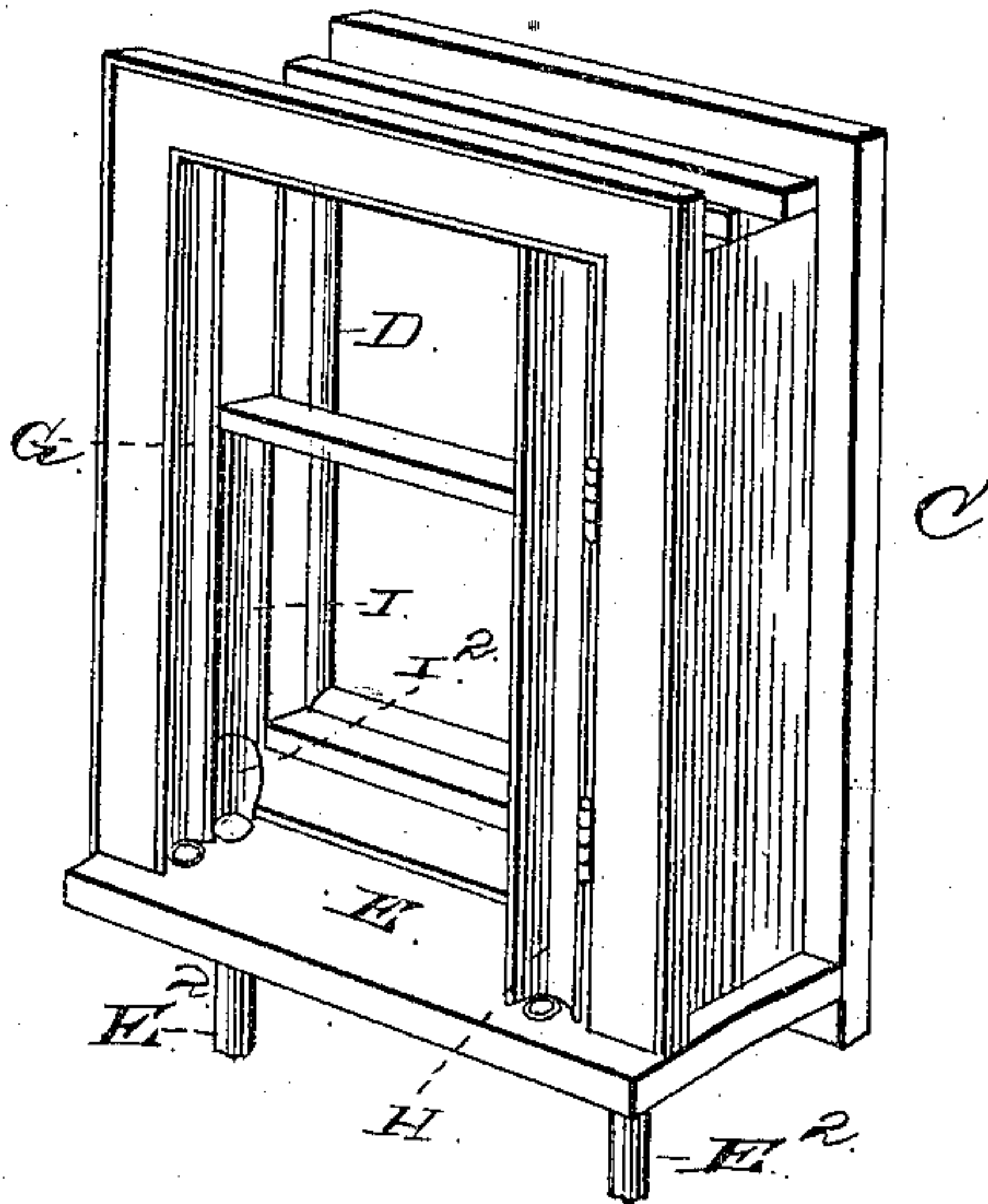
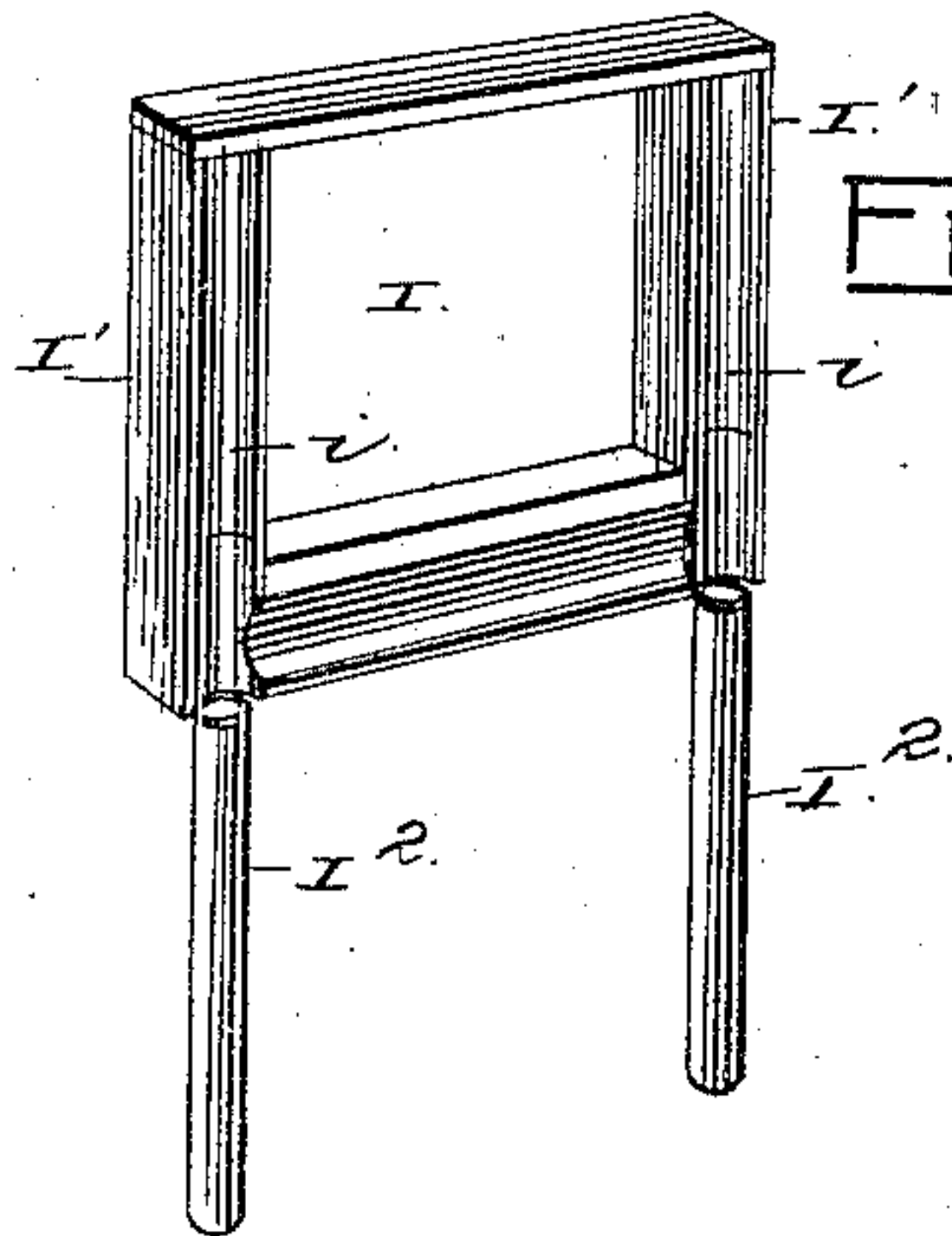


Fig. 7.



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UNITED STATES PATENT OFFICE.

ROBERT J. TRUESDAIL, OF CARLYLE, ILLINOIS.

DUST-GUARD FOR CARS.

SPECIFICATION forming part of Letters Patent No. 316,583, dated April 28, 1885.

Application filed November 3, 1884. (No model.)

To all whom it may concern:

Be it known that I, ROBERT J. TRUESDAIL, a citizen of the United States, residing at Carlyle, in the county of Clinton and State of Illinois, have invented certain new and useful Improvements in Dust-Guards for Cars; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to dust and cinder protectors for cars, and has for its object to provide simple and efficient means whereby the vacuum produced by the cars by the motion thereof will operate to draw the cinders and dust under the car and prevent their entering the car through exposed portions, such as doors and windows.

The invention consists in the novel construction, combination, and arrangement of the several parts, as will be hereinafter more fully described and claimed, and in a system or arrangement of curved guards or dust-catchers, whereby the inner space of the car is protected from dust and smoke.

Referring to the drawings, Figure 1 is a side view of a car provided with my improvement. Figs. 2 and 3 are respectively top plan and perspective views of one end thereof. Fig. 4 is a modification of the window-guard frame. Fig. 5 is a vertical longitudinal section of a window with the sash and guard-frame in place. Fig. 6 is a transverse section of the window with the sash and guard-frame removed. Fig. 7 is a detail perspective view of the preferred form of guard-frame, and Fig. 8 is a perspective view of the window.

In carrying out my invention I aim to protect the exposed portions of the car, such as the doors and windows. In protecting the doors I arrange deflectors or guides A A on top of and near the opposite ends of the car. These deflectors are curved upwardly and back away from the end of the car on which they are located, and they are inclined downwardly from their middle portion, which is on the ridge of the car toward their outer ends, so that the dust and cinders caught by said deflectors will

be directed outward toward the side of the car. Openings A' are formed through the roof of the car near the outer ends of the deflectors or guides A. Pipes B are connected at their upper ends with the roof of the car, and communicate with the openings A'. They extend thence downward along the ends of the cars on opposite sides of the door, and open at their lower ends below the cars, where they will be subject to the vacuum or draft produced by the motion of the car.

It is well understood that cars in motion, by the displacement of air, will form a vacuum beneath them, into which the air rushes rapidly from all directions. The pipes B being subject to such draft or vacuum, a strong suction is produced which tends to draw downward through such pipes all dust and cinders coming within or approaching their upper ends.

When trains are in motion, the dust and cinders from the engine pass rearwardly over the cars and are drawn down between the same, moving down close to the rear end of each car. It will be noticed that the deflectors A will catch such cinders and they will be rapidly drawn down through pipes B. It will also be noticed that if the natural course of such cinders was slightly above deflectors or guides A the draft through pipes B would deflect the course of said cinders, and would bring them down sufficiently far to be caught by deflector or guide A, and thus prevent their passing between the cars, accumulating on platforms and railing, or entering the doors. These pipes B therefore not only serve to convey the cinders to a proper place of deposit, but also enable the practical use of the deflector or guard A of less height than would be otherwise necessary. The windows C are provided with a suitable sash, D, glazed, as is usual. This sash slides in suitable guides or ways, C', formed on the inner side of the window-frame. I also provide the window with similar guides or ways, C², in front of ways C', and the said ways C² are employed to receive the guard-frames, presently described. Through the sill E of the window at the base of ways C², I form openings E', from which pipes E² depend, with their lower ends extended below the car, so as to be affected by the draft or vacuum thereunder. It is also preferred to provide openings F through the

sill E in advance of the openings E'. The window-frame, when said openings F F are used, is formed on one side with a guide-groove, G, arranged so as to direct dust and cinders thereby into one of said openings F. I also use a curved guide, H, hinged at one end to the window-frame on the side opposite the groove G, and adjustable on said hinge, so that its lower end may be brought to register with the adjacent opening F, in order that the cinders caught by said deflector H might be directed into said opening. When the said openings F are used, suitable pipes are also extended therefrom below the car, so that the said openings will also be properly affected by the draft.

It is understood that cinders and dust ordinarily pass into the window of the car, first by contact with the sides of the window-frame, and it will further be understood that when such natural influence is supplemented by the strong draft produced beneath the cars in motion but little, if any, dust or cinders will enter the car. The guard-frame I has its side bars, I', held in the ways C², so that it may be adjusted vertically, as may be desired. These side bars are provided with guide-grooves i, formed vertically, so as to direct downward any dust or cinders coming in contact therewith, and pipes I² are connected at their upper ends to the frame I, communicating with the grooves i. These pipes I² depend from the frame I, and their lower ends enter the opening E' through the sill E. It will be noticed that by means of these pipes I² the draft under the car will properly affect the guard-frame I, no matter whether it be rested flat down against sill E or adjusted up therefrom at any desired point. When the frame is used flat against the sill E, the pipes I² will not be required; but I prefer to use said pipes, as thereby the frame will be readily adjusted to any desired point.

It is my purpose in the manufacture of new cars to employ the rigid frames shown most clearly in Fig. 7; but for the application of the invention to cars now in use I intend to employ the construction shown in Fig. 4. In this view, it will be understood, the frame is made in two sections, 1 and 2, the top and bottom bars being cut apart. One of the ends of said top and bottom has fixed to it a sleeve, 3, into which slides the other end, and one or both of said sleeves may be provided with a clamping-screw, by which the frame may be rigidly held in any desired position. I thus make the guard-frame adjustable to different

widths, so that it may be conveniently placed in a window by narrowing the said frame before inserting it in a window-frame, and widening it after it has been applied, so that it will properly fit, as is desirable.

It will be understood that the window-guard frames might be employed without the protectors G and H; but I prefer to use said guides, and to form them as before described.

By my invention, it will be seen, I provide simple means which may be economically applied to cars, and by which the ingress of dust and cinders will be reduced to a minimum degree, thereby resulting in a great increase of comfort to the passengers. It will be noticed that the guide-grooves of both the upper and lower deflectors are arranged at right angles to the length or direction of motion of the cars.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with a car, of deflectors provided with guide-grooves arranged at right angles to the length or line of motion of the car, and pipes opening at their upper ends at the lower ends or base of such grooves, and having their other ends extended below the car, substantially as set forth.

2. The combination, in a car-window, of a guard-frame held therein and provided in its side bars with vertical deflecting-grooves, and pipes opening at their upper ends through the sills at the base of said grooves and extended below the car, substantially as set forth.

3. In a dust-protector for cars, the guard-frame herein described, having its side bars provided with deflecting-grooves and provided with depending pipes communicating at their upper ends with the lower ends of the guide-grooves, substantially as set forth.

4. The combination, with the window having its sill provided with openings, and pipes communicating with said openings and extended below the car, of the guard-frame held and movable vertically in the window and having its side bars provided with depending pipes communicating at their upper ends with the deflecting-grooves therein, and having their lower ends extended into the openings through the sill, substantially as set forth.

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

ROBERT J. TRUESDAIL.

Witnesses:

A. PARKER,
G. T. BAKER.