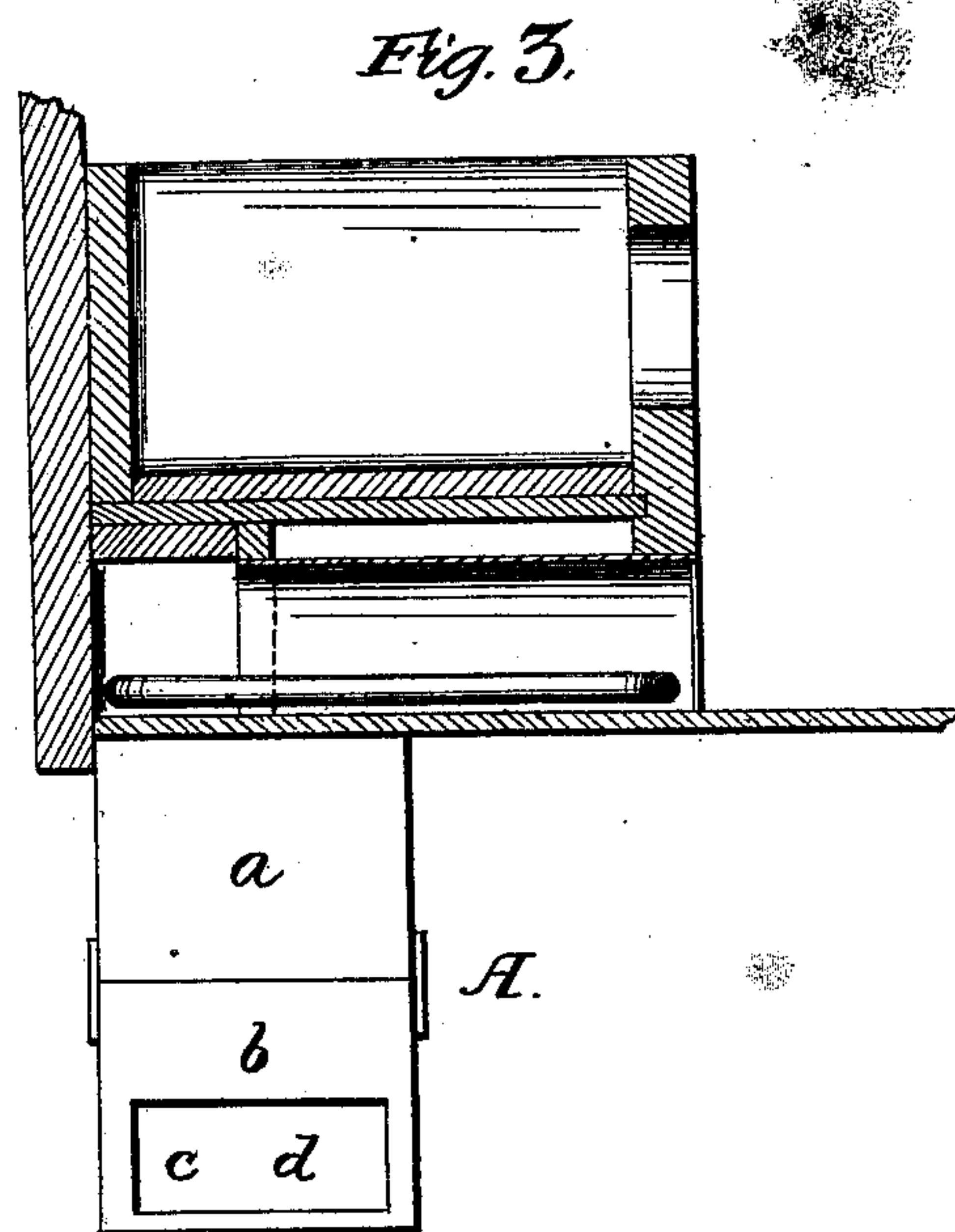
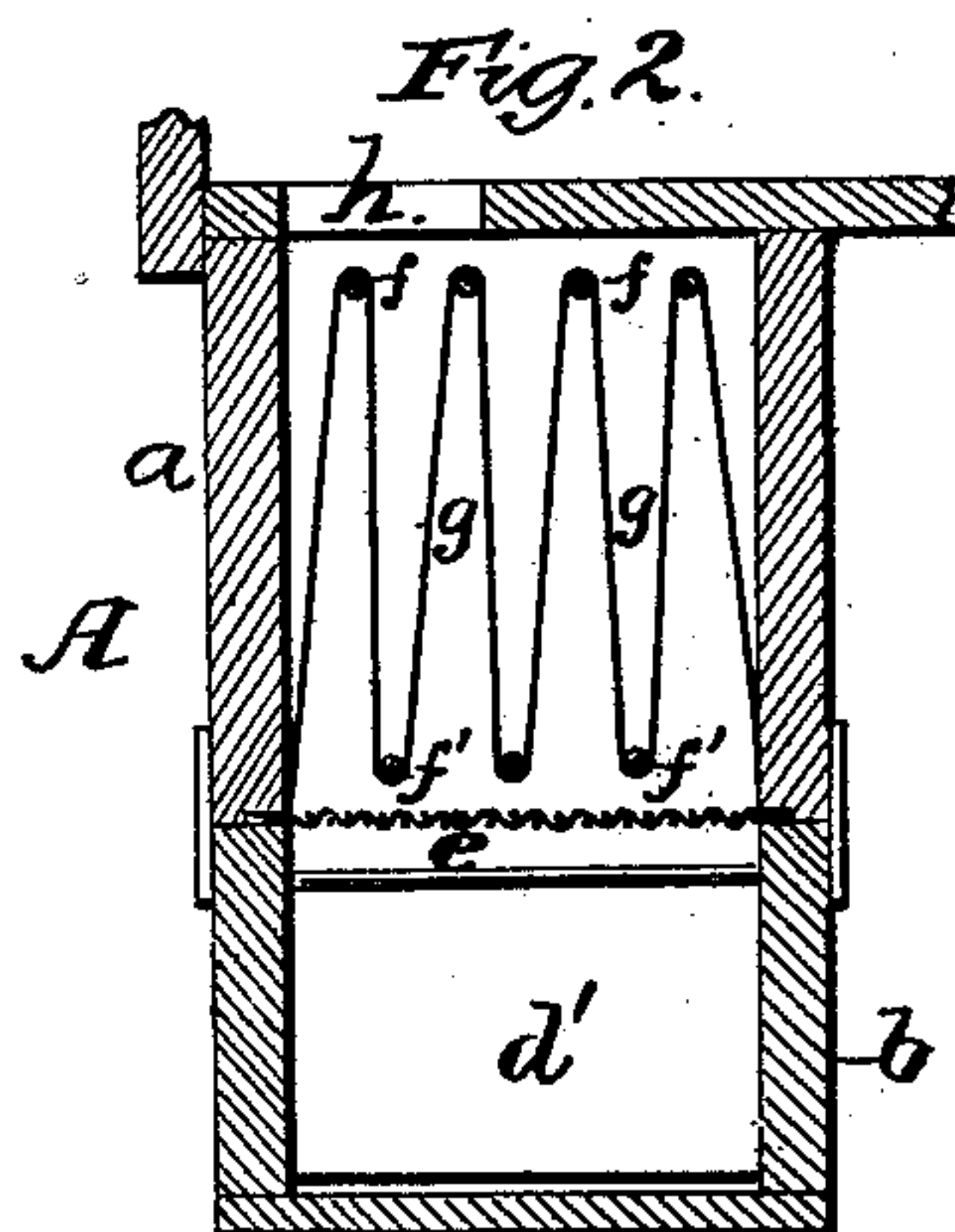
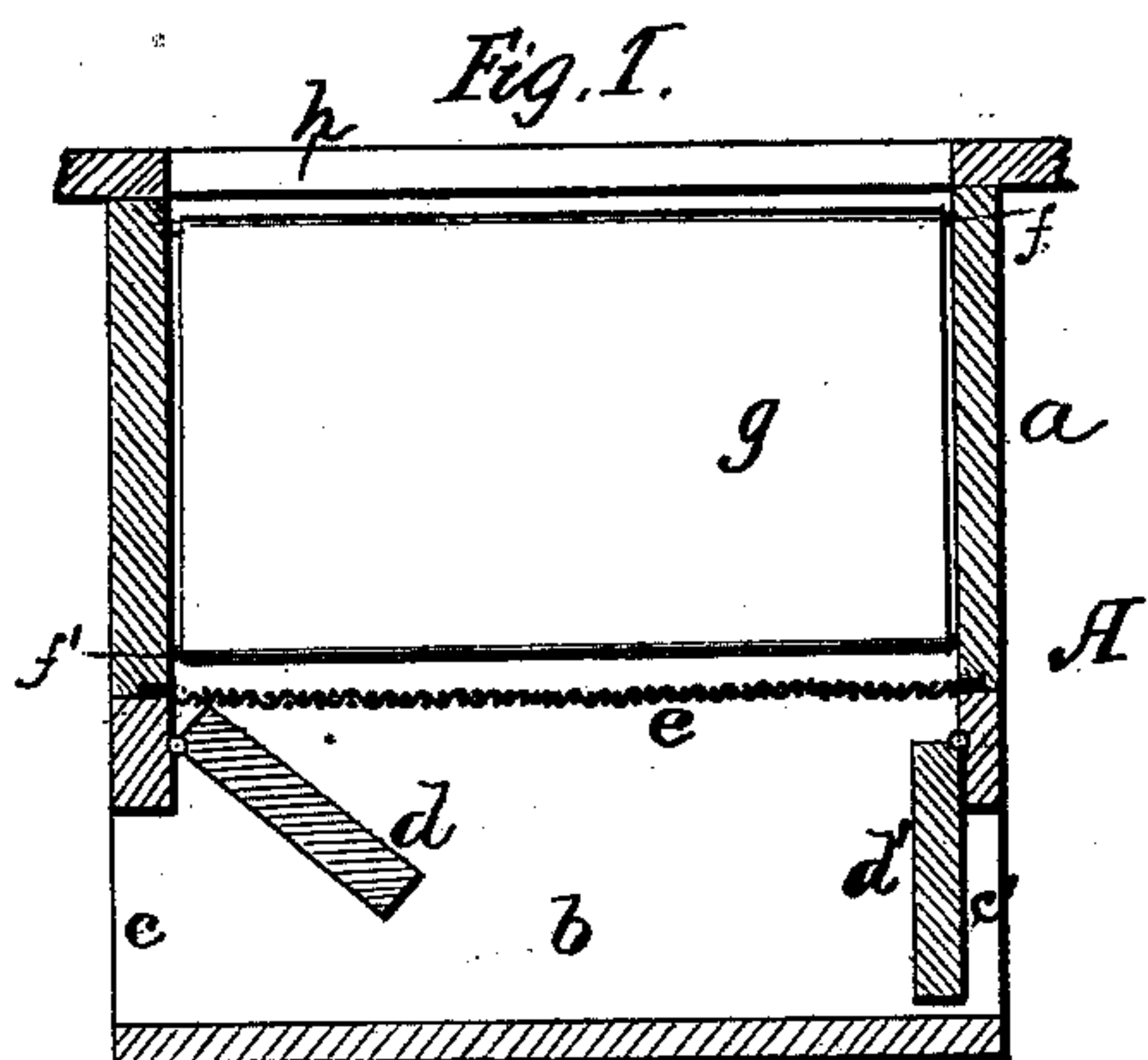


J. B. COLLIN.

Device for Supplying Fresh Air to Cars.

No. 222,247.

Patented Dec. 2, 1879.



Attest:
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att'y.

UNITED STATES PATENT OFFICE.

JOHN B. COLLIN, OF ALTOONA, PENNSYLVANIA.

IMPROVEMENT IN DEVICES FOR SUPPLYING FRESH AIR TO CARS.

Specification forming part of Letters Patent No. **222,247**, dated December 2, 1879; application filed July 22, 1879.

To all whom it may concern:

Be it known that I, JOHN B. COLLIN, of Altoona, in the county of Blair and State of Pennsylvania, have invented certain new and useful Improvements in Devices for Supplying Fresh Air to Cars; and I do hereby declare that the following is a full, clear, and exact description of the invention, which 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 letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 represents a longitudinal vertical section of a ventilating device having my improvements applied thereto, and Fig. 2 a vertical transverse section of the same. Fig. 3 represents an end view of my improved device as applied to a car, a portion of the latter being shown in section. In this view the box is drawn on a smaller scale than in the other two figures.

My invention relates to a new and improved mode of supplying fresh air to cars either in a heated or natural condition.

My improvement consists in a novel construction of box for the supply of pure fresh air to the interior of the cars, by which, before it enters the latter, it is filtered and freed from dust and other impurities capable of being mechanically separated from it.

To enable others skilled in the art to make, construct, and use my invention, I will now proceed to describe its parts in detail.

In the drawings, A represents an air-box of any suitable size and shape, but preferably of rectangular form, arranged lengthwise of the car and secured to its bottom. These boxes are made in two parts, *a* and *b*. The lower half, *b*, is provided with two openings, *c* and *c'*, one at each end. Each of these openings is provided with a door—opening *c* with door *d*, and opening *c'* with door *d'*. These doors are hinged at their upper end to the end walls of the lower half, *b*, of the box in such manner that when the cars are not in motion their gravity, (they swinging in a vertical plane) causes them to hang down and close the openings *c c'*.

Thus constructed, as the car advances the pressure of the air forces open the forward

door and firmly closes the other, as shown in Fig. 1, and in so doing is forced up through a wire-gauze screen, *e*, fastened to the upper side of the lower half, *b*, of box A, and thence into the upper half, *a*, of said box, and then filtered in the manner now to be described before being forced into the interior of the car.

The upper half, *a*, of box A is provided with a double series of rods or bars, *f f'*, the one series *f* at or near its top, and the other series, *f'*, at or near its bottom, and which for obvious reasons I prefer should run lengthwise of the box, although they may be advantageously used crosswise. Over these rods is passed a cloth screen, *g*, of suitable texture and material, in the manner shown in Fig. 2—that is to say, by first passing one end over one of the top side bars, *f*, and then over the adjacent lower-side bar, *f'*, and then over the next top bar, *f*, and lower side bar, *f'*, and so on for as many bars as there are arranged in the box. The two ends are then firmly secured to the sides of the upper half, *a*, of the box A. This mode of arranging the screening-cloth gives much surface for filtering and purifying the air from dust, &c., in a small space. The two halves *a* and *b* thus constructed are secured together in any suitable way, but so that the lower half can be readily removed from the other to give access to the cloth screen *g* for the purpose of dusting and cleaning it whenever its pores become clogged or filled up.

On the upper side of the upper half, *a*, of the box A is cut an opening, *h*, which runs the whole length, or nearly so, of the inside of the box, and fits an opening of corresponding size and shape cut through the bottom of the car, whence the filtered air from box A passes into the interior of the car. The box thus constructed is secured to the bottom of the car in any suitable or known way, care being taken in so doing that the opening *h* in box A fits the corresponding opening formed in the bottom of the car. As many of these filtering-boxes may be applied to each car as may be deemed necessary or requisite to fully supply it with pure fresh air.

It will be apparent that this air-filtering box will operate no matter in what direction the car moves, and that it can be used either without or in connection with any suitable air-heat-

ing apparatus, such as steam or hot-water heating apparatus.

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

1. An air-filtering apparatus for supplying pure air to railroad-cars, consisting of a box, A, provided with open ends and swinging doors, a wire-gauze screen, and an opening, *h*, in the manner substantially as set forth.

2. An air-filtering apparatus for supplying pure air to railroad-cars, consisting of a box, A, having open ends and swinging doors, and provided with a cloth screen, *g*, and opening *h*, in the manner substantially as set forth.

3. An air-filtering box for supplying pure air to railroad-cars, consisting of a box, A, having open ends and swinging doors, and provided with a wire-gauze screen, *e*, cloth screen *g*, and opening *h*, in the manner substantially as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOHN B. COLLIN.

Witnesses:

H. A. HALL,

F. B. BROCK.