

(No Model.)

A. COONS.
SASH FASTENER.

No. 601,948.

Patented Apr. 5, 1898.

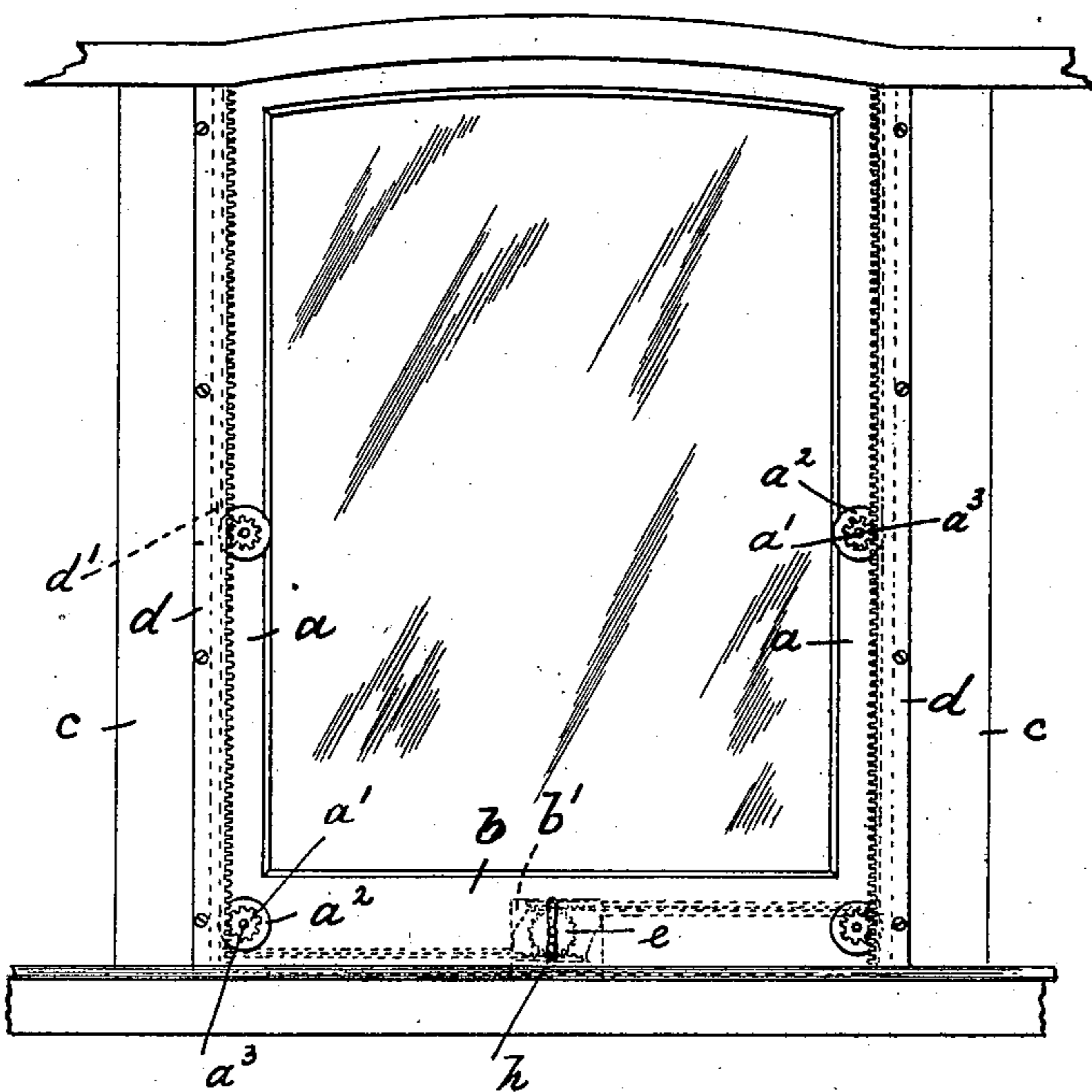


Fig. 1.

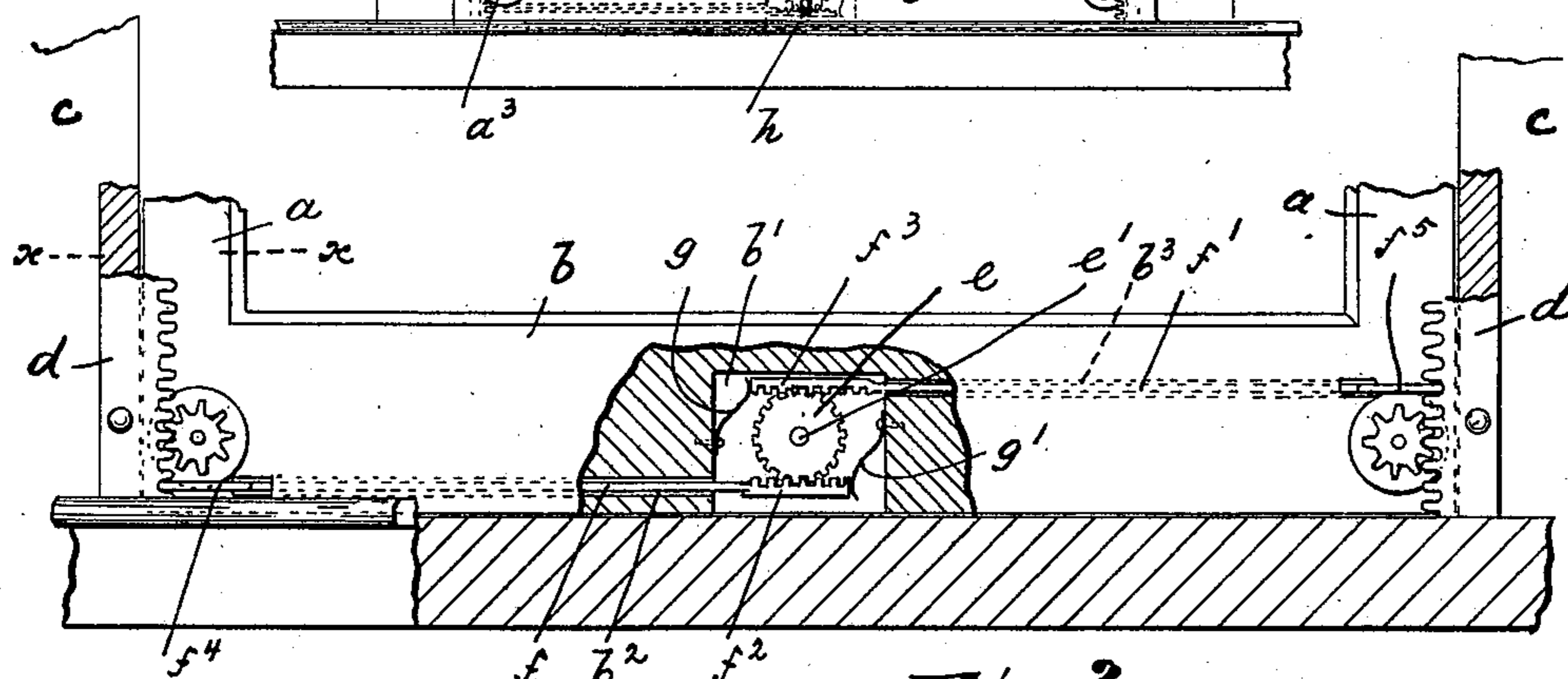


Fig. 2.

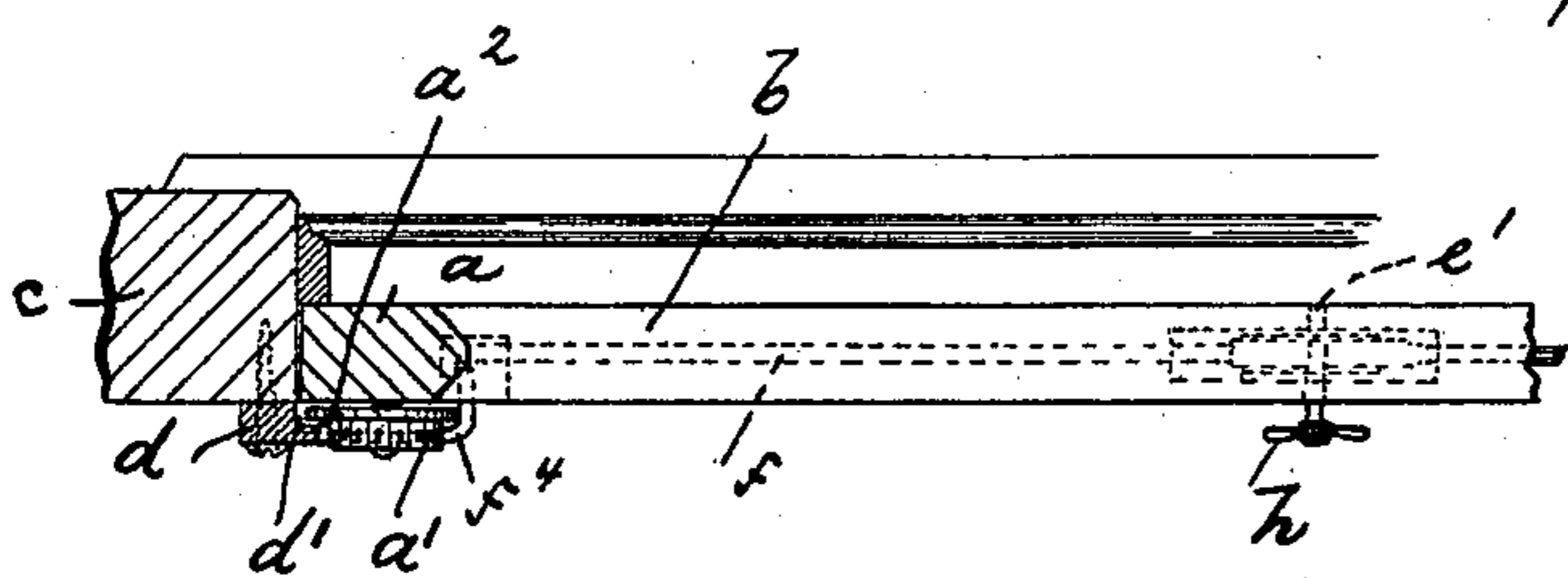


Fig. 3.

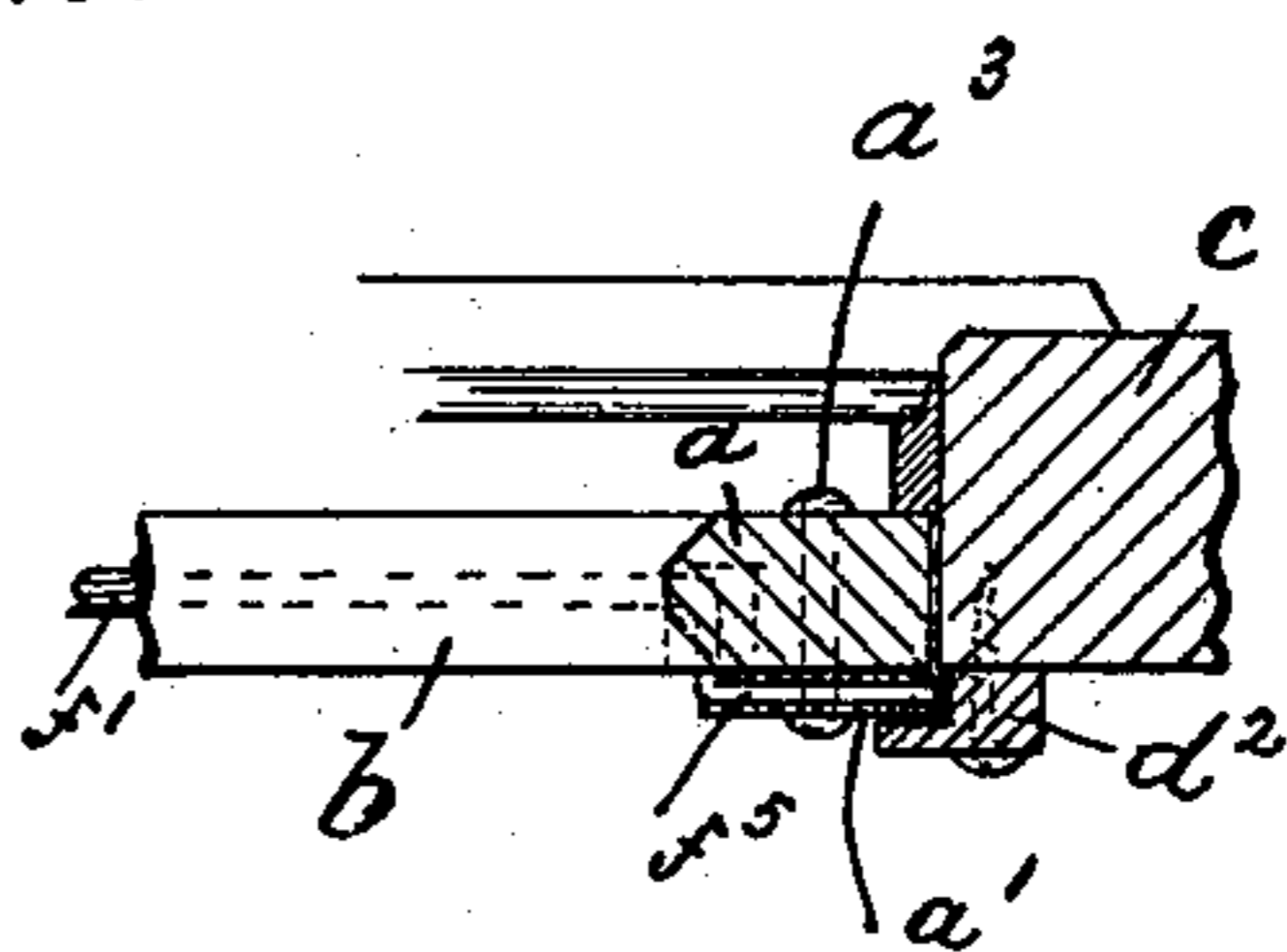


Fig. 4.

WITNESSES:

INVENTOR:

Wm. D. Bell.
S. D. Rimsey

Alexander Coons

BY Partner & Co.

ATTY'S.

UNITED STATES PATENT OFFICE.

ALEXANDER COONS, OF LAKEVIEW, NEW JERSEY.

SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 601,948, dated April 5, 1898.

Application filed January 4, 1897. Serial No. 617,867. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER COONS, a citizen of the United States, residing in Lakeview, county of Passaic, and State of New Jersey, have invented certain new and useful Improvements in Window-Sashes and Fasteners; and I do hereby 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 letters of reference marked thereon, which form a part of this specification.

My invention relates to new and useful improvements in window-sashes and fasteners therefor, and is especially adapted for use in railroad-cars. Its object is to provide a window-sash and fastener of simple, strong, and durable construction, easily handled, and not liable to get out of order, and by means of which the window can be opened to any suitable distance.

The invention consists in the detail of construction and in the arrangement of parts, substantially as will be hereinafter more fully described, and finally embodied in the claim.

Referring to the accompanying drawings, in which like letters of reference indicate corresponding parts in each of the several views, Figure 1 represents my improved sash viewed from the inside of a car. Fig. 2 is an enlarged detail view of the lower portion of Fig. 1, having certain portions broken away and others shown in section to better illustrate various points of my invention. Fig. 3 is a sectional view on line xx of Fig. 2; and Fig. 4, a view similar to Fig. 3, illustrating a slight modification of the same.

In said drawings, a a represent the sides of my improved window-sash, and b the bottom of the same. Pinions a' a' , provided with integral disks or flanges a^2 a^2 , revolvably mounted on suitable axles a^3 a^3 , are arranged on said sides a a . Said pinions a' a' are adapted to engage the teeth of racks d d , parallel with the sides of said sash and secured to the window-frame c by screws or in any desired manner. Throughout the entire length of each of said rack-bars is arranged an angular grooved recess d' , adapted to be engaged by the disks or flanges a^2 a^2 of said pinions a'

for the purpose of keeping the sash in place. The bottom of said sash is provided with the central recess b' , in which is arranged a pinion e , mounted on a suitable shaft or spindle e' , having its bearings in the bottom b of the sash, as clearly shown. Partially inclosed and moving freely in horizontal recesses b^2 b^3 of the bottom b are the locking bars or rods f f' , provided on their inner ends with racks f^2 f^3 , engaging the teeth of pinion e and adapted to engage with their forwardly and outwardly projecting ends f^4 f^5 the teeth of the rack-bars d . Said locking-bars f f' are held in normal position by the springs g g' , as clearly shown. A handle or knob h is secured to the projecting end of the axle e' for the purpose of operating the locking mechanism above described.

In the modified view, Fig. 4, I have illustrated the teeth of the rack d^2 arranged upon the inner surface of the angular recess d' , by which arrangement the disk or flange a^2 of the pinion a' becomes no longer necessary, the pinion itself taking the place of the same.

The operation of my invention is as follows: When it is desired to raise the window, the pinion e is turned by the handle of knob h , so that the bars f f' are drawn inward and disengage the recesses formed by the teeth of the rack-bars d , thus unlocking the sash and allowing it to be raised to any desired position. When the handle or knob is released, the locking-bars f f' are immediately forced outward by the action of the springs g g' and engage other recesses formed by the teeth of said rack-bars, thus retaining and locking the window in its raised position. The pinions a' a' , engaging the teeth of the rack-bars d , prevent any tendency there may be of the one side rising faster than the other—i. e., of the sash getting out of plumb—thereby avoiding all binding of said sash against the frame and causing it to be easily adjusted to any height and position.

It is evident that an additional sash-lock is not required, as the locking mechanism shown and described will securely hold the sash in its lowermost position.

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

The combination with the side pieces of a

window-frame and with a sash vertically movable between said side pieces, of a rack-rod arranged on each side piece close to the inner face of each stile of said sash and approximately in the same plane therewith, pinions journaled on the face of the stiles and engaging the rack-rods, and each provided with a flange on its perimeter spacing the sash from the rack-rod, a vertically-set pinion inclosed in the bottom rail of the sash and provided with a suitable exposed operating element, and spring-pressed locking-bars also inclosed by the bottom rail and provided at their outer

ends with integral and exposed angular extensions engaging the rack-rods and at their inner ends with racks engaging the pinion, said locking-bars being arranged the one above and the other below said pinion, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 30th day of December, 1896.

ALEXANDER COONS.

Witnesses:

ALFRED GARTNER,
S. D. RUMSEY.