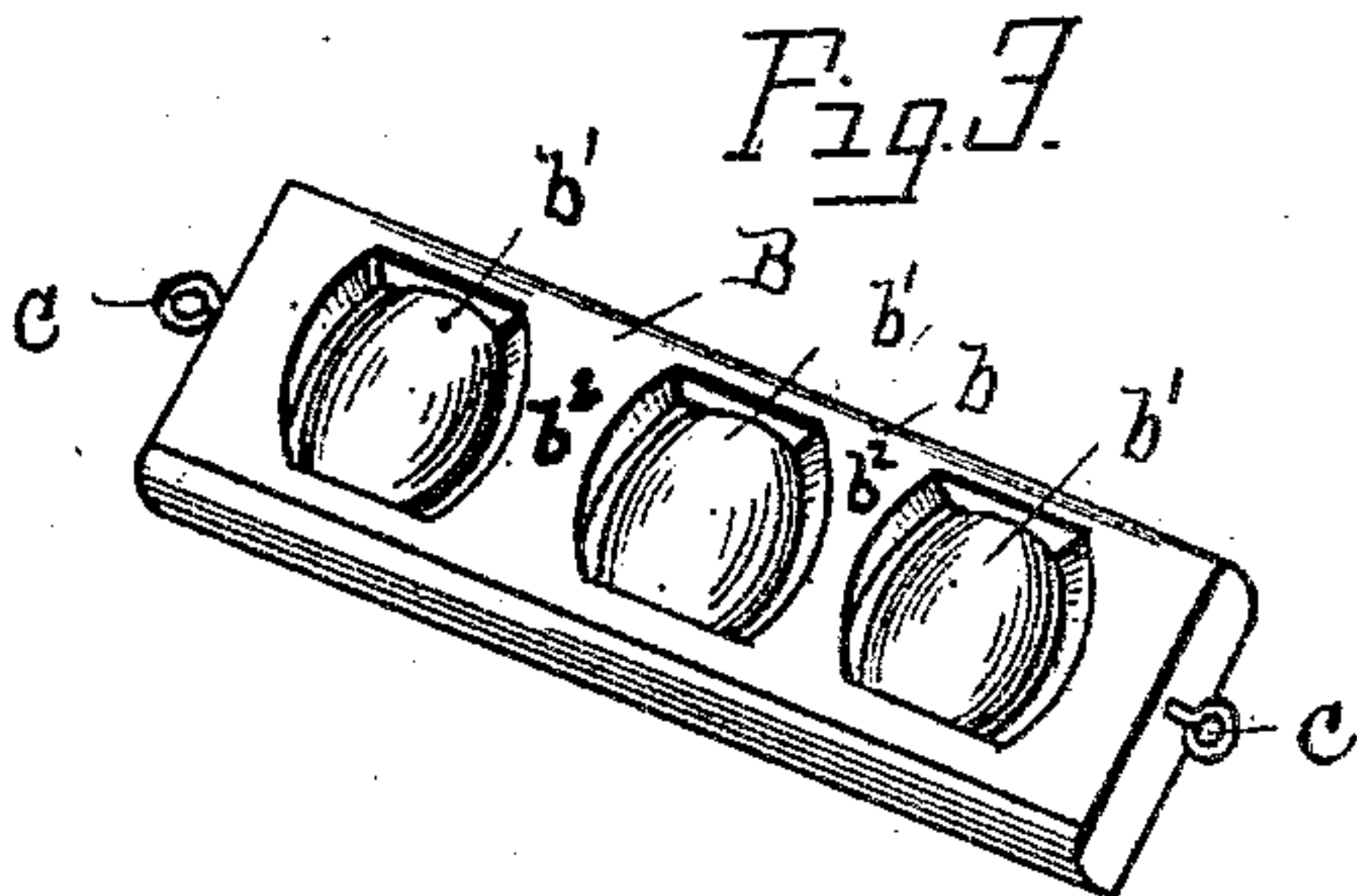
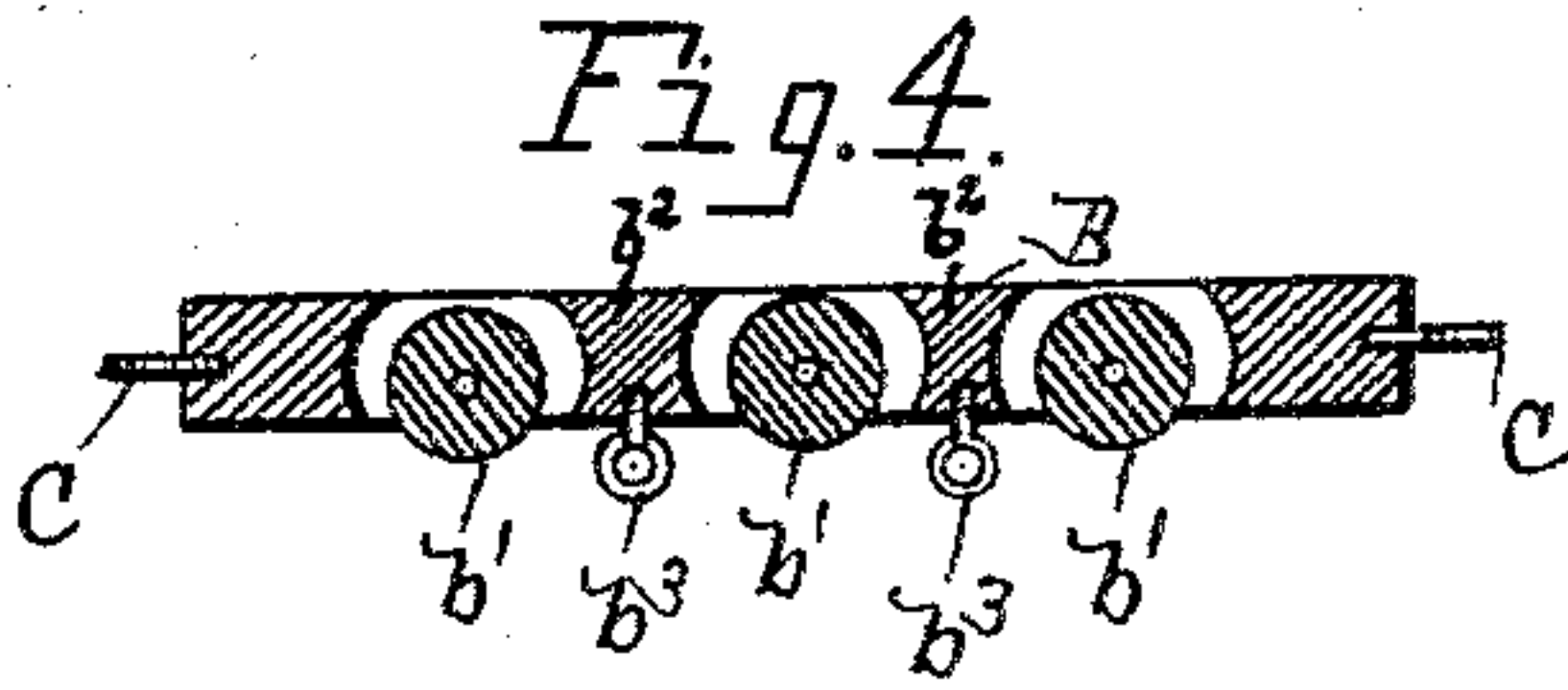
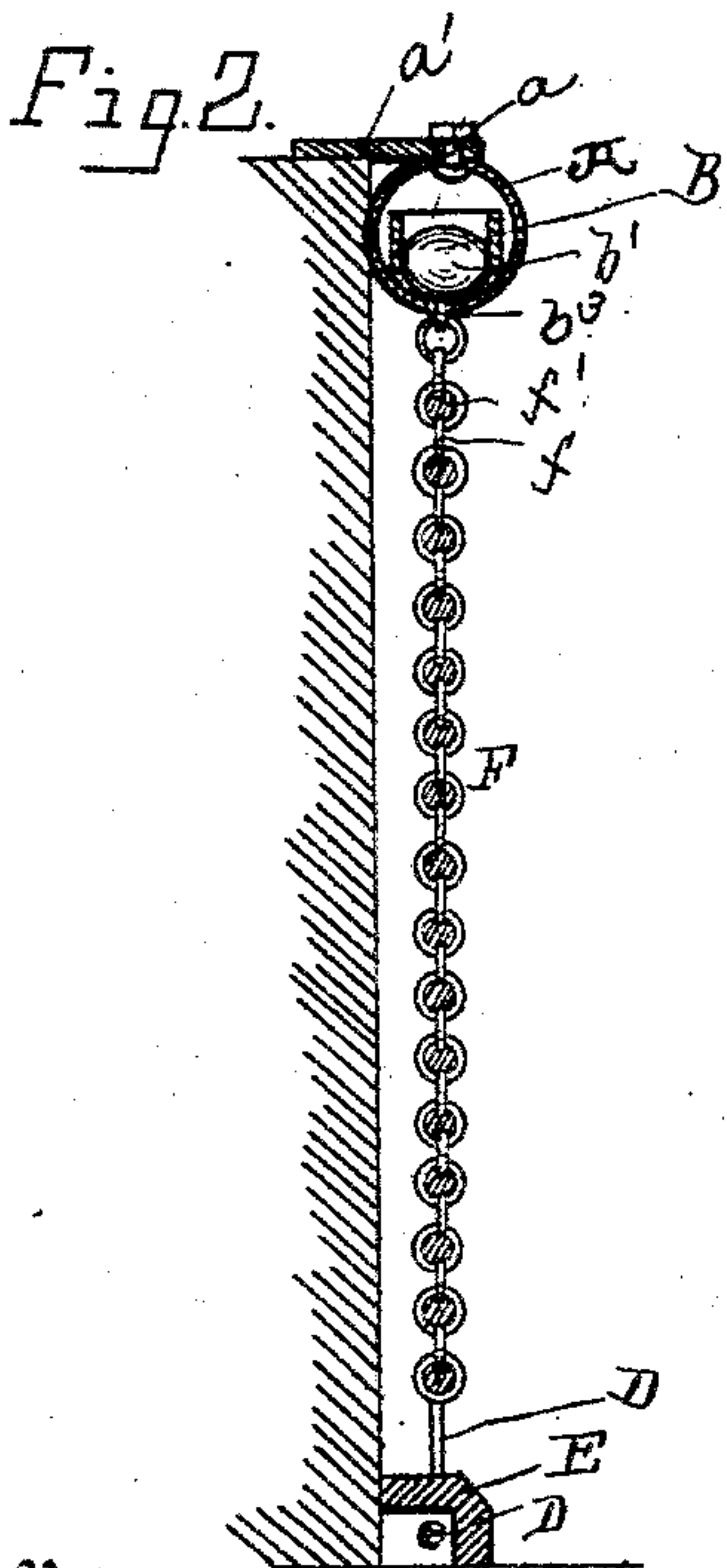
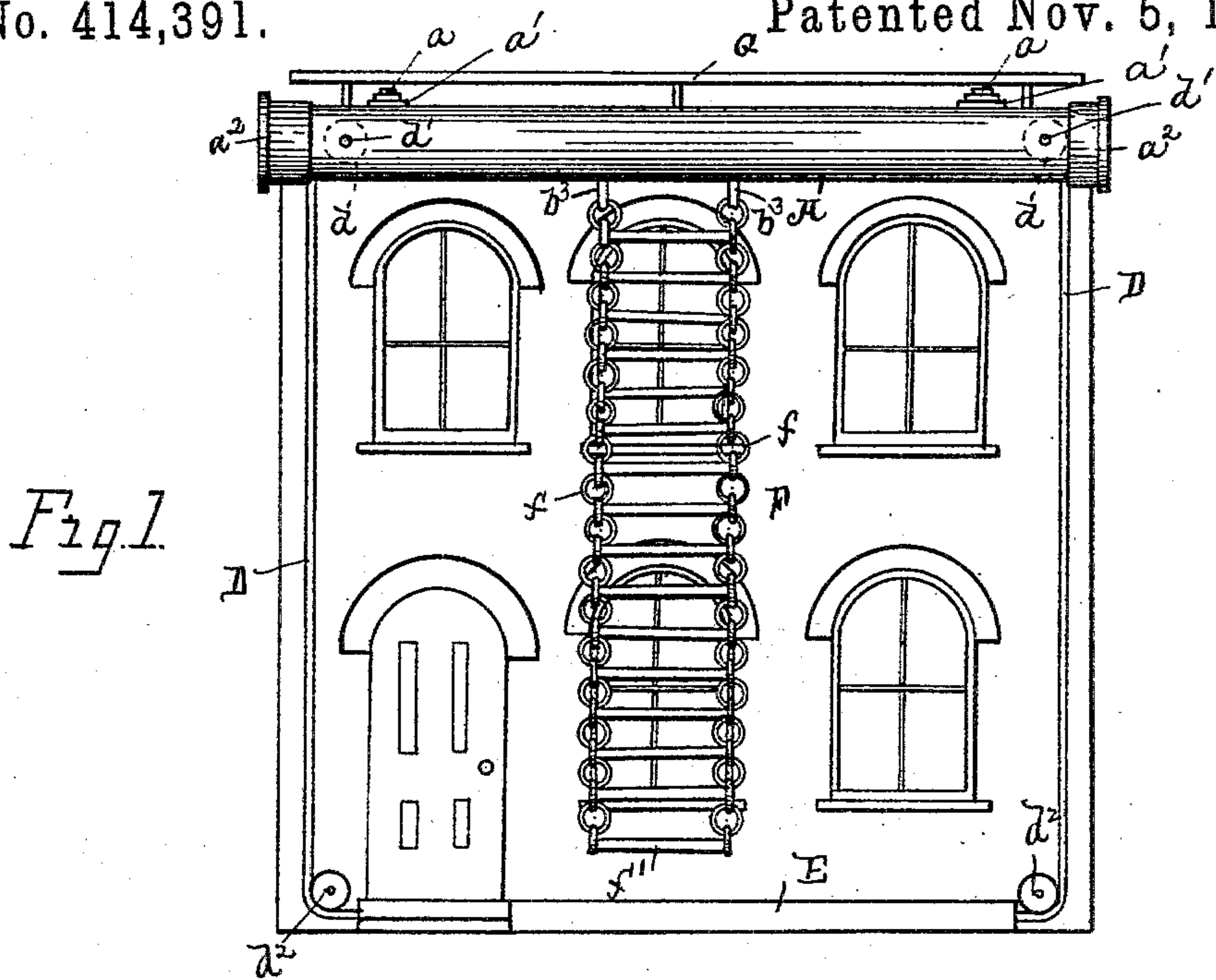


(No Model.)

E. W. FENNER & E. J. LEE.
FIRE ESCAPE.

No. 414,391.

Patented Nov. 5, 1889.



Witnesses
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UNITED STATES PATENT OFFICE.

EDWARD W. FENNER AND EDGAR J. LEE, OF TROY, PENNSYLVANIA.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 414,391, dated November 5, 1889.

Application filed July 20, 1889. Serial No. 318,146. (No model.)

To all whom it may concern:

Be it known that we, EDWARD W. FENNER and EDGAR J. LEE, citizens of the United States of America, residing at Troy, in the county of Bradford and State of Pennsylvania, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention pertains to certain new and useful improvements in fire-escapes, having for its object the provision of simple and highly efficient means for moving a chain-ladder to any desired point over the front, rear, or side of a building.

The invention comprises the details of construction, combination, and arrangement of parts, substantially as hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a view showing our invention applied to the front of a building. Fig. 2 is a vertical longitudinal sectional view. Fig. 3 is an enlarged detail view of the ladder-carrying carriage. Fig. 4 is a longitudinal sectional view thereof.

In carrying out our invention, we employ a tubular casing or tramway A, rigidly secured, preferably, by nutted bolts *a* to brackets *a'*, attached to the cornice or eaves of a building, the ends of said casing being closed by caps *a²* *a²*.

B is a carriage composed of a frame *b*, wherein are three (more or less) rollers *b'*, and two connecting-pieces *b²*, from which project eyebolts or hooks *b³* *b³*, as shown, said rollers being secured in recesses in said frame and between said connecting-pieces.

To end studs C C, attached to carriage B, are connected the ends of a cable D, which is passed over pulleys *d* *d*, held by pins *d'* *d'* in the ends of casing A, and said cable is also passed over pulleys *d²* *d²*, secured to the wall of a building adjacent the ground. The cable is passed under a guard or shield E, secured to the said wall, so as to protect the cable at this point.

F is the chain or wire-cable ladder composed of parallel vertical chain or wire cable *f* *f* and rounds *f'* *f'*, connected thereto by any suit-

able means. The upper ends of chain or wire cable *f* are connected to the eyebolts of hooks *b³*, whereby upon pulling on the cable and moving the carriage the chain or wire cable ladder can be carried to any desired point.

A ladder constructed as herein described can be readily hooked up out of the way, or its lower end can be drawn from the building, if desired.

A bar G is secured to the roof of the building to serve as a hand-bar for a person passing from the roof to the ladder.

From the foregoing description it will be seen that we have produced a fire-escape or ladder that is extremely simple in construction, one that comprises but few parts, and that the same is readily and easily operated and can be brought to any point on the wall of a building and permit a person in any room or on the roof to readily and easily grasp the ladder and reach a point of safety.

We claim as our invention—

1. In a fire-escape, the combination, with the upper casing having a lower longitudinal opening, of the carriage in said casing provided with recesses, and a series of rollers secured therein, the chain or wire-cable ladder secured at its upper end to the under side of said carriage and extended through said opening, substantially as set forth.

2. In a fire-escape, the combination, with the upper casing having a lower opening therein and provided with pulleys at its opposite ends, of the carriage sliding in said casing, provided with recesses and connecting-pieces *b²*, and a series of rollers, the hooks depending from said connecting-pieces, and the chain or wire-cable ladder secured to said hooks and extending through said opening, and the cable connected to the opposite ends of said carriage and passed over said pulleys, substantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

EDWARD W. FENNER.
EDGAR J. LEE.

Witnesses:

C. O. LEWIS,
N. KERRICK.