

(No Model.)

J. A. HUNT.
FIRE ESCAPE.

No. 481,565.

Patented Aug. 30, 1892.

Fig. 1.

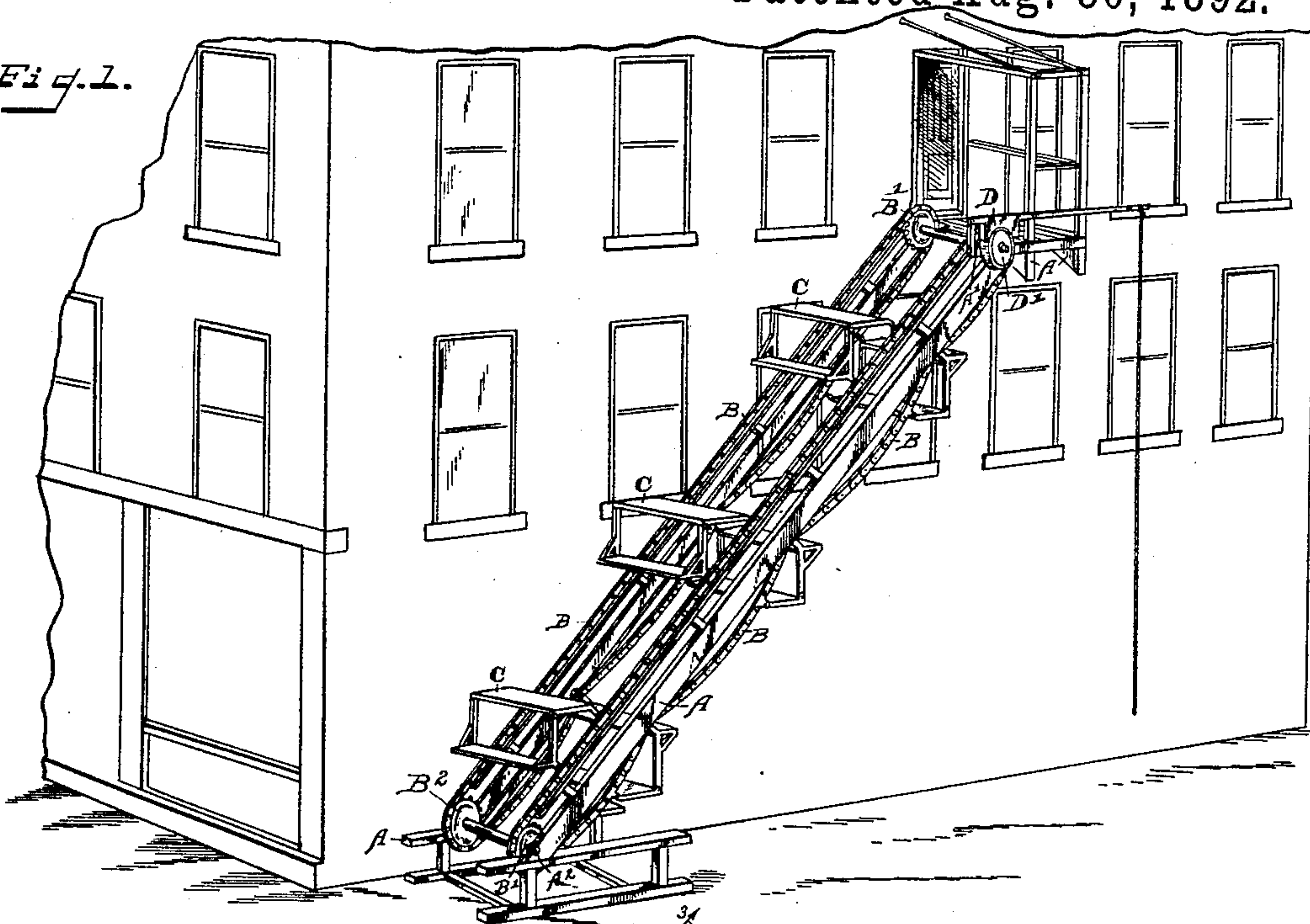


Fig. 2.

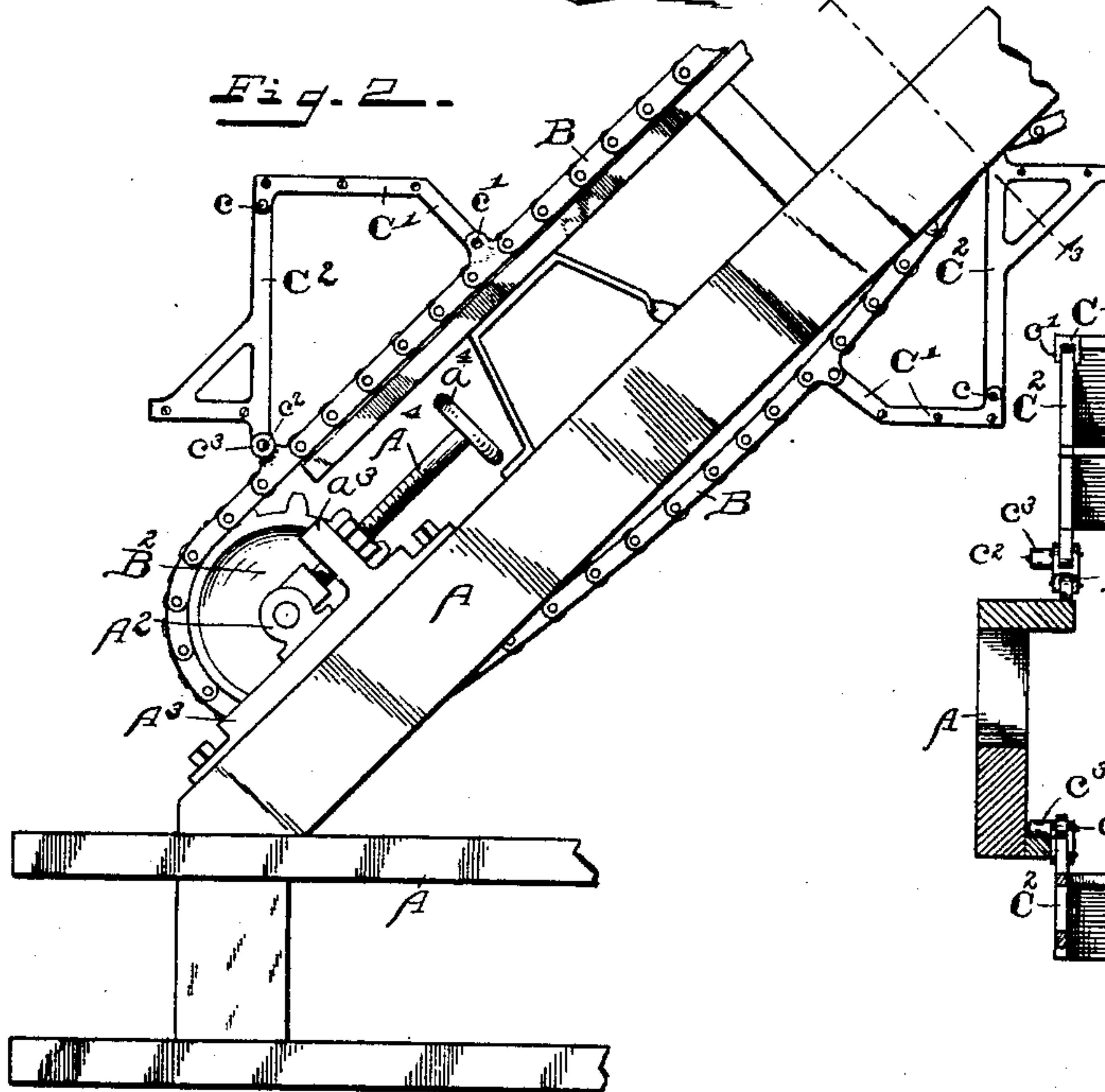
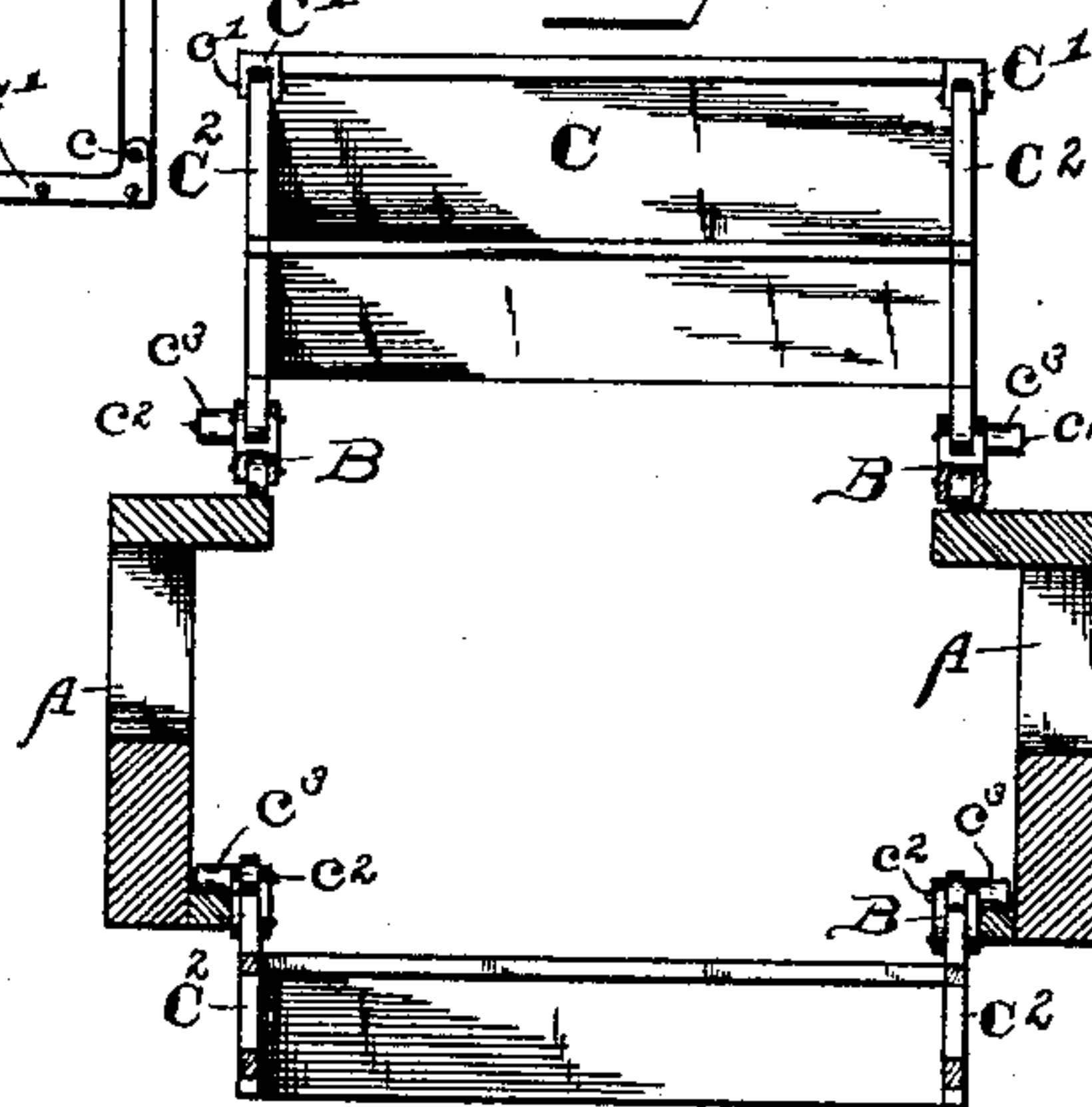


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 481,565, dated August 30, 1892.

Application filed February 9, 1892. Serial No. 420,869. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. HUNT, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a specification.

My said invention consists in a traveling carrier which is adapted by means of certain peculiarities of construction and arrangements of parts, as will be hereinafter more particularly described and claimed, to serve the purpose of conveying persons and articles from a higher to a lower elevation and to be easily and safely manipulated, whereby it is of peculiar value in cases of emergency, as when conflagrations occur in large buildings and the like.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a perspective view of a building with my improved device attached to one side to serve as a fire-escape; Fig. 2, a side elevation of said device at the lower end on an enlarged scale, and Fig. 3 a transverse vertical sectional view looking in the direction indicated by the arrows from the dotted line 3 3 in Fig. 2.

In the drawings, the portions marked A represent the framework upon which the mechanism of my improved device is mounted; B, an endless-chain ladder; C, steps or seats mounted upon said endless ladder, and D a brake by which the movement may be controlled and its speed regulated.

The framework A may be of any desired form or description and is stoutly secured to the side of the building when, as in the case illustrated, it is arranged to be used on the outside. It is arranged at an angle, as shown, so that passengers thereon may ride down an incline, which has many advantages over a perpendicular descent. At the upper end the framework may extend upward to form an inclosure adjacent to a window or door, as also shown in the drawings, and a platform may be built as a part thereof, onto which persons may step from the inside of the building through said window or door. Upon this framework are bearings A' and A² for the shafts of the sprocket-wheels, over which the

chains of the chain ladder run. One set of these bearings, preferably the upper set A', are of the ordinary form and are attached in a fixed position. The lower ones A² are mounted in slides A³ and are operated by screws A⁴, passing through upward projections a³ and provided with hand-wheels or equivalent devices a⁴. By this means the tension of the chain ladder may be quickly and easily adjusted.

The chain ladder B consists of two endless chains connected by rungs, as usual. It runs over the sprocket-wheels B' and B², which are carried on shafts resting, respectively, in the bearings A' and A². The upper or descending portions of the chains rest upon and are supported by the upper edges of the side timbers of the framework A, and are thus prevented from sagging. The under or ascending portions of these chains hang loose, except that they are supported at intervals by little projecting stud-shafts having antifric-tion rollers, which rest upon cleats attached to the inner lower sides of the side pieces of the framework A, as shown most plainly in Fig. 3.

The steps or seats C are secured by means of angle-frames composed of the parts C' and C² to the chains B. These frame parts are secured together by means of pivots c, and they are secured to the chains by other pivots or pivot-bolts c' c². These joints permit the structure to pass around the wheels at the ends and thus have a continuous movement without breakage or disarrangement of any of the parts. The pivots or pivot-bolts c² also form the stud-shafts upon which the antifric-tion-rollers c³ are placed, which support the under or ascending portions of the chains and keep them from sagging to too great an extent.

The brake D is arranged adjacent to and adapted to come in contact with a friction-pulley D', mounted on the end of one of the shafts carrying the sprocket-wheels over which the chains run, preferably the upper one, as shown. This brake may be of any desired form. It is preferably a lever having a concave shoe fitting the surface of the friction-wheel, as shown, or a strap-brake which encircles and comes in contact with a considerable portion of the surface of said friction-wheel. It can be best operated by a cord de-

pending from the end of the lever or the end of the strap to near the ground, where a person can stand and hold it with just that force of contact necessary to regulate the speed of the descent, and can also stop it from time to time to permit persons to mount the steps or seats and dismount therefrom. As will readily be understood, by a proper manipulation of this brake a very speedy descent may be secured, while the speed can be checked when the passengers arrive at the bottom, thus allowing them to dismount without difficulty. The steps or seats may be wide enough for two, three, or more persons and a number of them may be attached, as shown. Therefore a large number of persons can be taken from a building by this means in a very short time.

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

1. The combination of traveling chains, angle-frames pivoted thereto and pivoted together, and seats or steps on said angle-frames, whereby a carrier is provided, and an appropriate device for checking and regulating the speed of said carrier, substantially as set forth.

2. The combination, in a chain-carrier, of frames composed of parts C^1 C^2 , pivoted to the chains and pivoted together, and seats or steps C , secured to said frames, whereby the necessary movement is secured to permit the continuous motion of the carrier, substantially as shown and described.

3. The combination, in a carrier, of a framework set at an angle, bearings on said framework, shafts carrying wheels mounted in said

bearings, adjusting-screws A^4 , whereby said bearings and the wheels carried thereby are adjusted to the proper position, chains running over said wheels, and seats or steps secured to said chains, whereby a safe gradual descent from an upper to a lower elevation may be secured, substantially as shown and described.

4. The combination, in a carrier, of a framework set at an angle, a traveling chain-carrier mounted thereon having seats or steps secured thereto extending out therefrom in a substantially horizontal direction, thus producing a substantially level platform for carrying the passengers.

5. The combination, in a carrier, of a framework set at an angle and frames secured thereto in such a position that the upper member thereof will be at substantially a level with a seat or step portion secured thereto, substantially as shown and described.

6. The combination, in a carrier, of traveling chains, frames pivoted thereto having two portions which extend out in a horizontal direction or on a level but at an angle with the chain and its direction of travel, the upper portion of which carries a seat part and the lower portion a foot-rest part, substantially as shown and described.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 2d day of February, A. D. 1892.

JOHN A. HUNT. [L. S.]

Witnesses:

CHESTER BRADFORD,
J. A. WALSH.