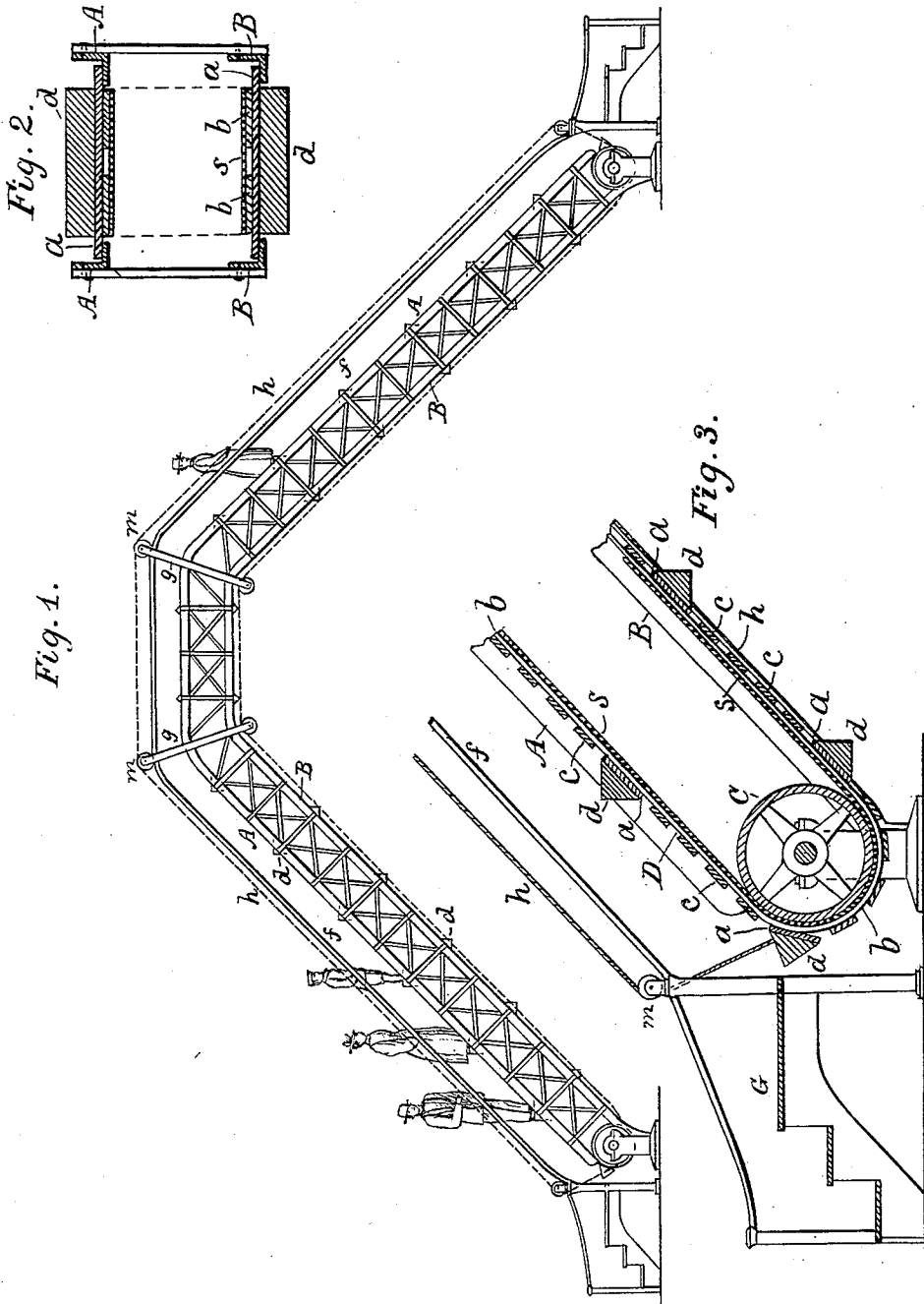


(No Model.)

G. F. BROTT.
ELEVATOR.

No. 569,539.

Patented Oct. 13, 1896.



Witnesses:

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UNITED STATES PATENT OFFICE.

GEORGE F. BROTT, OF WASHINGTON, DISTRICT OF COLUMBIA.

ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 569,539, dated October 13, 1896.

Application filed July 25, 1896. Serial No. 600,498. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. BROTT, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Elevators; 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.

This invention relates to elevators adapted for use in connection with elevated railways; and it consists in certain improvements in the construction of such elevators, as herein-
after described and claimed.

In the accompanying drawings, Figure 1 represents a side view of an elevator constructed according to my invention. Fig. 2 illustrates the elevator in transverse section. Fig. 3 shows a portion of the elevator in vertical longitudinal section.

The trackway, which forms a supporting-frame for the carrier, is somewhat in the form of a bridge, having an ascent to reach the plane of an elevated railway and a descent therefrom. The said trackway has two inclines and a level portion or platform at the top, from which the passengers may step from the elevator to the elevated railway. It consists of two upper and two lower angle-irons running parallel with each other, the lower angle-irons being connected with the upper irons by means of truss-braces and firmly secured in position, the extremities of the trackway being suitably supported on the ground.

A designates the upper angle-irons, and B the lower angle-irons, the latter running parallel with the former from end to end. The irons A and B are arranged a suitable distance apart, and at each end of the trackway is located a rotary drum C, which is mounted in suitable bearings based in the ground. An endless belt D is mounted in the trackway and forms the main part of the carrier, said belt passing about the said drums.

The belt D is constructed of a series of endless bands *b*, of steel, upon which are secured at intervals a series of slats *a*, which extend across said belt. The slats *a* are longer than the width of said belt D, so that the ends of the slats rest on the angle-irons, as shown in

Fig. 2. The slats *a* are spaced about three feet apart, and intervening slats *c* are also secured to the belt D, and are supported at their extremities by the angle-irons in like manner with the slats *d*, so that the belt is well protected. A layer *s*, of suitable textile material, such as duck, is secured to the under side of the steel belt, so that in passing over the drums the latter are protected from injury by contact with the screws by which the parts of the carrier-belt are secured together, and slipping of the belt is also prevented.

Firmly secured to the slats *a* are steps *d*, which may be constructed of hard wood, and each step may be fastened to the slat and to the belt by screws along the center line of the slat.

The carrier-belt D passes about the drums C at the extremities of the trackway, and, as shown in Fig. 2, the construction is such that during operation the upper and lower parts of the belt are supported by the upper and lower angle-irons, the ends of the slats bearing thereon and the steps moving between said irons. The carrier makes its forward movement on the upper angle-irons A and returns on the lower angle-irons B, and the steps *d* on that part of the belt making the return movement are inverted, as shown, but the lower part of the belt is supported, during the return movement, by the slats bearing on the upper faces of flanges of the angle-irons B.

For the safety of passengers the elevator is provided with stationary side rails *f*, which are suitably supported by posts *g*.

A portion of the rail *f*, which is at one side of the platform at the top of the elevator, may be dispensed with to allow passage to and from said platform. An endless cable *h* is also provided, being mounted at one side of the elevator, passed about the drums C or grooved rollers on the drum-shafts, and pulleys *m*, the mountings of which are connected with the supporting-frame. The endless cable *h* follows the movement of the carrier at the same rate of speed.

The angle-irons forming the trackway for the belt D may be inclined at an angle of forty-five degrees or less. The slats *a*, with steps *d*, are secured to the outer side of the belt, and the latter is free from friction, its

bearings on the angle-irons being formed by the slats.

For driving the carrier an electric motor (not shown) may be applied to the axle of each of the rotative drums, or any suitable motor may be employed whereby the speed may be regulated.

The carrier being in operation and moving at a moderate rate of speed, the passengers may step from a platform G to the steps d, and standing thereon are conveyed to the platform at the top of the elevator, and stepping therefrom may pass to the cars.

The carrier-belt having bearings by the slats on both the upper and lower angle-irons is entirely free from sagging.

I claim—

1. In an elevator, the combination with a support consisting of two upper and two lower, stationary angle-irons, of an endless belt, a series of slats forming bearings on said angle-irons for said belt, steps carried by said belt, and rotative drums, on which said belt moves, substantially as and for the purposes described.

2. The combination with a supporting-frame consisting of two upper and two lower

angle-irons, which are connected by braces, of an endless, flexible belt, transverse slats secured to said belt, the extended ends of said slats bearing on flanges of said angle-irons, and steps mounted on said slats, the parts being so constructed that, in the forward movement of the belt, the slats bear on flanges of the upper angle-irons, and in the return movement of the belt, said slats bear on the upper faces of flanges of the lower angle-irons, substantially as set forth and described.

3. The combination with a supporting-frame, a trackway and rotative drums, of an endless belt, consisting of one or more steel bands, having a layer of textile material secured thereto, and a series of slats secured to said belt and forming bearings for it on said trackway, substantially as and for the purposes described.

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

GEORGE F. BROTT.

Witnesses:

H. A. DANIELS,
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