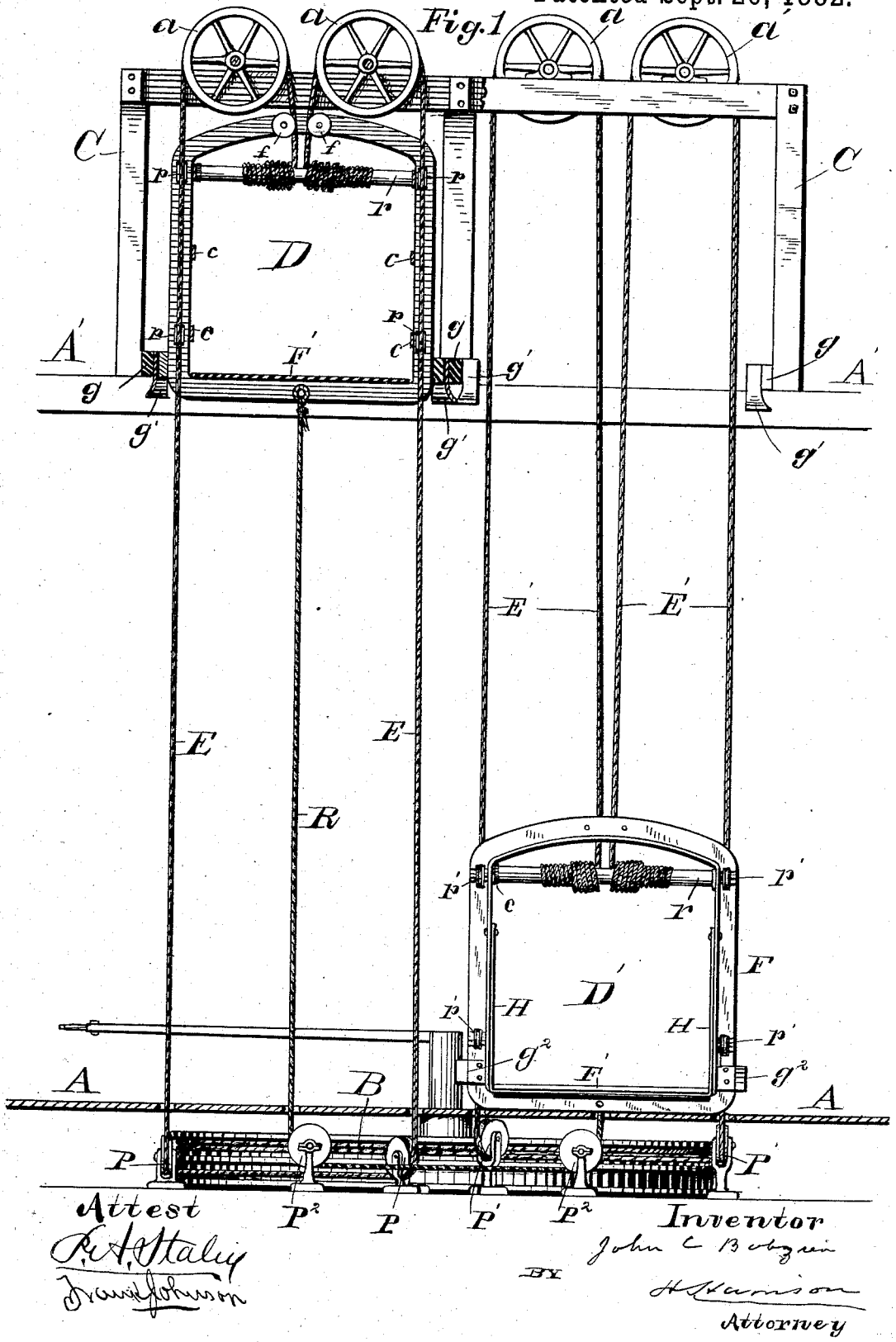
(No Model.) 3 Sheets—Sheet 1.

J. C. BOBZIEN.

BRICK ELEVATOR.

No. 265,012. Patented Sept. 26, 1882.

Fig. 1



Attest
P. A. Staley
Frank Johnson

Inventor
John C Bobzien
BY
H. Harrison
Attorney

(No Model.)

3 Sheets—Sheet 2.

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Fig. 2

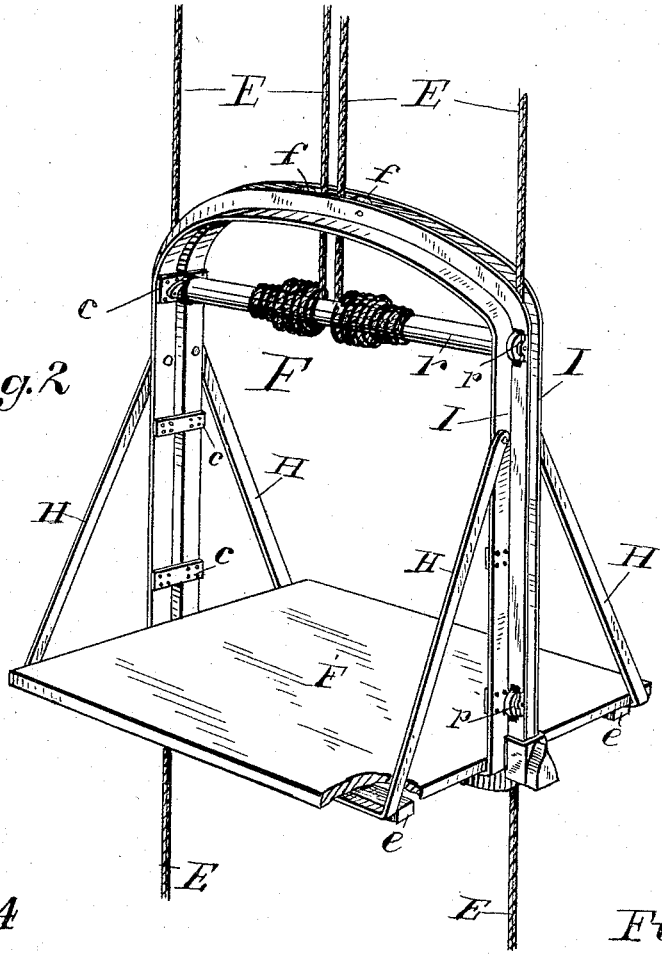


Fig. 4

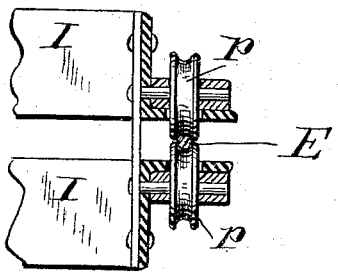
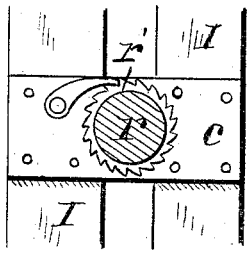


Fig. 5



Attest

O. A. Staley

Frank Johnson

Inventor

John C Bobzien

BY

H Hamson

Attorney

(No Model.) 3 Sheets—Sheet 3.

J. C. BOBZIEN.

BRICK ELEVATOR.

No. 265,012. Patented Sept. 26, 1882.

Fig. 3

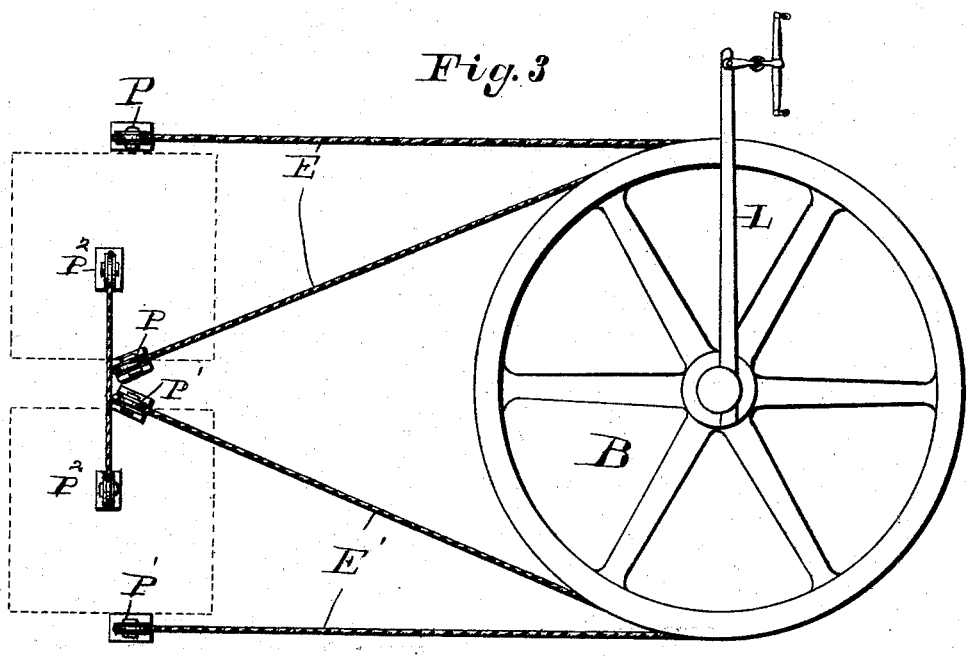


Fig. 6

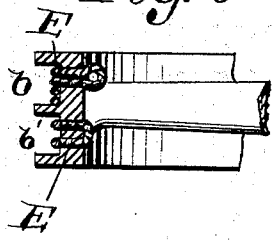
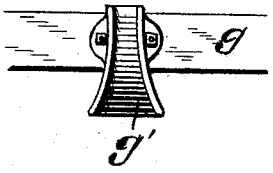


Fig. 7



Attest
R. A. Staley
Frank Johnson

Inventor
John C. Bobzien
BY
A. Hamson
Attorney

UNITED STATES PATENT OFFICE.

JOHN C. BOBZIEN, OF CHICAGO, ILLINOIS.

BRICK-ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 265,012, dated September 26, 1882.

Application filed March 18, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. BOBZIEN, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Elevators for Mortar, Brick, &c., of which the following is a specification.

My invention relates to improvements in elevators, and particularly relates to that class of elevators used for the purpose of elevating building material, brick, mortar, &c., in buildings in process of erection.

The object of my invention is to so improve upon the construction and arrangement of elevators of this class as will render them capable of being easily transported from place to place and readily and quickly adapted to elevate the material to different heights as the building progresses; and my invention consists, first, in a peculiar arrangement of the hoisting-ropes with relation to the platforms by which the guideways or rods heretofore employed are dispensed with; second, in a peculiar construction of the platforms, and, third, in the combination of parts hereinafter fully specified. I attain these objects by the arrangement and combination of the several parts as illustrated in the accompanying drawings, in which—

Figure 1 is a partial sectional elevation of my improved elevator in use. Fig. 2 is a perspective view of the platform detached; Fig. 3, a plan view, showing the arrangement of the ropes. Figs. 4 to 7, inclusive, are detail views, referred to hereinafter.

Similar letters of reference refer to similar parts throughout the several views.

In the drawings, Fig. 1, A and A′ represent respectively the lower and one of the upper stories of a building in which my improved elevator is placed.

D and D′ are the platforms of the elevators.

E and E′ are the hoisting-ropes, which also serve the purpose of guides.

B is a drum on which the ropes E and E′ are wound or unwound for the purpose of raising or lowering the platforms D D′. The drum B is provided on its periphery with two grooves or recesses, *b b′*, in which the ropes E and E′ are respectively wound in opposite directions. The hoisting-ropes E and E′, each of which consists of a continuous piece, are attached at their centers to the periphery of the drum B in the recesses *b b′* by passing through the rim of said wheel and securing them at the other side, as shown in Fig. 6, or in any other suitable manner. The ends are then carried up over pulleys P P′, through the frames of the platforms D D′, which are supplied with suitable pulleys, *p p′*, and from thence up and over the pulleys or wheels *a a′*, supported in a suitable frame, C, at the upper story, A′, of the building, and then down, and connected to the platforms D D′, the surplus rope being wound around a roller, *r*, journaled at each end in the frame of the elevator.

The platforms are connected together by a rope, R, attached to the bottom of each, and passing over pulleys P^2 at the bottom. By this arrangement the guideways or rods heretofore used are dispensed with, the hoisting-ropes serving the double purpose of raising and guiding the platforms, and in adapting the elevator to elevate to different heights as the building in which it is employed progresses it is only necessary to move the frame-work C and let out sufficient rope from the roller *r*. The frame of the platforms I make of two pieces of angle-iron, each of which is made continuous by securing the ends thereof together, the two being connected together at suitable intervals, leaving an open space between, by means of cross-pieces *c*. The floor F′ of the platforms is made separate from the frame F and rests in the center on the bottom part of the frame F, and is supported at each end by U-form braces H, which are made continuous, and hinged at each end to the frame F, the lower or connecting part resting against a batten, *e*, on the bottom of the floor F′. A screw or bolt may be put in each to hold the parts together; but this is not absolutely necessary. Upon removing the floor F′ from the frame F the U-formed braces will swing up to and parallel with the frame F, and thus occupy a small amount of space in moving. The ropes E pass through the space between the angle-irons I I, the rollers *p* being placed as shown in Fig. 4. At the top of the frame F, where the ropes E

come through to join rollers, are placed two small pulleys, *f*, which serve to bring the draft centrally on the platforms D D′.

Secured to cross-pieces *g* of the frame C are small guide pieces or ways *g′*, into which the guide-projections g^2 on the frame F of the platforms enter when nearing the upper extremity of their stroke, and serve to hold the platform steady while loading or unloading.

The rollers *r*, on which the surplus rope E E′ is wound, are supplied at one end with a ratchet, *r′*, as shown in Fig. 5, by means of which the ropes may be held in any position and secured to any degree of tension.

The drum B may be made of any suitable material, and should be very light, so as to be easily moved, and, if desired, can be made of sections. It is to be revolved by a horse hitched to lever L in such a manner that it may turn around and pull in either direction; or it may be revolved in any other suitable manner.

The operation is as follows: The elevator being in its proper position and the ropes E E′ brought to the proper length by rollers *r r*, with one platform up and the other down, as shown in Fig. 1, the drum is revolved in one direction, winding up one set of ropes, as E′, and paying out the other, E, carrying one elevator up and bringing the other down, the platforms being guided in either direction by means of said ropes passing through the frames F, provided with the pulleys *p p′*. As the platforms approach the extremity of their upward stroke the guide-projection g^2 enters into guideways *g′* on the frame C and holds the platform steady while being loaded or unloaded. The platforms are to be held in their relative positions at the top and bottom while being loaded and unloaded by means of an automatic catch, which is to be disconnected when everything is ready for hoisting. This catch is not shown in the drawings, as such catches are common to elevators of this class. If desired, the surplus rope, instead of being wound on the rollers *r r*, may be placed in a suitable manner on the drum B, and the rollers *r* be used merely to tighten it up and secure the proper tension when the platforms are in place.

The advantages of this elevator will be evident. Being composed of but few parts, systematically arranged, it may be readily put in place, quickly and easily adjusted to different heights as the building progresses, and compactly arranged for moving from place to place.

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

1. The hoisting-ropes E and E′, in combination with platforms D D′, having pulleys P P′, substantially as described and shown, and for the purpose set forth.

2. A platform-frame composed of two pieces of angle-iron connected together by cross-pieces, substantially as described and shown, and for the purpose set forth.

3. The hinged braces H, for the purpose set forth, substantially as shown and described.

4. The combination of platform having roller *r* and pulleys P, hoisting-ropes E, and drum B, substantially as shown and described.

5. In an elevator-platform, the combination of the frame F, floor F′, and hinged brace H, substantially as shown and described.

6. The combination of the frame F, composed of two pieces of angle-iron, I I, connected by cross-piece *c*, with floor F′ and hinged brace H, substantially as described and shown.

7. The combination of the platforms D′ and D, hoisting-ropes E E′, connection *g*, ropes R, wheels *a*, pulleys P, P′, and P^2 for drum B, and roller *r*, substantially as described and shown, and for the purpose set forth.

8. The combination, in an elevator, of the horizontal drum B, having grooves *b b′*, pulleys P, P′, and P^2, frame C, having pulleys *a a′*, elevator-frames having pulleys *p p′*, and rollers *r r*, provided with pawls and ratchets, the hoisting-ropes E E′, and the rope R, connecting the elevator-frames, whereby the same are raised and lowered without the employment of fixed guides, substantially as shown and described.

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

JOHN C. BOBZIEN.

Witnesses:
P. A. STALEY,
FRANK JOHNSON.