

(No Model.)

J. MURTAUGH.
DUMB WAITER.

No. 353,458.

Patented Nov. 30, 1886.

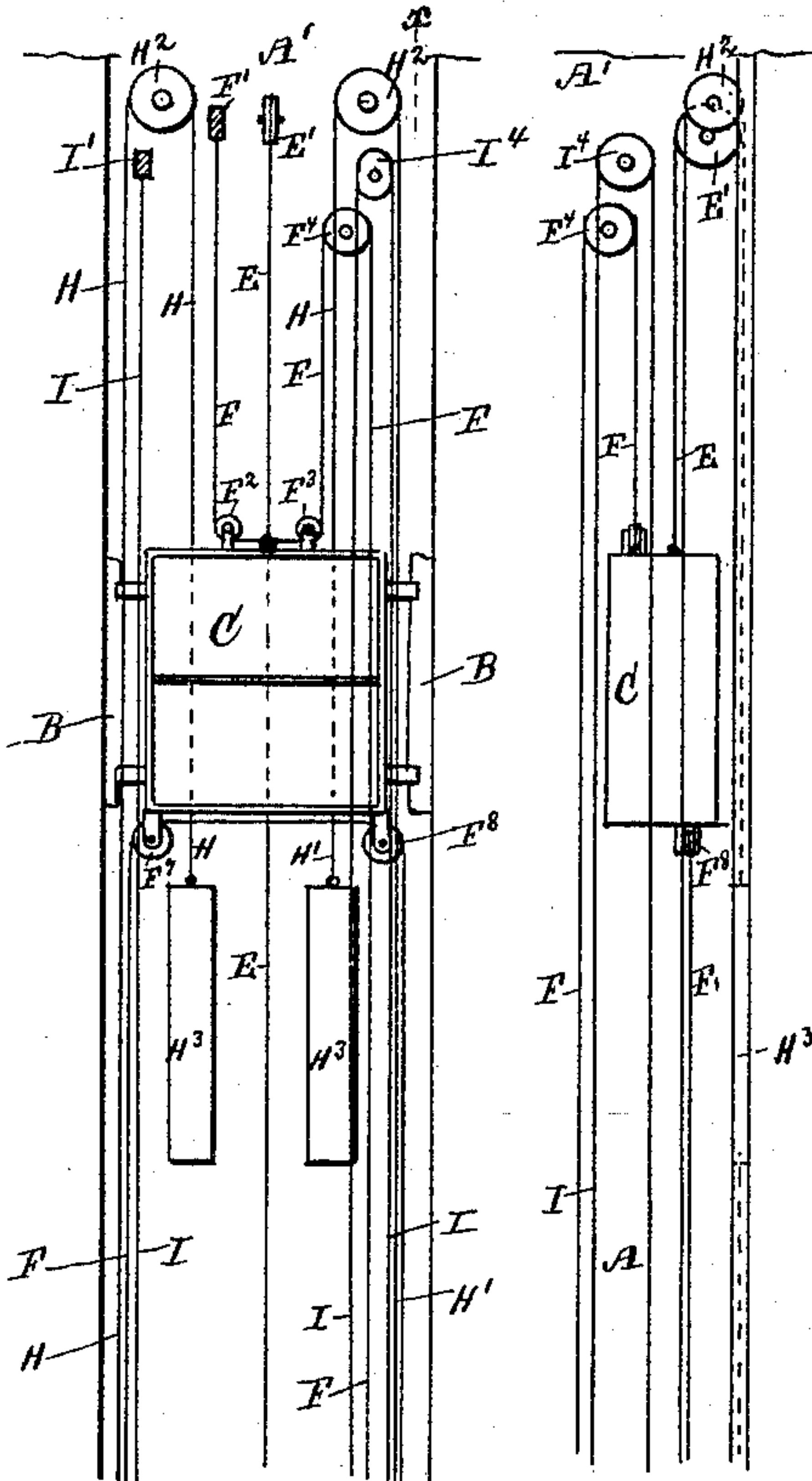


Fig. 1.

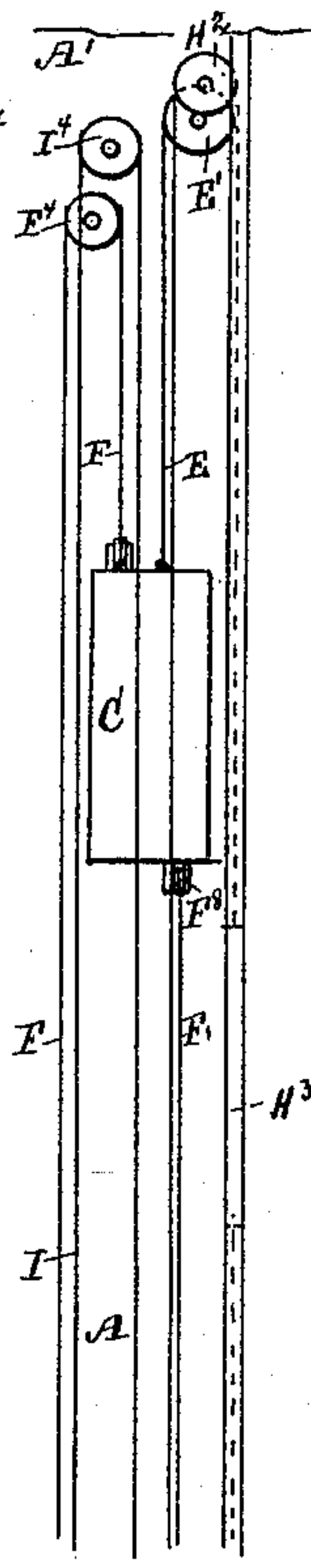


Fig. 2.

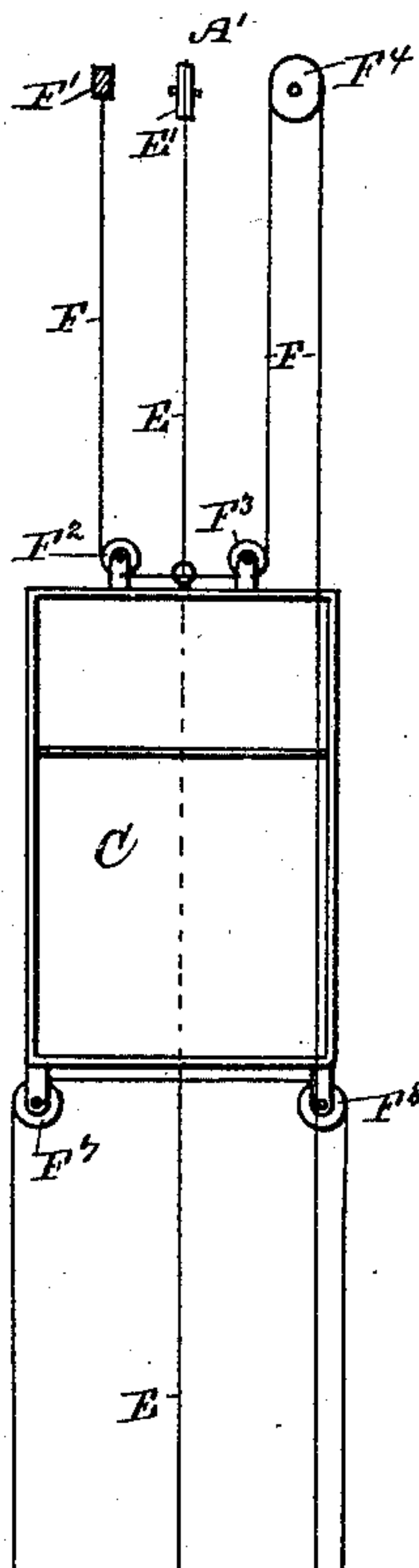


Fig. 3.

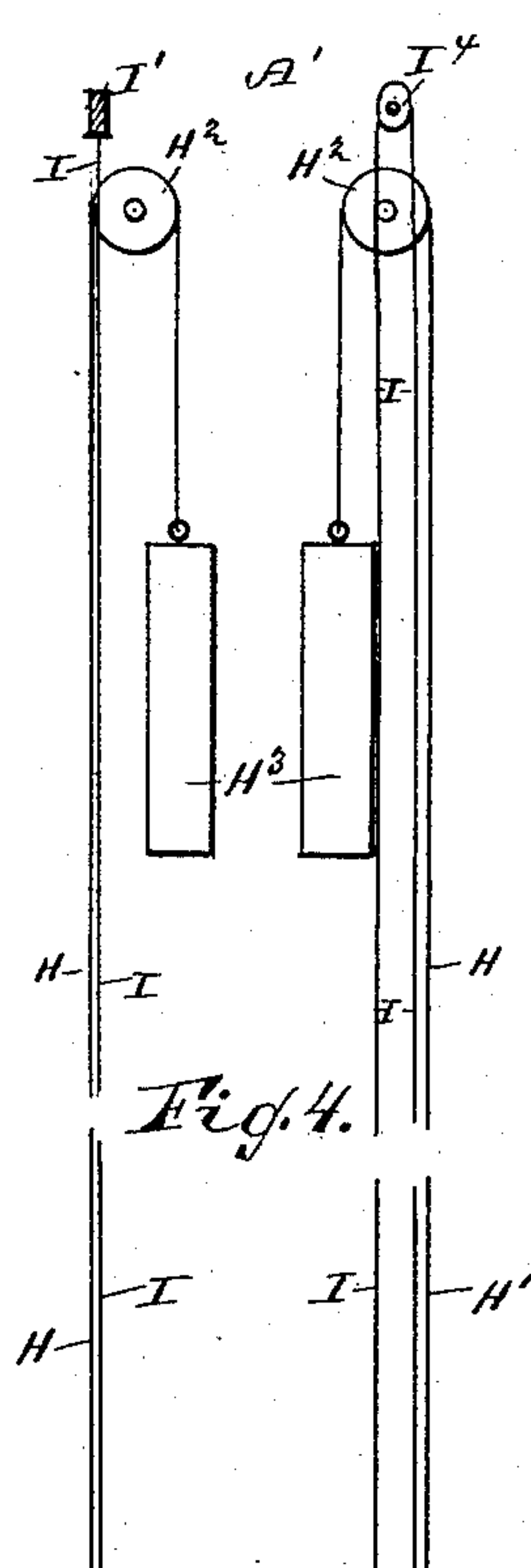


Fig. 4.

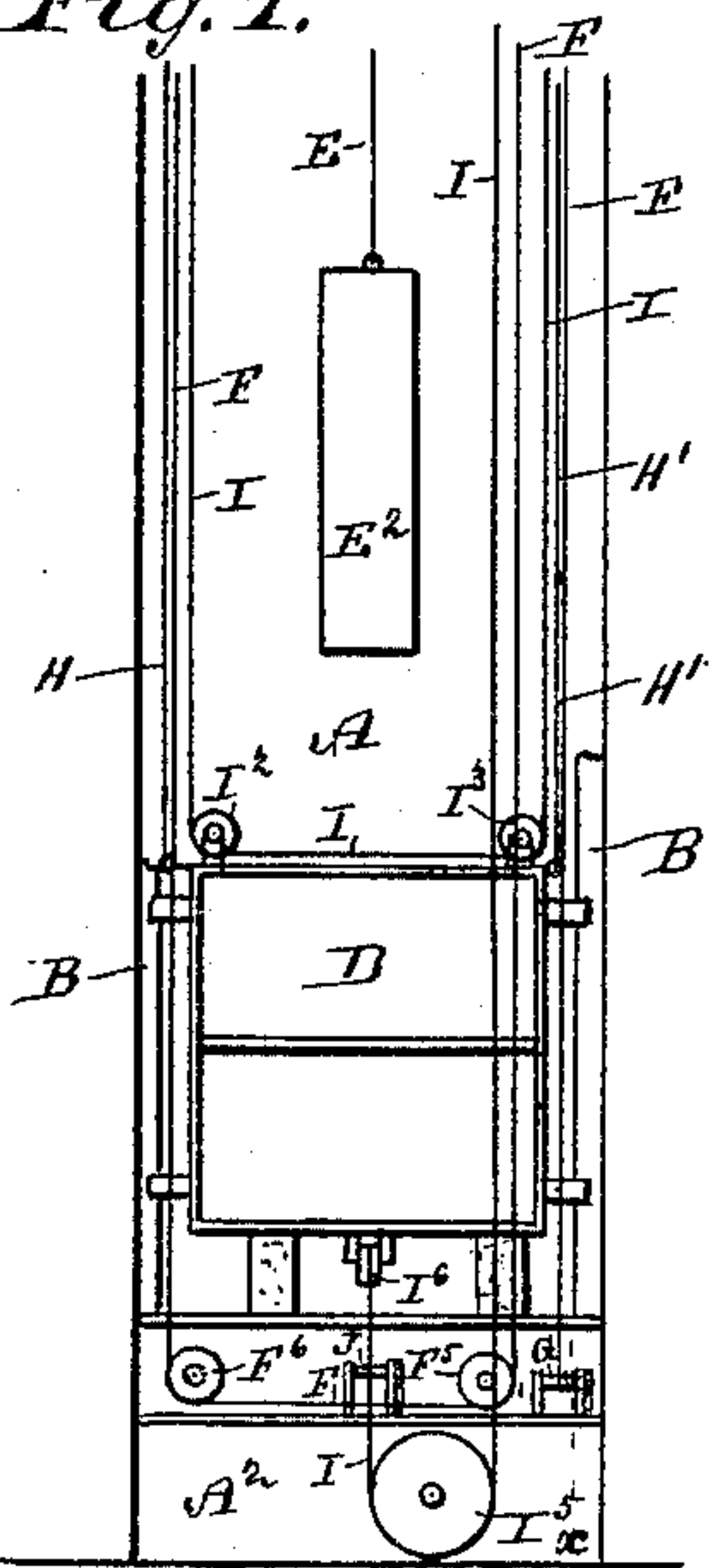


Fig. 5.

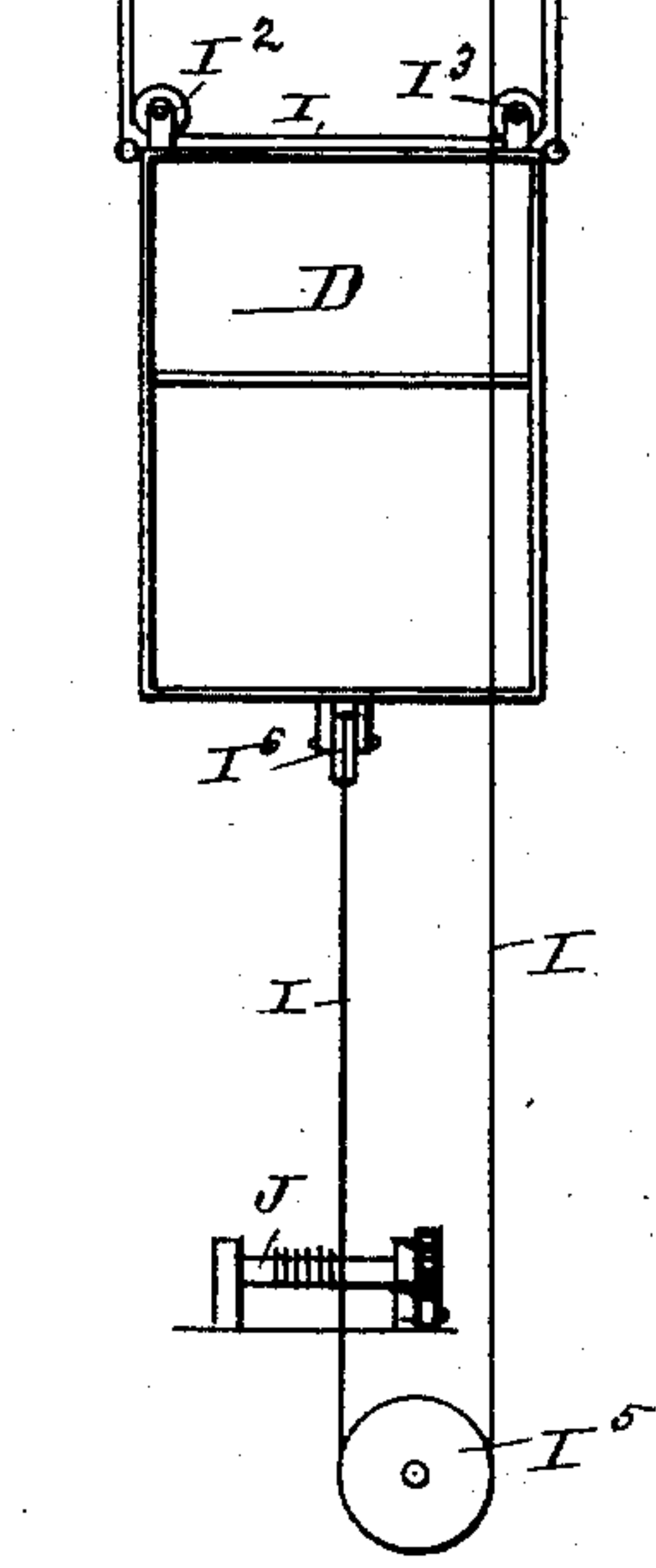
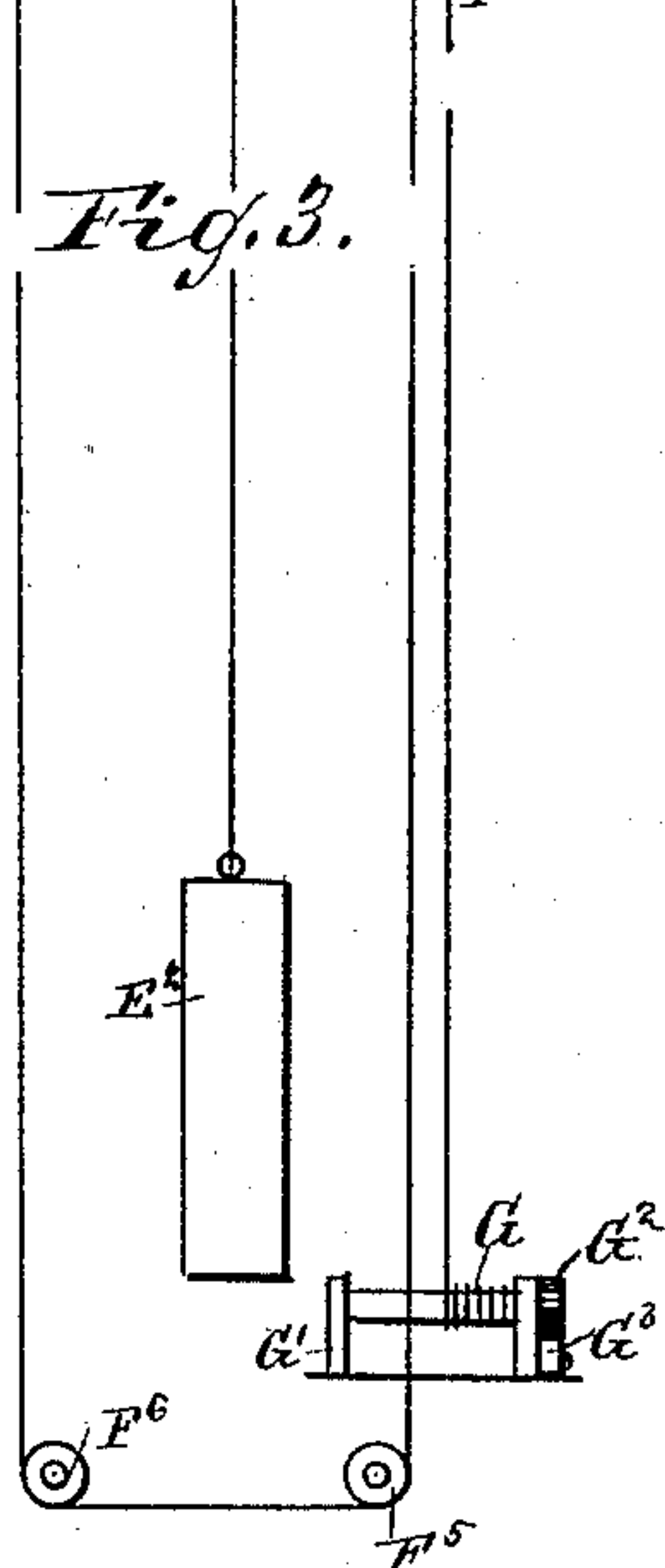
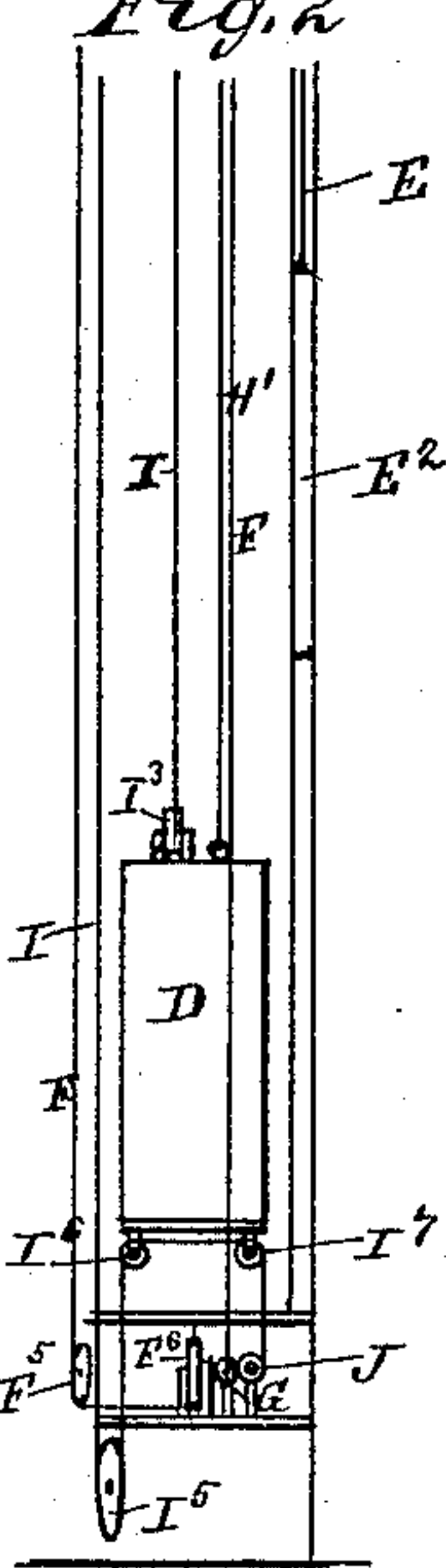
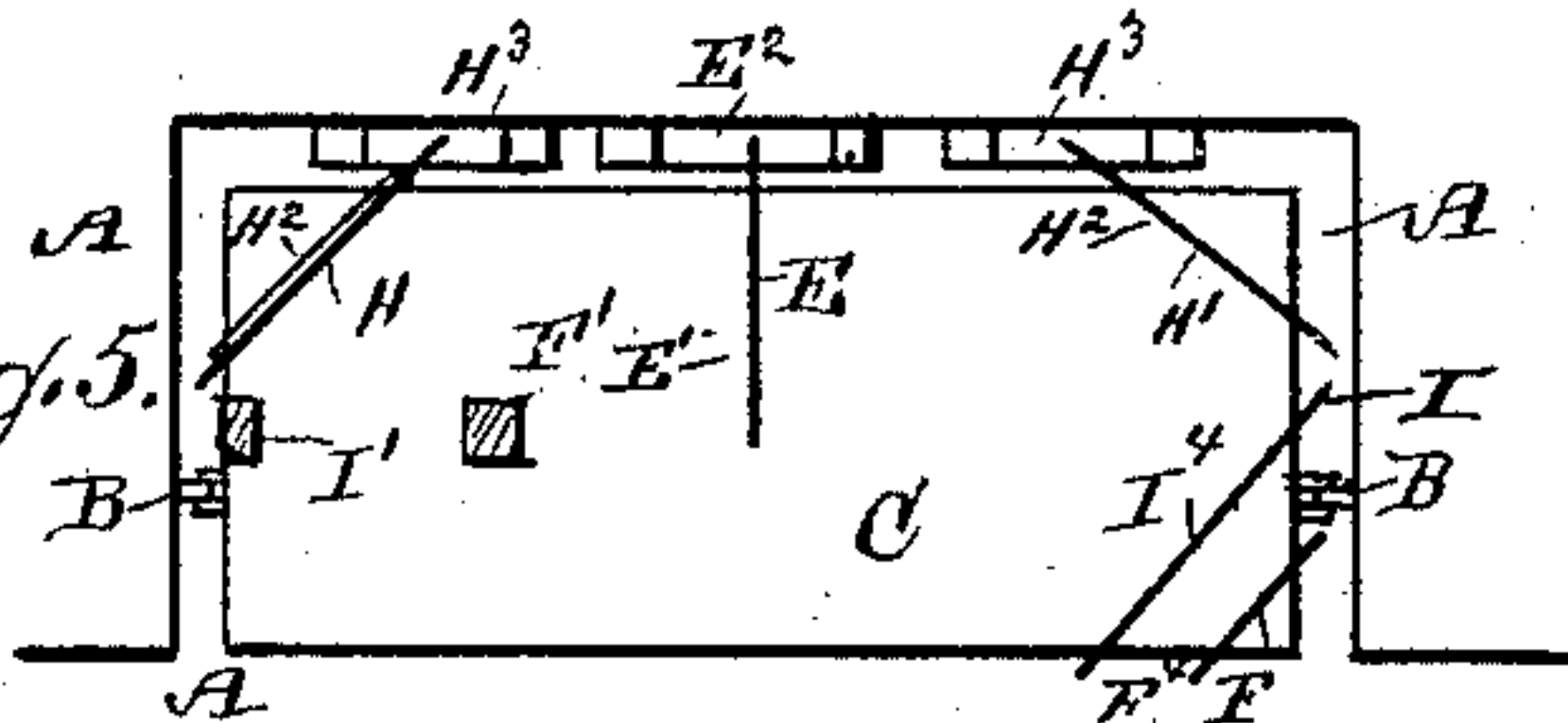


Fig. 8.

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JAMES MURTAUGH, OF NEW YORK, N. Y.

DUMB-WAITER.

SPECIFICATION forming part of Letters Patent No. 353,458, dated November 30, 1886.

Application filed May 14, 1886. Serial No. 202,186. (No model.)

To all whom it may concern:

Be it known that I, JAMES MURTAUGH, of the city, county, and State of New York, have invented a new and Improved Dumb-Waiter, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved dumb-waiter having two carriages running independently of each other in the same shaft without interfering one with the other.

The invention consists of two counterbalanced carriages arranged in the same shaft, one above the other, each provided with means for operating it independently of the other, as hereinafter fully described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of my improvement. Fig. 2 is a vertical cross-section of the same on the line $x x$ of Fig. 1. Fig. 3 is a front view of the upper carriage, its ropes, pulleys, and counterbalance-weights. Fig. 4 is a similar view of the lower carriage and its ropes, pulleys, and counter-weights; and Fig. 5 is a plan view of my improvement.

The shaft A, of the usual construction, is provided on each side with the guides B, on which travel the carriages C and D, placed one above the other, and both being of any approved construction. The upper carriage, C, Fig. 3, is hung on the rope E, which passes upward and over the pulley E', mounted in the top A' of the shaft A, and the rope then passes downward to the rear wall of the shaft A, and is provided on its end with a counter-weight, E², running in suitable guides secured in the rear wall of the shaft A.

The carriage C is raised or lowered by pulling on the rope F, which is fastened by its upper end on the cross-beam F', rigidly secured to the top of the shaft A', and thence passes downward and under the pulleys F² and F³, mounted on the top of the carriage C, and the rope F passes upward and over a pulley, F⁴, mounted on the top of the shaft A. This pulley F⁴ is so arranged that the part of the rope which now passes downward passes in

front of the carriage C, so that it is within convenient reach of the operator. The rope passes down to the bottom box, A², of the shaft and under the pulleys F⁵ and F⁶, mounted in the said box A², and then upward again and over pulleys F⁷ and F⁸, mounted on the under side of the carriage C, and then the rope passes downward from the pulley F⁸, and has its lower end secured to a drum, G, mounted in a frame, G', and provided with the ratchet-wheel G², which engages a pawl, G³. The rope F can be tightened or slackened by turning the drum G, which is held in place after the rope is adjusted by the pawl G³ engaging the ratchet-wheel G².

The lower carriage, D, Fig. 4, is hung on the ropes H and H', one on each side of the carriage, and each passing upward and over a pulley, H², mounted in the top A' of the shaft, and then passing downward, and being provided on its lower end with a counterbalance-weight, H³, which runs at the rear of the carriages C and D in a suitable guide secured to the rear wall of the shaft A. These guides for the counter-weights H³ are placed alongside of the central guide, in which runs the counter-weight E² of the carriage C.

The carriage D is moved up and down by pulling on a rope, I, which has one end fastened to a cross-beam, I', in the top A' of the shaft A, and extends from there downward and over the pulleys I² and I³, mounted on the top of the carriage D, and the rope I then passes upward from the pulley I³ and over a pulley, I⁴, mounted on the top A' of the shaft A, and thence downward again and in front of the carriages C and D and to and under the pulley I⁵, mounted in the box A² in the bottom of the shaft A. The rope I then passes upward and over the pulleys I⁶ and I⁷, mounted on the under side of the carriage D, (see Fig. 2,) and the rope I then passes downward from the last-named pulley, I⁷, and has its lower end fastened to a drum, J, which is similar in construction to and is for the same purpose as the drum G.

It will be seen that each of the carriages C and D is hung and can be operated in the shaft A independently of the other, as each has its own pulleys, pull-rope, weight-rope, and counter-weights, which are so arranged that the

two sets do not interfere with each other, even if both carriages C and D are operated at the same time.

5 The shaft A extends, usually, the length of the lower carriage, D, below the ground floor of the building in which the dumb-waiter is located, so that when the lower carriage is at the bottom of the shaft A the upper carriage, C, can be moved downward to the ground floor, 10 and there be loaded or unloaded and then sent up again to any desired floor. The lower carriage is then moved upward to the ground floor and loaded, and is also sent up to any desired floor. The upper end of the shaft A is simi- 15 larly arranged, so that the lower carriage, D, can be sent to the top floor while the upper carriage is at the top of the shaft A, which is above the top floor. The dumb-waiter may also be arranged so that the upper carriage 20 travels between the upper floor and the second floor, while the lower carriage travels only between the ground floor and the floor below the top floor.

Of course neither of the carriages C or D can 25 pass the other; but they may be run up and down in the shaft A at the same time. The upper carriage is generally used for the upper floors, while the lower carriage is used principally for the lower floors.

30 The shaft A is provided on each floor with

a clamp or any other suitable device by which either of the ropes F or I or either of the carriages C or D can be held in a locked position.

The lower carriage, D, may be provided on top with bumpers of any suitable construction, 35 to prevent serious damage to either carriage in case of a collision caused by careless handling.

The ropes I and F are marked so as to indicate the exact position at any time of either 40 carriage C or D.

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

1. In a dumb-waiter, the combination of a 45 shaft provided with guides with two carriages traveling in the shaft on the said guides independently of each other, and placed one above the other, substantially as shown and described.

2. In a dumb-waiter, the combination, with 50 a shaft, of two counterbalanced carriages arranged in the said shaft one above the other, and means, substantially as described, for operating the said carriages independently of each other, as specified.

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Witnesses:

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