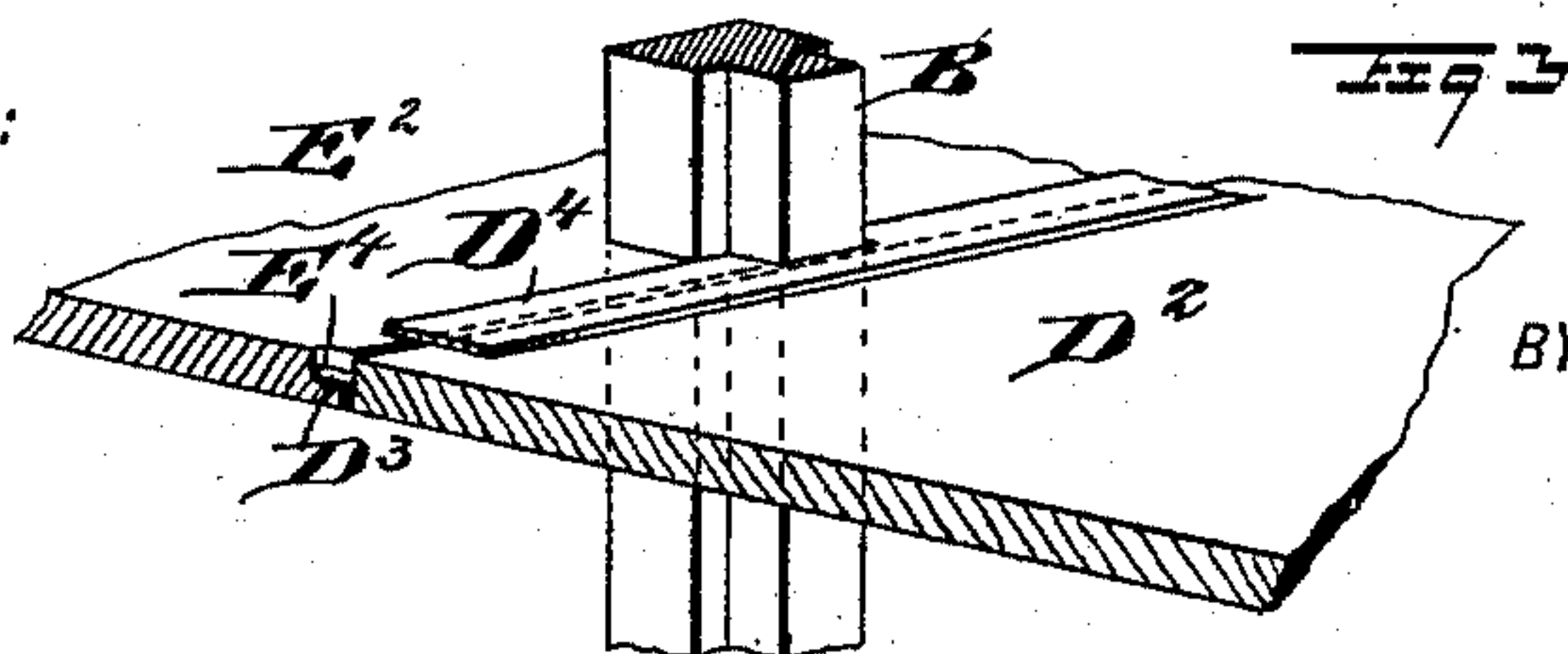
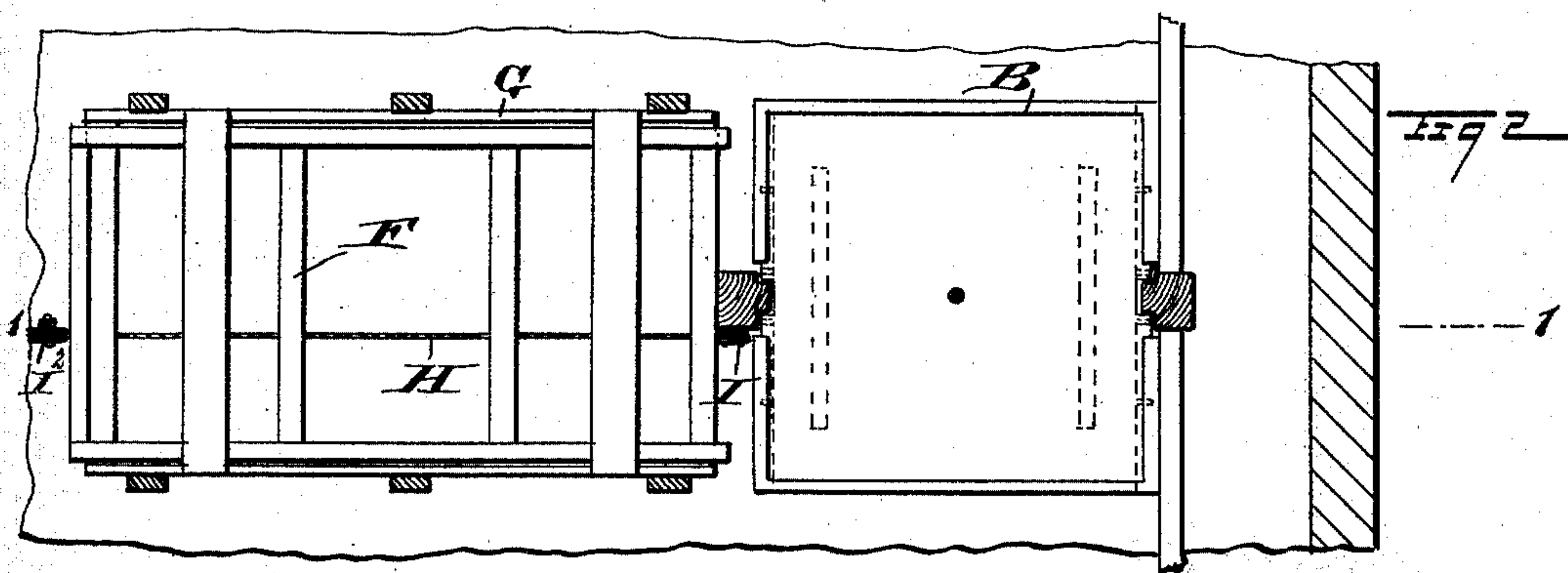
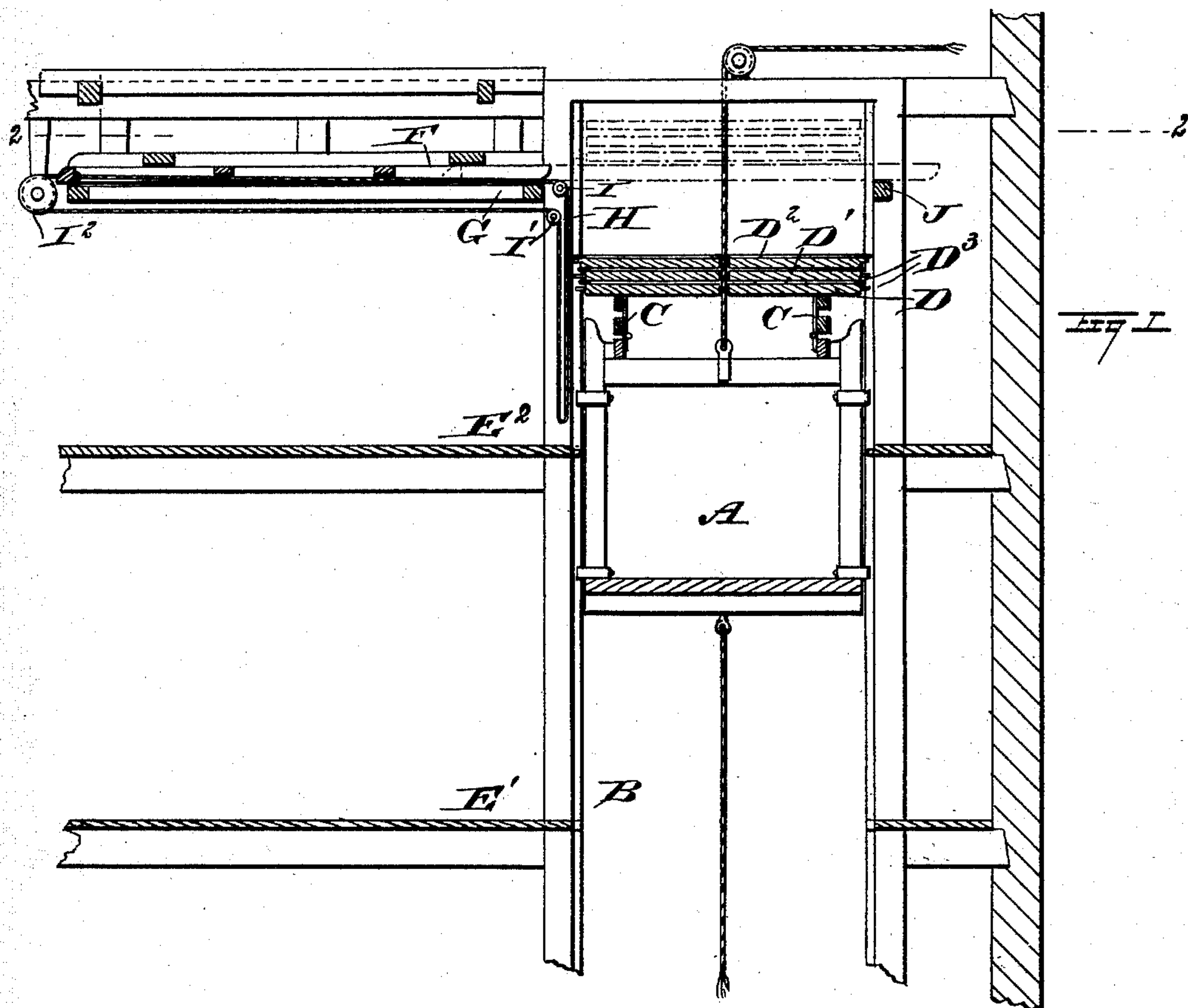


(No Model.)

N. J. BLAGEN.  
DEVICE FOR CLOSING ELEVATOR SHAFTS.

No. 483,416.

Patented Sept. 27, 1892.



**WITNESSES:**

H. Walker  
C. Sedgewick

***INVENTOR***

N. J. Blagen

BY

**ATTORNEYS**



# UNITED STATES PATENT OFFICE.

NIELS J. BLAGEN, OF PORTLAND, OREGON.

## DEVICE FOR CLOSING ELEVATOR-SHAFTS.

SPECIFICATION forming part of Letters Patent No. 483,416, dated September 27, 1892.

Application filed July 6, 1892. Serial No. 439,104. (No model.)

*To all whom it may concern.*

Be it known that I, NIELS J. BLAGEN, of Portland, in the county of Multnomah and State of Oregon, have invented a new and Improved Device for Closing Elevator-Shafts, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved device for closing elevator-shafts which is simple and durable in construction, very effective in operation, and arranged to securely close the shaft at each floor during the time the elevator is not running, so as to prevent the spreading of fire in the building by means of the elevator-shaft.

The invention consists of certain parts and details and combinations of the same, as will be described hereinafter, and then 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 sectional side elevation of the improvement on the line 1 1 of Fig. 2. Fig. 2 is a sectional plan view of the same on the line 2 2 of Fig. 1, and Fig. 3 is a sectional perspective view of part of the improvement.

The elevator carriage or cage A is mounted to travel in the usual manner in the shaft B and carries at its top hinged supports C, adapted to carry a series of platforms D D' D<sup>2</sup>, located one on top of the other and adapted to close the elevator-shaft B at the different floors leading to the elevator-shaft, the said platforms being provided with pins D<sup>3</sup>, adapted to engage corresponding recesses E<sup>4</sup>, formed in the several floors E' E<sup>2</sup>, as will be readily understood by reference to Fig. 3. The pins D<sup>3</sup> of one platform are arranged at different points from those on the other platforms, so that the respective platforms are supported on the recesses E<sup>4</sup> in the corresponding floor E' or E<sup>2</sup>. Each of the platforms may also be provided on its top with flexible strips D<sup>4</sup>, adapted to project beyond each of the platforms, so as to cover up the joint between the floor and platform to prevent all draft.

The several platforms D, D', and D<sup>2</sup> are supported during the time the elevator is running on a carriage F, mounted to slide in suitable bearings G, arranged at one side of

the shaft D, at the extreme upper end thereof. This carriage F is adapted to slide under the lowermost platform D at the time the carriage A is in an uppermost position, the said carriage passing with its sides beyond the ends of the transversely-extending supports C to take hold of the lowermost platform at the ends thereof. (See dotted lines in Fig. 1.)

The carriage F is connected with a rope H, extending from the rear cross-bar of the carriage forward to pass over a pulley I, mounted on one of the running-posts of the shaft B. The rope H then hangs downward on the post for a short distance, so as to be within convenient reach of the operator in the carriage A when the latter is in an uppermost position. The rope H then passes up again over a second pulley I' and then extends horizontally under the bearings G to pass over a pulley I<sup>2</sup> to again connect with the rear cross-bar of the carriage F.

During the time the elevator is running the several platforms D D' D<sup>2</sup> are supported on the carriage F, which is now drawn out across the top of the shaft B and supports on its top the said platforms.

Previous to stopping the elevator for the night the carriage A is run to an uppermost position, with the supports C extended, as shown in Fig. 1, so that the supports engage the under side of the lowermost platform D and lift the same, with the other platforms, over the carriage F. The operator then pulls on the innermost part of the downwardly-hanging rope H, so as to pull the carriage F away from the shaft B back into its bearings G, as shown in Fig. 1, so that the carriage is finally withdrawn from the shaft B. The operator now starts the carriage or cage A downward, whereby the uppermost platform D is first engaged by its pins on the uppermost floor E<sup>2</sup> and supported thereon, while the other two platforms travel farther down with the cage, to be finally deposited at their respective floors, and supported there by their pins, as above described. Thus when the elevator finally comes to a lowermost position the several platforms have been deposited at the corresponding floors, so that the shaft is closed at the floors by the platforms. When the elevator is again started the next day, the carriage A is run up and in its ascent picks up the



several platforms on its supports C and finally carries them to an uppermost position—that is, above the level of the carriage A. The operator then pulls on the front part of the rope 5 H, hanging down on one side of the post, so that the carriage F moves outward into and across the shaft D under the several platforms at the ends of the supports C. The outer end of the carriage F then rests on a suitable 10 cross-piece J, arranged on one side of the shaft B. (See Fig. 1.) The operator then starts the carriage A downward, so that the platforms are supported on the carriage F.

During the day's run of the carriage A the 15 supports C are folded upon the top of the cage to form a cover for the same. When the elevator is to be stopped for the night, the supports are again swung upward and the above-described operation is repeated.

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

1. The combination, with the elevator-car and the hinged supports C on its top, of a series of platforms adapted to be supported 25 within the shaft at the different floors and a carriage mounted to slide in the upper end

of the shaft to support the platforms during the time the elevator is running, substantially as set forth.

2. A device for closing elevator-shafts, comprising a series of platforms adapted to be supported within the shaft at the different floors and a carriage mounted to slide in the upper end of the shaft and adapted to support the said platforms during the time the 35 elevator is running, substantially as shown and described.

3. A device for closing elevator-shafts, comprising a series of platforms adapted to be supported within the shaft at the different floors, and a carriage mounted to slide in the upper end of the shaft and adapted to support the said platforms during the time the 45 elevator is running, and means, substantially as described, for imparting a sliding motion to the said carriage to move the latter under the said platforms and away from the same to support the platforms on the running cage of the elevator, as set forth.

N. J. BLAGEN.

Witnesses:

K. D. HARLOW,  
R. BUCK.