

(No Model.)

F. FRIEDGEN.

DUMB WAITER.

No. 336,046.

Patented Feb. 9, 1886.

FIG. 1.

FIG. 2.

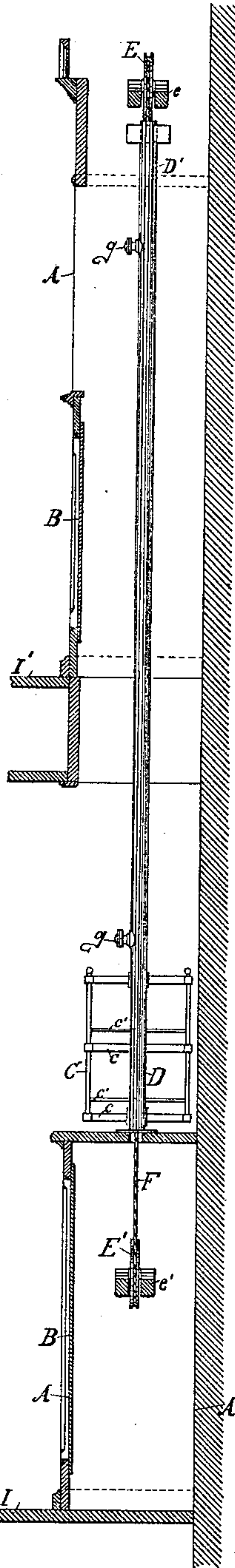
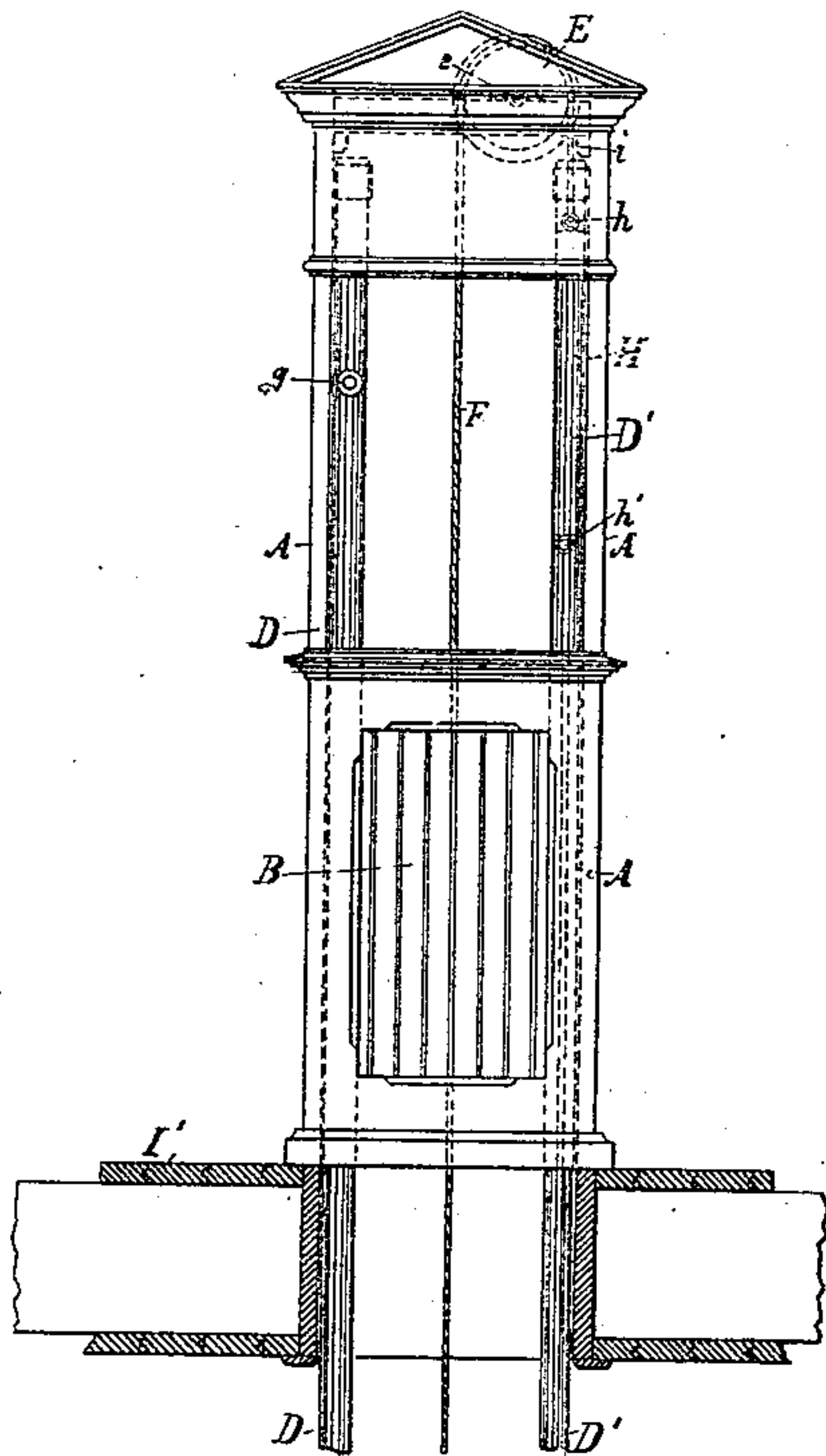


FIG. 3.

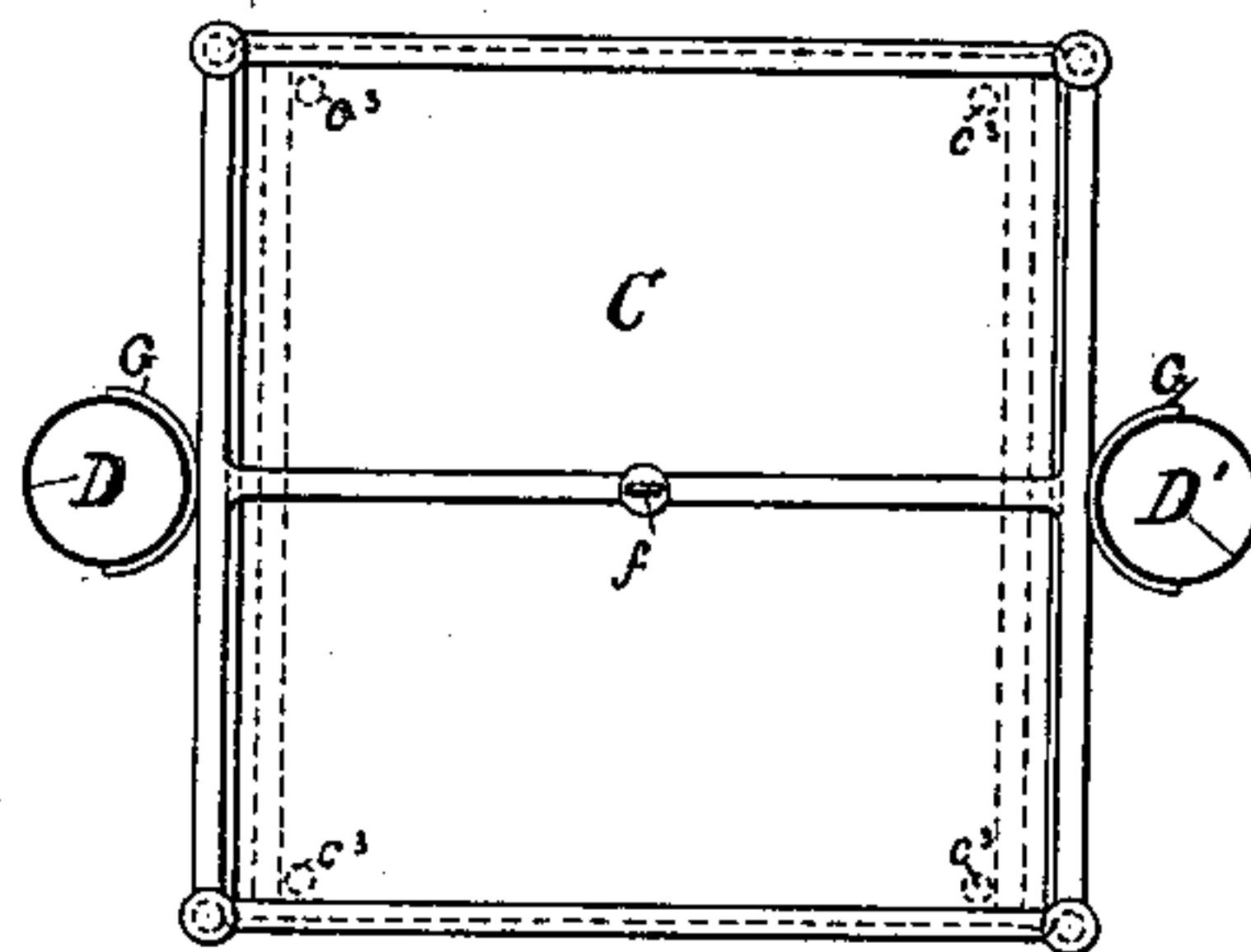
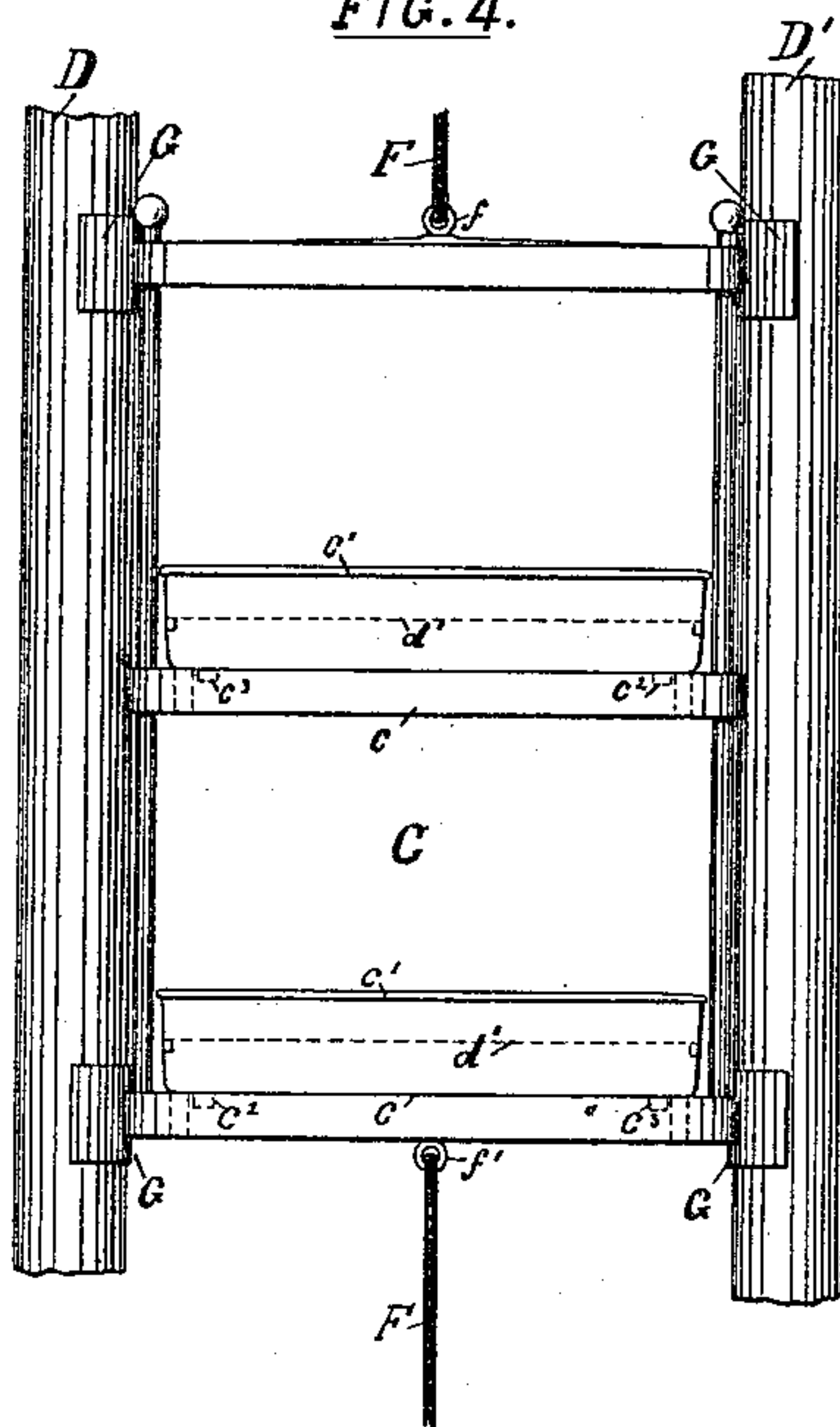


FIG. 4.



WITNESSES:

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FREDRICK FRIEDGEN, OF PHILADELPHIA, PENNSYLVANIA.

DUMB-WAITER.

SPECIFICATION forming part of Letters Patent No. 336,046, dated February 9, 1886.

Application filed December 24, 1885. Serial No. 186,650. (No model.)

To all whom it may concern:

Be it known that I, FREDRICK FRIEDGEN, of the city and county of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Dumb-Waiters, of which improvements the following is a specification.

My invention relates, generally, to elevating apparatus of the class known as "dumb-waiters," capable of being operated by hand-power and susceptible of use in dwellings and other places for raising and lowering comparatively light weights; and it consists of certain novel features in the construction and arrangement of a car provided with curved guide-plates rigidly attached to the sides thereof, and fitting around a portion of the cylindrical surfaces of two tubes secured within the main casing, preferably made of seamless brass, and in which one of these tubes is used for the purpose of allowing of the free movement therethrough of a counter-weight, holding the car firmly while loading or unloading, and each end thereof attached to an endless rope or cable secured to the top and bottom of the car, and passing over pulleys held in suitable bearings within the main casing at the top and bottom of the structure, while the other tube is utilized for performing the function of an ordinary speaking-tube, by which combined arrangement a neat and compact dumb-waiter is obtained, and one which may be operated with an expenditure of comparatively little power in comparison with that heretofore required for such apparatus, the construction, arrangement, and operation of which apparatus will be hereinafter more particularly described, and pointed out in the claim.

In the accompanying drawings, illustrating my invention, Figure 1 is a front elevation, partly in section, of my improvements. Fig. 2 is a side elevation of the same. Fig. 3 is a top view of the car, showing the brass tubes serving to guide the car in its movement upward and downward, and one of them for allowing the counter-weight to travel in, and the other for use as a speaking-tube; and Fig. 4 is a side elevation of the car on an enlarged scale, showing sections of the tubes.

Parts appearing in more than one figure are

represented by the same reference-letters in all of them.

Referring to the drawings, A represents the main case or frame-work inclosing the operative parts and mechanism of the apparatus. This case A extends upward through as many stories of a building as may be required, and is provided with suitable doors, B—such as shown, for example, in Fig. 1—to permit of access being had to the car for loading or unloading the same. Rigidly secured in any suitable manner to the interior sides of the main casing A are two cylindrical tubes, D and D', preferably made of seamless brass metal, extending the entire length of the structure, and of such size as may be required.

E is a single-groove pulley secured in suitable bearings, *e*, within the main case A, at the top thereof, and E' is a single-groove pulley secured in a similar manner in bearings *e'* in the lower part of said main case A.

C is a car, of any suitable light construction, and having therein a varying number of shelves, *c*, upon which are trays *c'*, provided with lugs *c''*, cast upon their bottoms and fitting into recesses *c'''*, formed in the shelves *c*, which firmly hold the trays *c'* in position. These trays are provided with perforated false bottoms *d'*, allowing liquids contained in glasses or other receptacles spilling while being elevated to drain through these perforated plates *d'* into the bottom of the trays, and thus permitting of the easy removal of the trays without in the least damaging whatever may be upon the remaining shelves of the car C. Upon the exterior sides of the car, preferably at the four corners thereof, are secured curved guides G, loosely fitting around a portion of the cylindrical surface of the seamless brass tubes D and D', and, while holding the car in position, permitting of its free movement upward and downward between these tubes.

Rigidly attached to the outside of the car C, at the top and bottom, near or in the center thereof, are eyes *f* and *f'*, to which the endless rope or cable F is secured, passing over the pulley E in the upper interior part of the main frame A to the counter-weight H, provided with eyes *h* and *h'* in each end thereof, for the attachment thereto of this endless rope or cable F, and which counter-weight H trav-

els freely upward and downward within the tube D' as the car C is raised and lowered by hand-power from the respective floors I and I'. To the interior of the main casing A, a short distance below the pulley E, is provided a stop, i, which prevents the counter-weight H from coming in contact with said pulley, or the endless rope or cable from becoming disengaged.

10 The tube D is provided with suitable mouth-pieces, g, at convenient distances apart on the respective floors, for use as a speaking-tube, and which will be so well understood by reference to Fig. 1 as not to demand any further description thereof.

15 The operation of my improved apparatus may be explained in the following manner:

The car C, in the position shown in Fig. 1, being required upon the second floor, I', by opening the door B the car may be readily elevated by hand-power through the movement of the cable or rope F, which causes this endless rope to pass freely upward over the pulley E, and the counter-weight to travel downward within the tube D', and the rope or cable F to be drawn upward from below over the pulley E', and thereby elevating the car to the position desired.

This entire structure, as is well understood,

will be generally built within the walls of dwellings or other places, and the only part exposed to view would be the doors opening into the same from the respective floors; or, if so desired, it may be built in any part of a building, and the casing (surrounding the parts and mechanism for the operation of the same) suitably ornamented.

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

As an improvement in dumb-waiters, a car, substantially such as described, provided with curved guides fitting partially around the cylindrical surfaces of two tubes secured within the main casing, through one of which tubes the counter-weight attached at its respective ends to an endless rope or cable passing over pulleys travels, while the other is used as a speaking-tube, substantially as and for the purposes set forth.

In testimony that I claim the foregoing as my invention I have hereunto set my signature in the presence of two subscribing witnesses.

FREDRICK FRIEDGEN.

Witnesses:

HERMANN BORMANN,
WALTER S. GIBSON.