(No Model.) 3 Sheets—Sheet 1.

W. WILLIAMS & P. McMORROW.

DUMB WAITER.

No. 600,759. Patented Mar. 15, 1898.

Fig. 1.

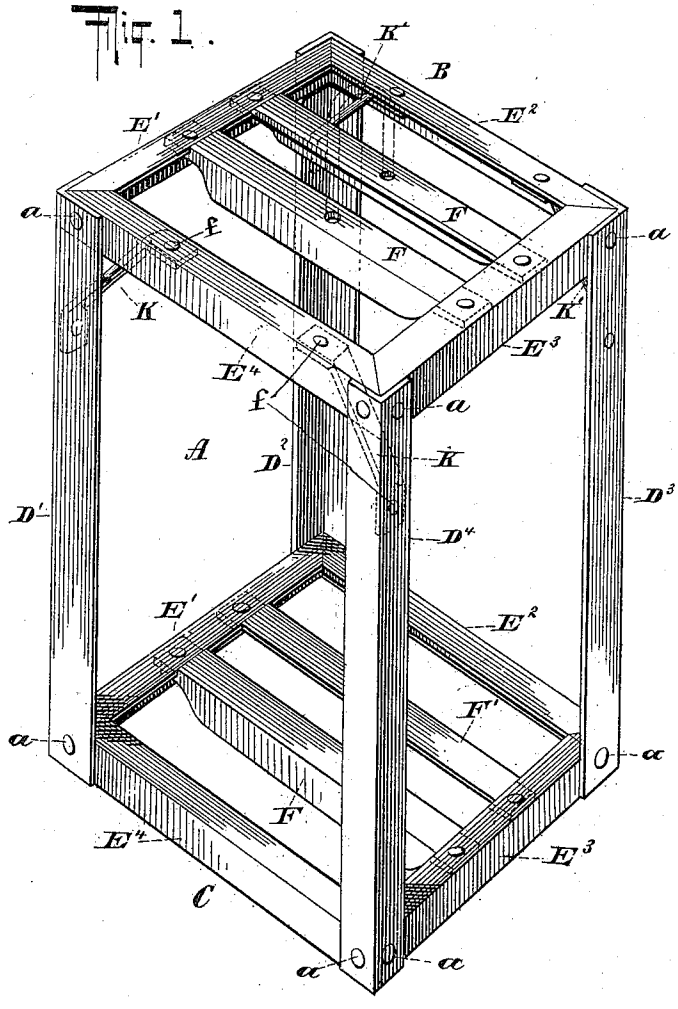
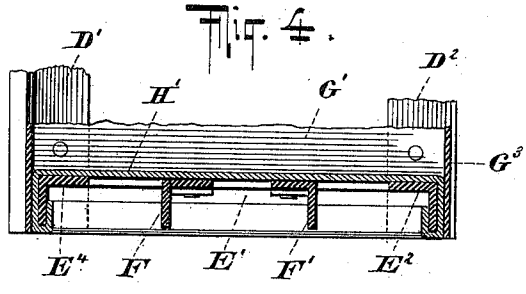


Fig. 4.



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Fig. 2.

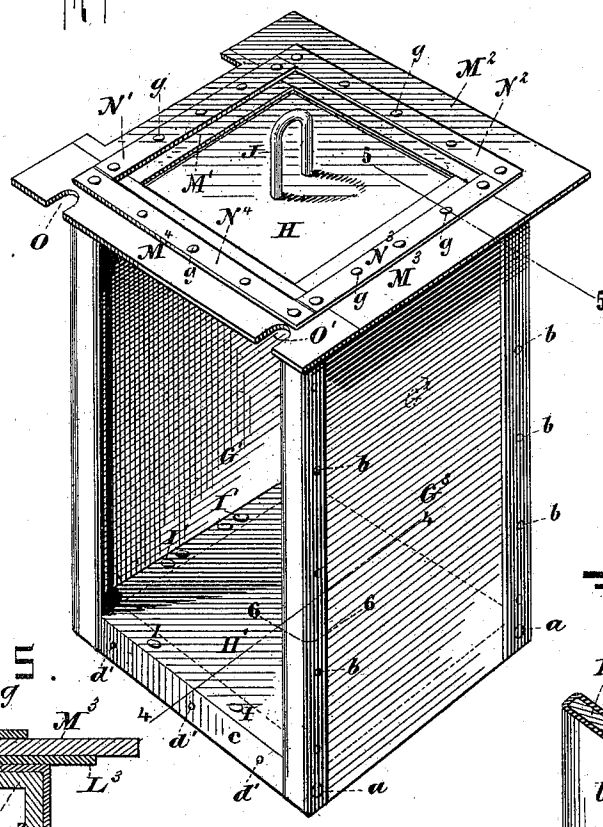


Fig. 6.

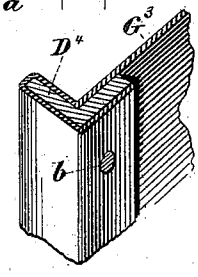


Fig. 5.

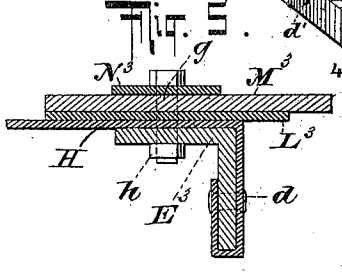
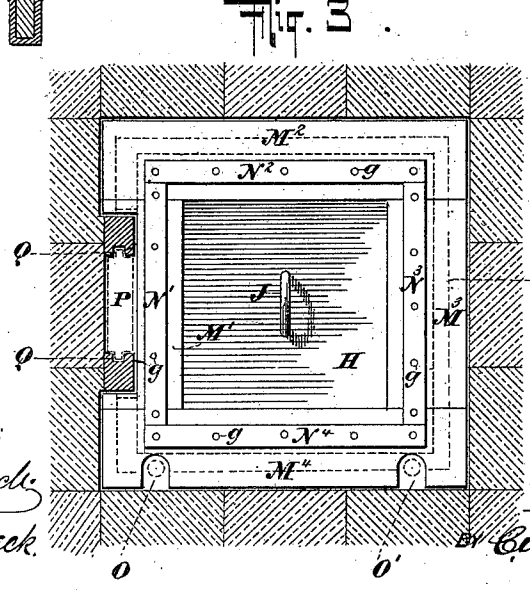


Fig. 3.



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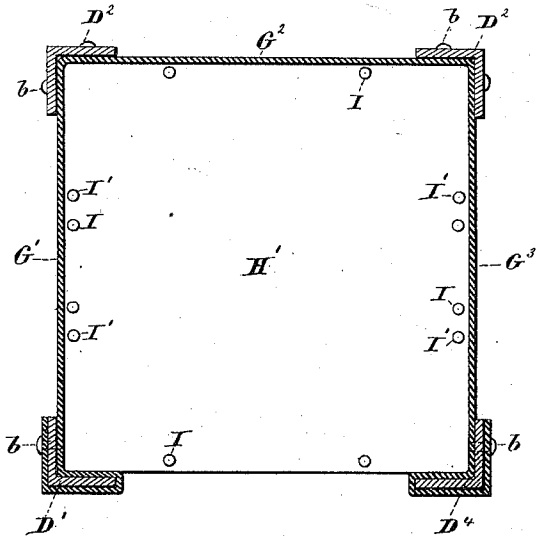
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W. WILLIAMS & P. McMORROW.

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Fig. 7.



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UNITED STATES PATENT OFFICE.

WILLIAM WILLIAMS AND PATRICK McMORROW, OF NEW YORK, N. Y.

DUMB-WAITER.

SPECIFICATION forming part of Letters Patent No. 600,759, dated March 15, 1898.

Application filed August 10, 1897. Serial No. 647,693. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM WILLIAMS and PATRICK MCMORROW, citizens of the United States, residing at the city of New York, in the county and State of New York, have invented certain new and useful Improvements in Dumb-Waiters, of which the following is a full, clear, and exact specification.

Our invention relates to hoisting apparatus, and has for its objects more particularly to provide a dumb-waiter car for residences, apartment-houses, &c., which will not only withstand fire, but will also serve to materially reduce the draft in the shaft, so as to prevent fire from working its way rapidly upward into the building by way of same.

The objects above set forth we are enabled to accomplish by means of our invention, which consists in the novel details of construction and in the combination, connection, and arrangement of parts hereinafter more fully described, and then pointed out in the claims.

In the accompanying drawings, forming part of this specification, wherein like letters of reference indicate like parts, Figure 1 is a perspective view showing the construction of the car-frame set together without its sheet-metal covering. Fig. 2 is a perspective view of a complete car constructed according to and embodying our invention. Fig. 3 is a top or plan view of the car, showing the same in position within the shaft. Fig. 4 is a transverse section of the base of the car, taken on the line 4 4 of Fig. 2. Fig. 5 is an enlarged detail section taken on the line 5 5 of Fig. 2. Fig. 6 is a similar view taken on the line 6 6 of Fig. 2, and Fig. 7 is a horizontal section of the car.

In said drawings, A designates the car-frame, consisting of the reinforced rectangular top and base frames B and C and the vertical connecting angle-iron sections D' D^2 D^3 D^4. The top frame B and base-frame C are substantially alike, and are composed of the angle-irons E' E^2 E^3 E^4, having their horizontal surfaces uppermost and their ends mitered and secured together with the ends of the angle-iron connecting-sections D' D^2 D^3 D^4 by bolts or rivets *a*.

F F′ denote the horizontal connecting sections or braces, having their ends partly cut away and swaged down and riveted to the under side of the horizontal surfaces of the top and base frame sections E' E^3, said horizontal connecting-sections F F′ likewise being secured in position, with the edges of their horizontal surfaces facing each other and their horizontal surfaces uppermost and in the same plane with horizontal surfaces of the angle-irons E' E^2 E^3 E^4 of the top and base frames. A sheet of metal of suitable form and thickness, bent to form the three sides G' G^2 G^3, is disposed within the vertical connecting-sections D' D^2 D^3 D^4 and the ends of the sides G' and G^3 bent outwardly and then back upon the outer surfaces of the vertical connecting-sections D' D^4, as shown in Figs. 6 and 7, and the whole covering then secured to the frame by rivets *b*.

H H′ denote the coverings for the top and base frames B and C, respectively, these coverings being placed upon the frames B and C so as to be supported upon the horizontal surfaces of the angle-irons constituting the frames and having their edges *c* bent downwardly over the vertical surfaces of said angle-irons and then rearwardly and up behind the same, and the whole then firmly secured to the frames by means of bolts I I′ and rivets *d d′*.

At the top of the car is a loop-bolt J, having its ends threaded and passed through openings in the covering H and the horizontal connecting-sections F F′ and secured in position beneath the horizontal surfaces of said sections F F′ by nuts, and K K′ denote diagonal corner-braces having their upper ends secured to the top frame B and their lower ends to the vertical connecting-sections D' D^2 D^3 D^4 by means of bolts or rivets *f* for the purpose of giving additional rigidity to the structure.

Along the edges of the car at its top are arranged metal supporting-strips L' L^2 L^3 L^4, which project a short distance beyond the outline of the car-body. Upon these supporting-strips are disposed flexible strips M' M^2 M^3 M^4, made of rubber, asbestos, or other suitable material, which project beyond the edges of the supporting-strips and almost touch the sides of the shaft adjacent to the car, as shown at Fig. 3. The metal supporting-strips

and the flexible strips are secured in position upon the top of the car by means of narrow metal strips N' N^2 N^3 N^4, disposed upon the flexible strips, and bolts g g, passing through said strips N' N^2 N^3 N^4, the flexible strips, the supporting-strips, and the top of the car and then secured beneath the horizontal portions of the angle-irons E' E^2 E^3 E^4 by means of nuts h h.

The metal supporting-strip and the flexible strip, secured at the front edge of the car, are provided with recesses O O', sufficiently large to accommodate the hoisting and lowering ropes, and one of the supporting-plates and flexible strips at one side of the car are partly cut away to accommodate the balance-weight P and the guides Q therefor, secured to one side of the shaft.

It will be observed that by means of the construction shown and described the car-body proper will serve as a fire-break and that by means of the apparatus applied to the top thereof the space intermediate the sides of the car and the shaft will be substantially closed, thus preventing a draft from carrying the fire upwardly into the building.

It is obvious that where the balance-weight guides are wider than herein described, and shown in the drawings, one of the flexible strips and the supporting-strip therefor may be dispensed with at one side of the car and that where the arrangement of the openings in the shaft, whereby access may be had to the car, is such as to require the car to be open at more than one side the same may be easily accomplished without materially altering the construction shown and described.

Without limiting ourselves to the details of construction, which may be varied within the scope of the invention, what we claim, and desire to secure by Letters Patent, is—

1. The combination with a shaft and car working therein, of flexible strips secured to said car and projecting horizontally beyond the outline thereof, and means interposed between the car and said flexible strips for maintaining said flexible strips to their horizontal position to close the opening intermediate the sides of the car and shaft, substantially as specified.

2. The combination with a shaft and car working therein, of flexible strips secured to said car along the edges thereof and projecting outwardly therefrom, and means interposed between the car and said flexible strips for supporting said flexible strips in their horizontal position beyond the outline of the car to close the opening intermediate the sides of the car and shaft, substantially as specified.

3. The combination with a shaft and car working therein, of flexible strips, secured to the top of the car along its edges and arranged to project outwardly from said car, with their outer edges corresponding in outline with the general outline of the shaft in cross-section, non-flexible strips disposed upon the top of the car beneath the flexible strips, and arranged to project outwardly beyond the outline of the car, and within the outline described by the outer edges of the flexible strips to support said flexible strips in the horizontal position, substantially as specified.

4. The combination with a shaft and car working therein, of rubber strips arranged upon the top of the car along its edge and projecting horizontally therefrom beyond the outline of the car, of non-flexible supporting-strips disposed upon the top of the car beneath the rubber strips, and projecting beyond the outline of the car but within the outline described by the outer edges of the rubber strips, and metal strips disposed upon the rubber strips along their inner edges, and bolts passing through said metal, rubber, and supporting strips, and the top of the car, provided with nuts secured to the ends thereof upon the inner side of the car, substantially as and for the purposes set forth.

5. A dumb-waiter car comprising the top and base composed of angle-iron sections having their horizontal portions uppermost, and sheet-metal coverings secured thereon, and angle-iron connecting-sections uniting said top and base and provided with sheet-metal sides secured thereto, and to the top and base, substantially as specified.

6. A dumb-waiter car-body frame comprising top and base frames composed of angle-iron sections united at their ends with their horizontal surfaces uppermost, horizontal connecting-sections secured to said top and base frames with their horizontal surfaces uppermost, and vertical connecting-sections having their ends secured to the top and base frames at the corners thereof, substantially as specified.

7. A dumb-waiter car comprising the top and base composed of angle-iron sections E', E^2, E^3, E^4, having their horizontal portions uppermost, horizontal connecting-sections F, F' having their ends secured to the under sides of the horizontal portions of the angle-irons E', E^3, and their horizontal portions in the same plane with those of the sections E', E^2, E^3, E^4, sheet-metal coverings H, H', disposed upon the horizontal portions, and secured to the vertical portions of the sections E', E^2, E^3, E^4, angle-iron connecting-sections D', D^2, D^3, D^4 having their upper and lower ends secured respectively to the corners of the top and base, and sheet-metal sides G', G^2, G^3 secured to said connecting-sections D', D^2, D^3, D^4, and the top and base frame sections E', E^2, E^3, E^4, substantially as specified.

Signed at the city of New York, in the county and State of New York, this 17th day of July, 1897.

WILLIAM WILLIAMS.
PATRICK McMORROW.

Witnesses:
A. J. KEHLENBECK,
W. H. LAW.