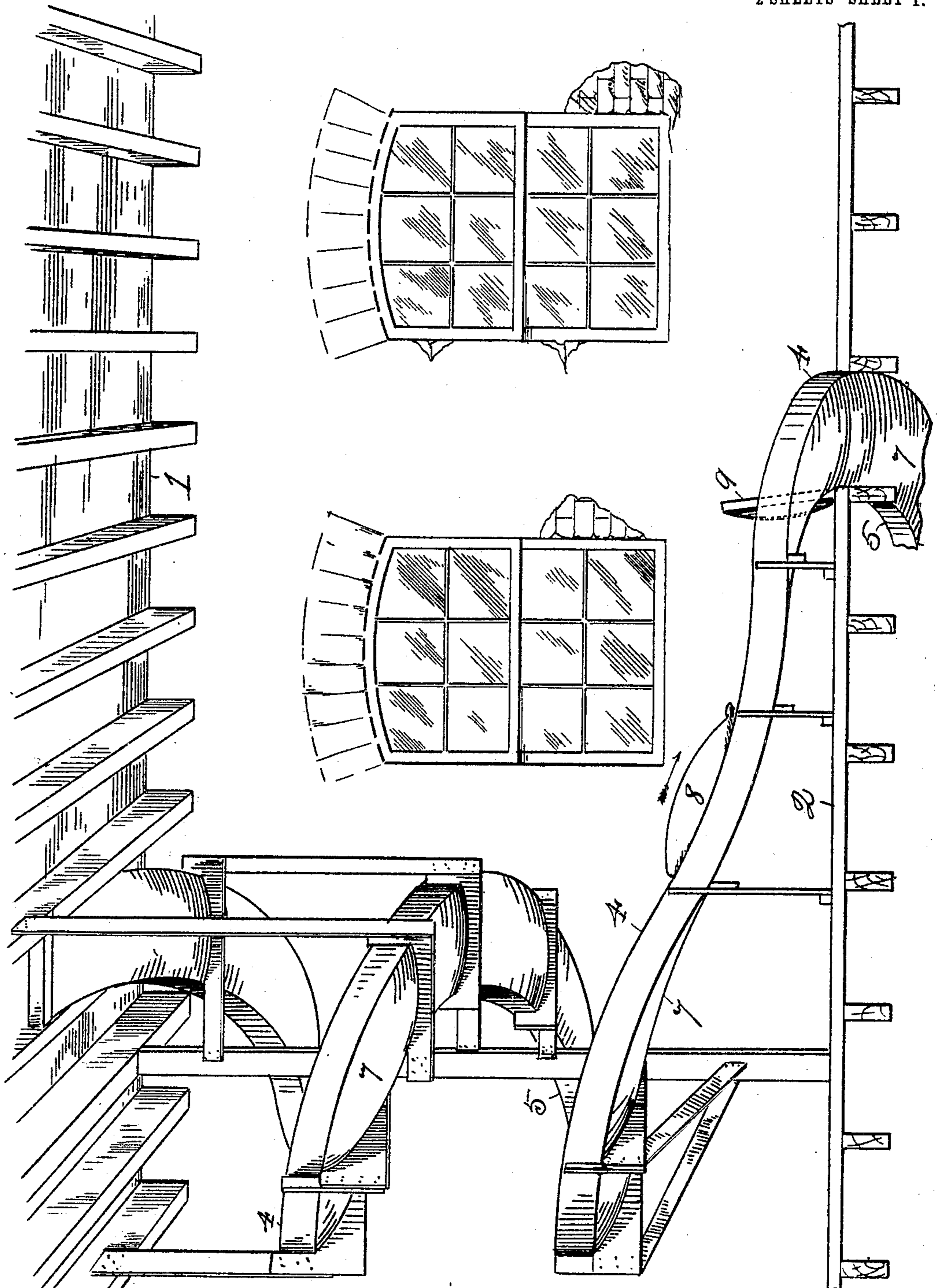


No. 798,323.

PATENTED AUG. 29, 1905.

C. F. CORMACK.
CHUTE FOR MERCHANDISE.
APPLICATION FILED MAR. 30, 1905.

2 SHEETS—SHEET 1.



Witnesses:
Arthur V. Slee
Elmer Wicker.

Fig. 1.

Inventor:
Charles F. Cormack,
by J. Richards & Co. Attys.

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2 SHEETS—SHEET 2.

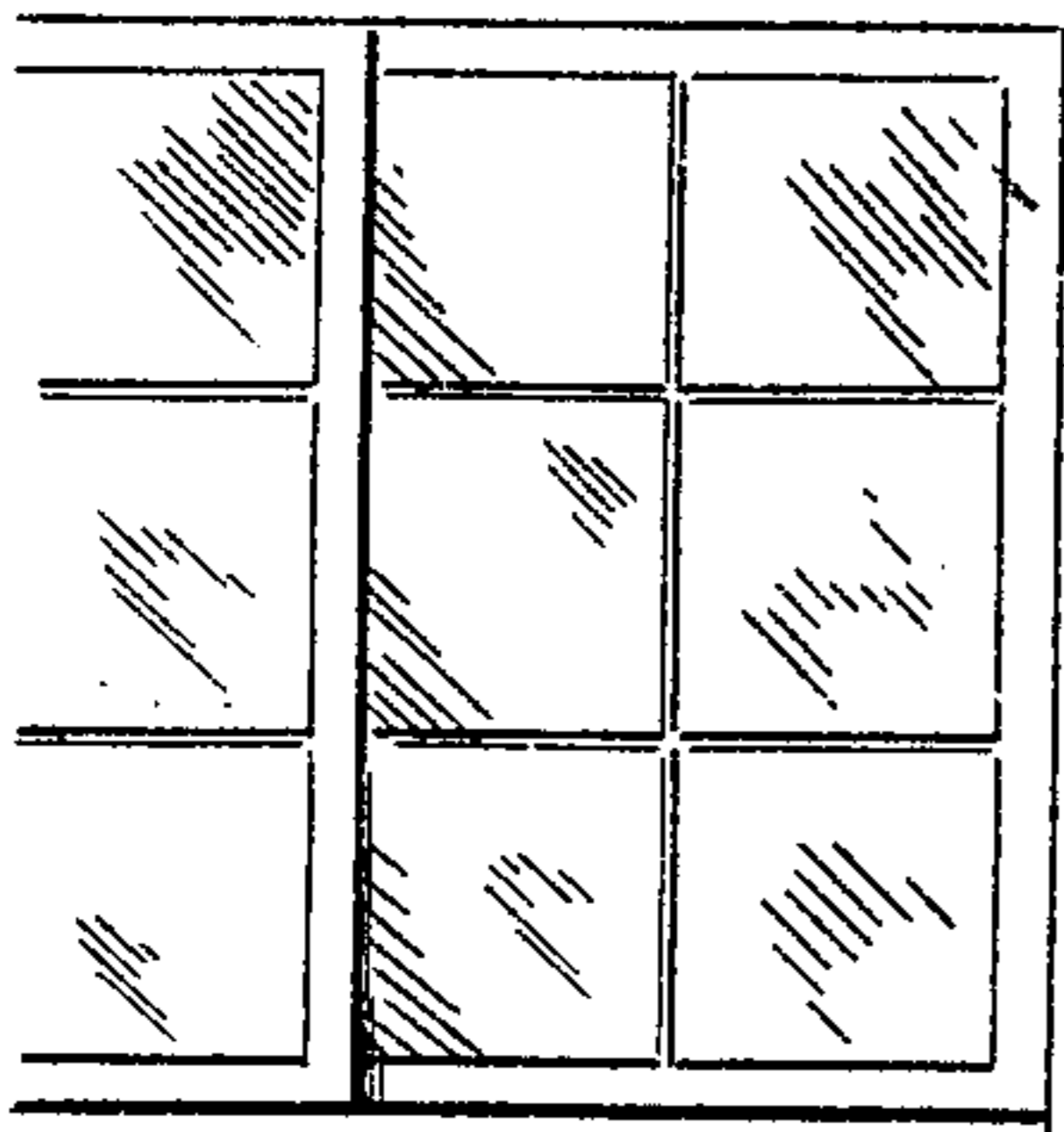
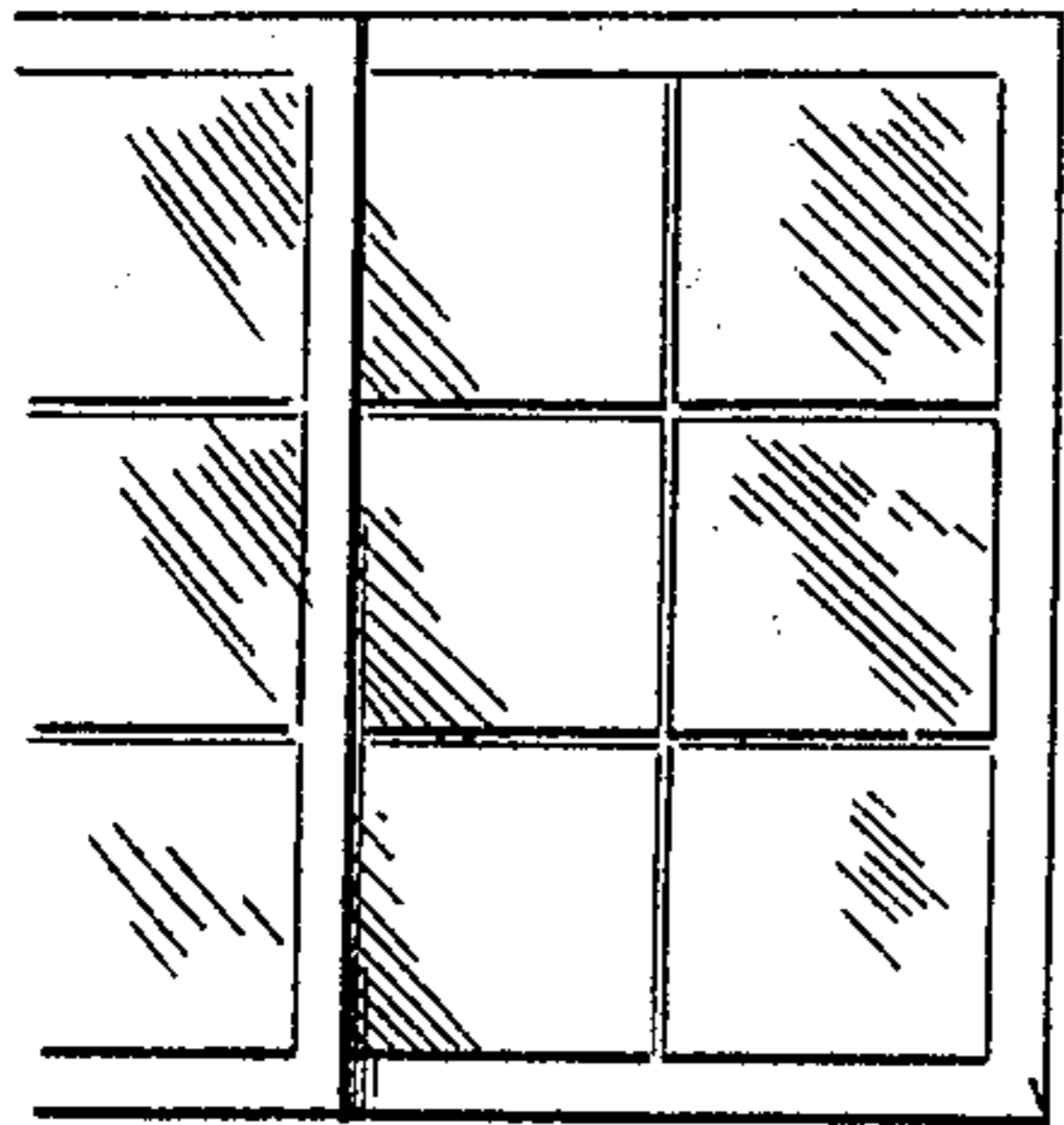


Fig. II.

Witnesses:
Arthur H. Slee
Elmer Wickes

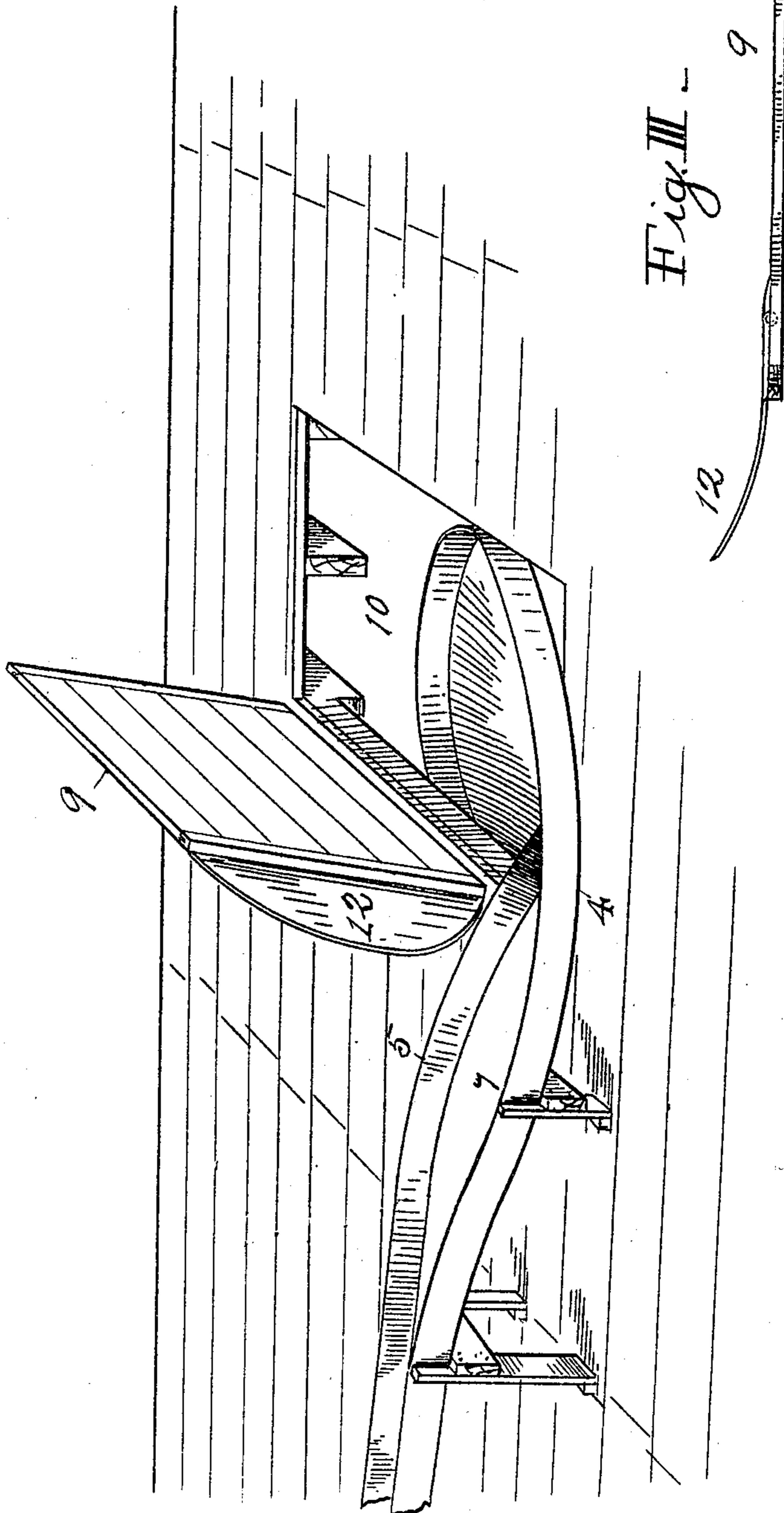


Fig. III.

Inventor:
Charles F. Cormack
by J. Richards & Co.
Attys

UNITED STATES PATENT OFFICE.

CHARLES F. CORMACK, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO
THE HASLETT WAREHOUSE CO., OF CARSON CITY, NEVADA, A CORPO-
RATION OF NEVADA.

CHUTE FOR MERCHANDISE.

No. 798,323.

Specification of Letters Patent.

Patented Aug. 29, 1905.

Application filed March 30, 1905. Serial No. 252,873.

To all whom it may concern:

Be it known that I, CHARLES F. CORMACK, a citizen of the United States, residing at San Francisco, county of San Francisco, and State of California, have invented certain new and useful Improvements in Chutes for Merchandise; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification.

This invention relates to an improvement in warehouse-chutes for merchandise, whereby goods are transferred downward by gravity from floor to floor or throughout a series of floors in a warehouse or other place of storing and moving packages.

My improvement consists in a trough-like chute disposed in helical form at a slope greater than the angle of friction and in intercepting devices that divert packages from the chute at a particular floor or at each floor and at the same time close and protect the hatchways through which the helical chute passes.

The object of my invention is to facilitate, cheapen, and save space in the operation of lowering merchandise in buildings from floor to floor or through several floors, and especially to the lower or street floor, from which packages are commonly removed, and to accomplish this without shock or injury to packages and at each floor by simply closing a hatch-door. To these ends I construct devices as shown in the drawings herewith.

Figure I is a view in perspective of a portion of the interior of a warehouse with one of my improved helical chutes therein; Fig. II, a similar view at a right angle to Fig. I, showing the intercepting devices and hatch through the floor; and Fig. III, an edge view of the hatch-door, showing a form of the deflecting or arresting devices for merchandise.

In lowering and discharging merchandise from warehouses by chutes it is found that a helical form has certain advantages, one being a saving of floor-space with a nearly direct course vertically and securing retardation or regulation of the rate of descent by centrifugal force, which causes the packages to bear against the outer wall of the chute. Impediments to this manner of operating have been in the want of convenient means to arrest and divert packages at each floor and to keep the hatchways closed when not in use, as is required by law. These impediments are re-

moved by combining a deflecting or diverting chute and a hatch-door and pivoting these at the side of the hatch, as shown in the drawings now to be referred to.

1 and 2 are floors of a warehouse connected by the helical chute extending between and through these floors and other floors in the same manner down to a last or landing floor or stage, as will be understood. The helical chute is shown with vertical sides 4 and 5 and a curved bottom 7, the latter causing packages, as at 8, to remain central in the chute and not rub on the sides thereof unless the velocity attained causes them to press outward by centrifugal force against the side 4. The chute is shown suspended by wooden framing; but it may be supported around a central column or in any other manner that will admit of the required convolution and slope. At the different floors are provided hinged hatch-doors 9, that close the hatchways 10, and at the ends these doors toward the chute are made to fit therein to intercept and land merchandise, or a curved extension 12 is provided to avoid shock when packages land on the hatch-door 9. These combined hatches and chutes are hinged to the side of the hatchways 10, as shown in Fig. II, one at each floor.

It will be understood that there are certain structural features that have to be modified to suit the character of the merchandise to be handled, which may be boxes, bales, barrels, or smaller articles of varying weight and more or less retarded by friction.

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

In a building provided with hatchways in the several floors thereof, a helically-disposed chute passing through said hatchways, the latter being provided with closing doors hinged to the sides thereof respectively, said doors having extensions which fit within the adjacent chute, for intercepting, deflecting and landing packages at the several floors when the doors are closed, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES F. CORMACK.

Witnesses:

ALFRED A. ENQUIST,
ELMER WICKES.