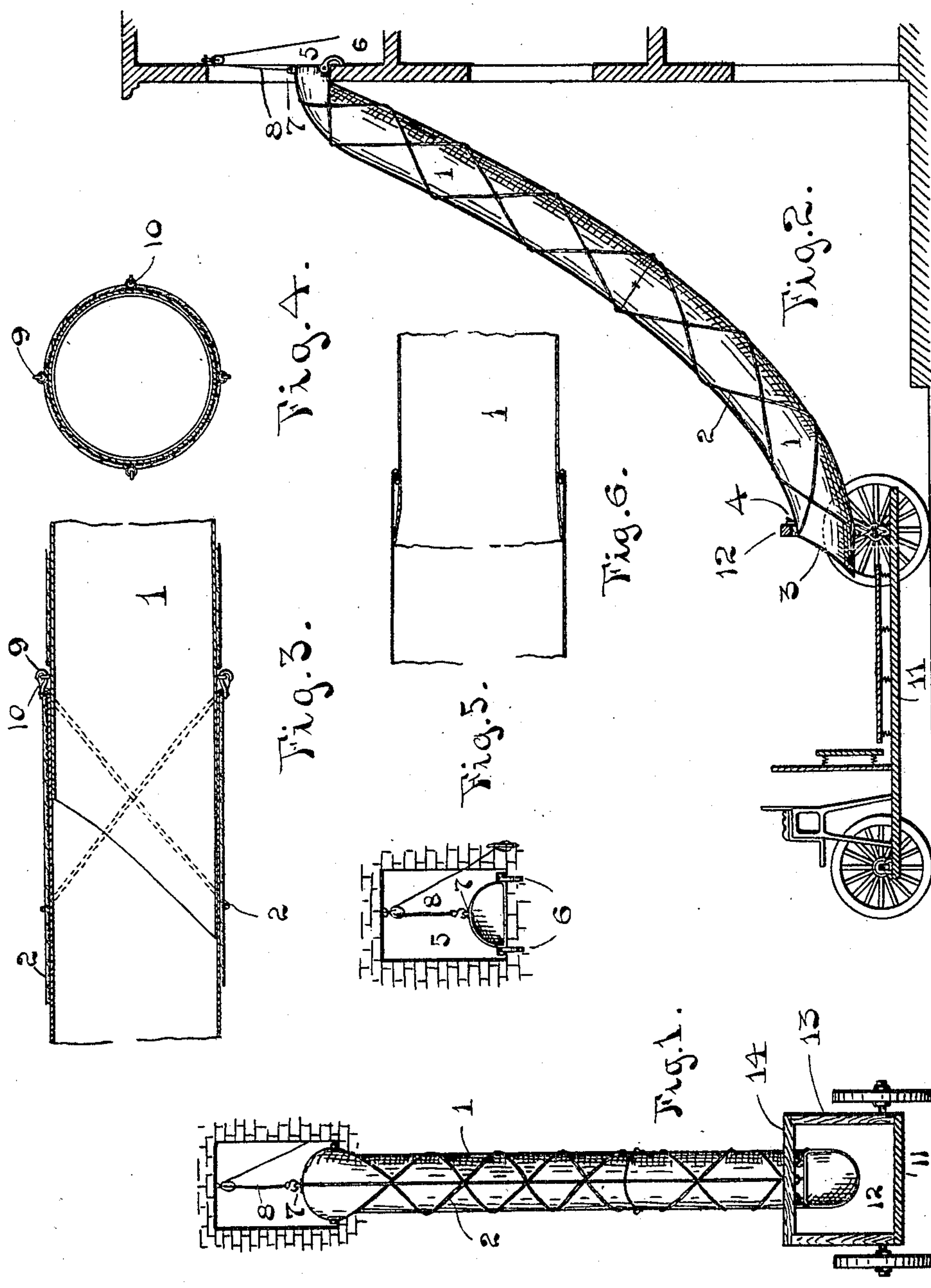


No. 837,602.

PATENTED DEC. 4, 1906.

A. BENENATO.
PORTABLE LOADING CHUTE.
APPLICATION FILED FEB. 26, 1906.



Witnesses:

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UNITED STATES PATENT OFFICE.

ANTONIO BENENATO, OF SAN FRANCISCO, CALIFORNIA.

PORTABLE LOADING-CHUTE.

No. 837,602.

Specification of Letters Patent.

Patented Dec. 4, 1906.

Application filed February 26, 1906. Serial No. 303,110.

To all whom it may concern:

Be it known that I, ANTONIO BENENATO, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented certain new and useful Improvements in Portable Loading-Chutes; and I do hereby declare the following to be a full, clear, and exact description of the same.

10 This invention relates to a portable loading apparatus.

The object of the invention is to provide a device of this character simple and cheap in construction and adapted to be used for delivering packages from various heights, so constructed that it can be folded and stored away on an ordinary delivery wagon or truck. These objects are accomplished by the devices illustrated in the accompanying drawings, in which—

20 Figure 1 is an elevation of the device in position for use. Fig. 2 is a side view of Fig. 1, portions being in section. Fig. 3 is a section, on an enlarged scale, of the joint between two lengths of the chute. Fig. 4 is a cross-section of Fig. 3. Fig. 5 is a detail of the receiving end of the chute in position. Fig. 6 is a view similar to Fig. 3 of a modification of the coupling or joint between lengths or sections of the chute.

30 Referring to the accompanying drawings, 1 is a chute or tube formed of flexible collapsible fabric. It is provided with a reinforcing net or covering of large open mesh of rope or the like flexible material 2. The discharge end is provided with a reinforcing-ring 3, preferably formed of a stiff rope of comparatively large diameter, surrounding the aperture. It is also provided with hooks or rings 4 for attachment when in use. The intake or receiving end is also provided with a stiffening and form-preserving reinforcement 5. This may be made of rope like the discharge end; but it is preferably constructed of a metallic band. The band is provided with hooks or claws 6, attached to its lower side. It is also provided with a hook or ring 7 on its upper side. Attached to the ring 7 may be provided a raising-rope or light tackle 8.

45 The chute is usually formed of a number of comparatively short lengths or sections. The end of each section is provided with suitable joining devices, such as the hook and rings 9 and 10, Figs. 3 and 4. A wheeled

vehicle or truck 11 usually coacts with the chute. It is provided with a frame 12, preferably located near the rear end. This frame may consist of side timbers 13 and a cross-bar 14. The frame 12 also is provided with suitable attachments to engage with the rings 4 of the chute to support its delivery end.

60 In operation the number of lengths or sections suitable to the height from which the parcels are to be conveyed are hooked together, as represented in Fig. 3, and the light rope 8 is thrown up to an attendant, who hoists the receiving end of the chute. This he makes fast by engaging the hooks 6 with a window-frame or other suitable place. The rings 4 of the delivery end of the chute are attached to the frame 12 and the device is ready for use.

75 Being flexible and collapsible the whole device is susceptible of being folded and packed into small compass. Thus it is readily stowed away on the vehicle or truck in any otherwise unavailable space—as, for example, under the driver's seat in a truck of the character indicated in Fig. 2.

80 Though this device is primarily intended for delivering and loading parcels or packages—such as sacks of flour, grain, or the like—it may in cases of emergency be employed effectively as a fire-escape. Under such circumstances or when goods of a damageable or fragile nature are to be loaded a cushion or buffer will be found desirable, such as is indicated by the spring-platform 15 in Fig. 2.

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

1. In a portable loading device, the combination of a flexible chute or tube reinforced on its outside with an open mesh of rope or the like, the chute being formed of lengths connected together by hooks and rings, a wheel-truck provided with a suitable frame having hooks or the like for the attachment and support for the delivery end of the chute, and attaching hooks or claws at the receiving end of the chute for securing this end in position.

105 2. In a portable loading device, the combination of a flexible chute or tube reinforced on its outside with an open meshwork of rope or the like, a wheel-truck provided with a suitable frame having hooks or the like for the

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attachment and support of the delivery end, and means for raising and securing the receiving end of the chute.

3. In a portable loading device, the combination of a flexible chute or tube reinforced on its outside with an open mesh of rope or the like, the chute being formed of lengths connected together by hooks and rings, a wheel-truck provided with a suitable frame
10 having hooks or the like for the attachment

and support for the delivery end of the chute, stiffening and supporting bands at the delivery and receiving end, attaching hooks or claws at the receiving end for securing it in position, and means for raising the receiving
15 end.

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