

(No Model.)

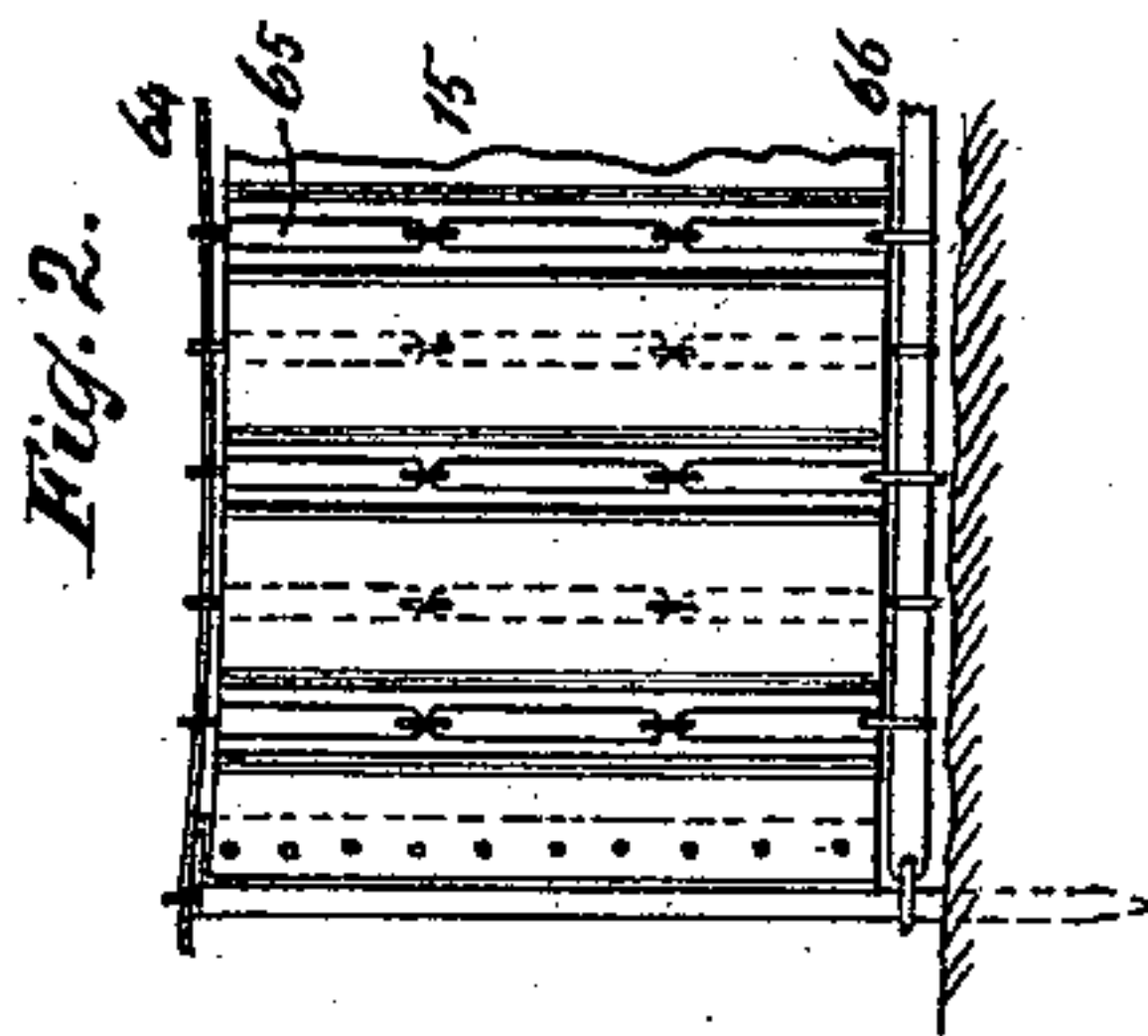
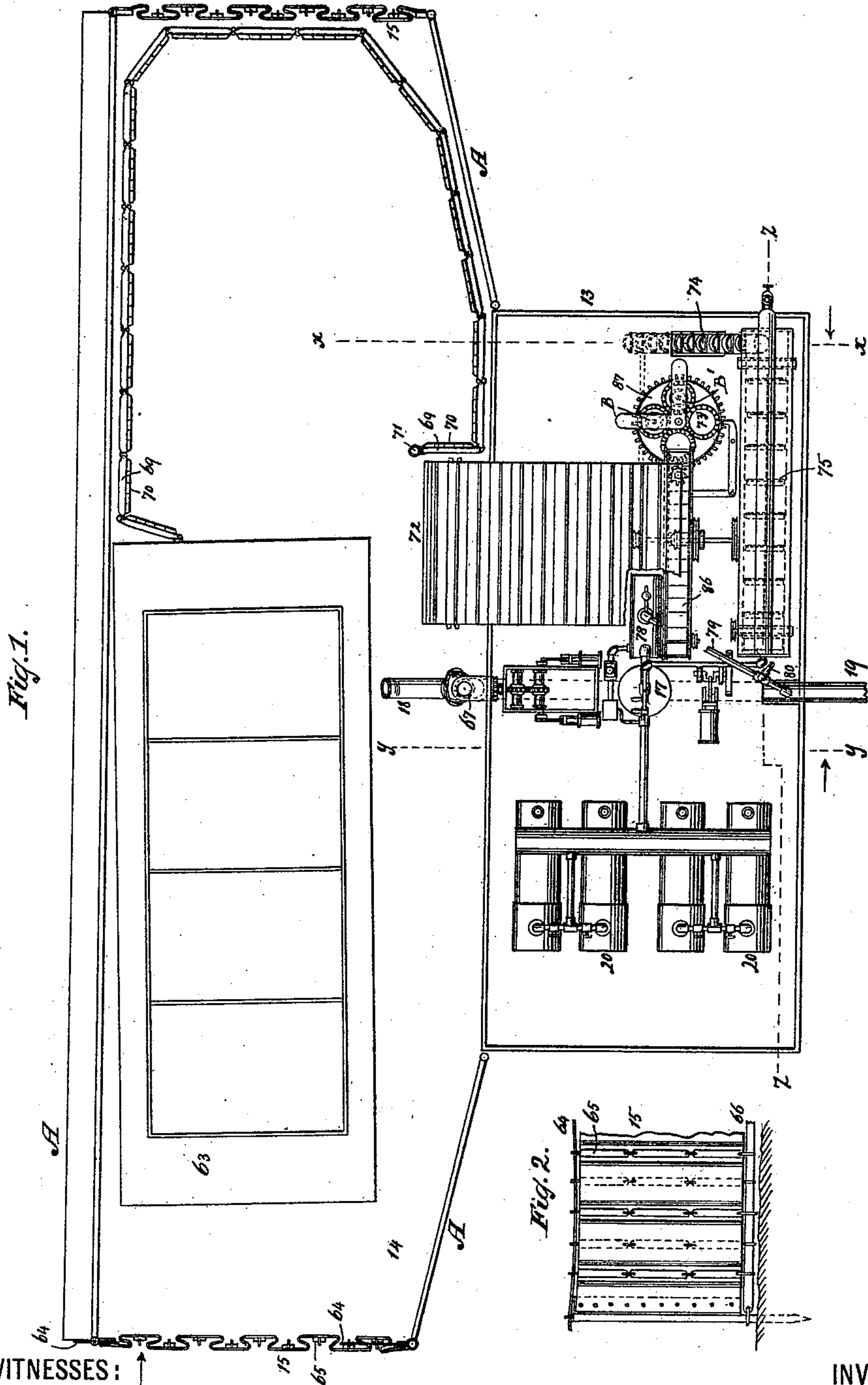
2 Sheets—Sheet 1.

C. GULLMANN.

APPARATUS FOR DISCHARGING REFUSE FROM SCOWS.

No. 541,532.

Patented June 25, 1895.



WITNESSES:

E. Woff.

Chas. E. Doering

INVENTOR:

Christopher Gullmann.

BY

BY
Hauß & Hauß

ATTORNEYS.

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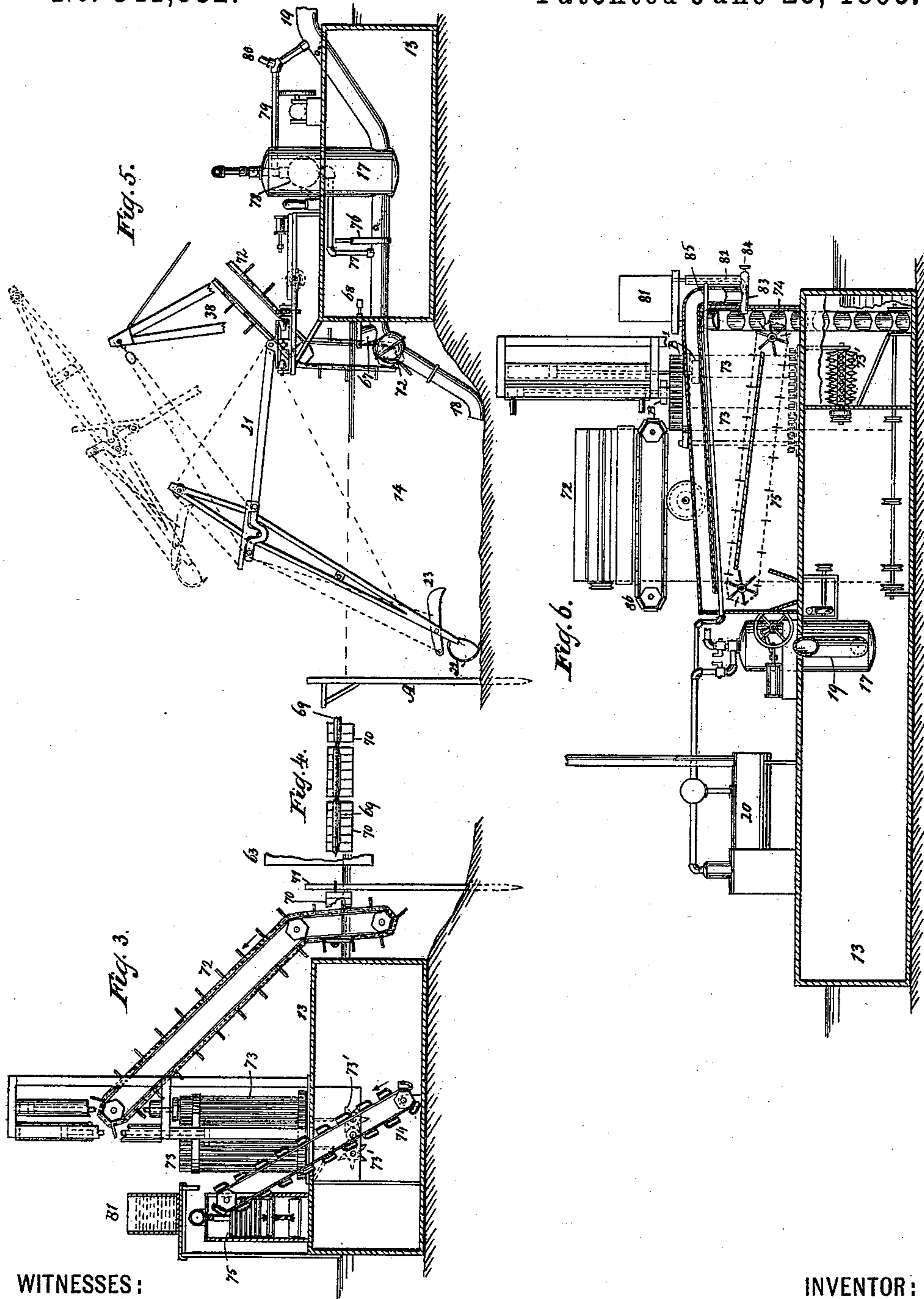
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UNITED STATES PATENT OFFICE.

CHRISTOPHER GULLMANN, OF NEW YORK, N. Y.

APPARATUS FOR DISCHARGING REFUSE FROM SCOWS.

SPECIFICATION forming part of Letters Patent No. 541,532, dated June 25, 1895.

Application filed October 25, 1894. Serial No. 526,941. (No model.)

To all whom it may concern:

Be it known that I, CHRISTOPHER GULLMANN, a citizen of the United States, residing at New York, in the county and State of New York, have invented new and useful Improvements in Apparatus for Discharging Refuse from Scows, of which the following is a specification.

The object of this invention is to effect certain improvements in the apparatus described in United States Letters Patent No. 507,902, granted to me October 31, 1893, the improvements residing in the novel features of construction set forth in the following specification and claims, and illustrated in the annexed drawings, in which—

Figure 1 is a plan view of the apparatus. Fig. 2 is a detail view of part of a gate. Fig. 3 is a section along $x x$, Fig. 1. Fig. 4 is a detail view of part of a boom or collector. Fig. 5 is a section along $y y$, Fig. 1. Fig. 6 is a section along $z z$, Fig. 1.

The dock A forms an open compartment 14 for receiving a scow 63 and which compartment may be open at one or both ends as seen fit, and provided with a gate or gates 15 for closing the openings or mouths of the dock.

The pump chamber 13 with discharge apparatus 17 having suction and discharge pipes 18 and 19 as also the boiler 20 (one or more) and swiveling crane 21 with scraper 22, grapple 23 and standard 38 are constructed to operate similarly as set forth in said patent.

The gates are each readily formed by a strip of canvas 15 suspended from a rope 64 connected by chains or links 65 to a bottom piece or steadying rod 66. One end of rope 64 being fixed at one side of a dock mouth and the other end of such rope being detachably connected at the other side of said mouth, said detachable end when released will drop and allow the links 65 with canvas 15 to buckle or flex so as to sink close to the bottom or to be folded out of the way for the entry or exit of a scow. When closed the gate prevents floating refuse in the dock from escaping or floating out.

The dock A is constructed as close as practicable to the dumping ground, and a deck load can be removed from scow 63 by grapple 23 or said grapple with suction 18 can be used

to remove a dumped load from compartment 14.

To prevent scattering of the floating refuse in compartment 14 and to guide such refuse to the upwardly extending branch or nipple 67 of the suction I provide a boom consisting of jointed or linked floats 69 carrying upright plates or planks 70, one end of the boom being conveniently connected to a pile or rod 71, and the other end of said boom being suitably handled as for scraping along scow 63.

The branch 67 can be closed when necessary through the medium of a valve 68.

In addition to suction 67 I provide an elevator 72 which can be used either with suction 67 or independently thereof when the suction is shut off, said elevator 72 being partly submerged to raise floating refuse from compartment 14. This elevator 72 is shown arranged to deliver the refuse to a conveyer 86 carrying the refuse into hollow receivers 73 where the water and juice can be squeezed from the refuse and suitably drained off while the squeezed refuse after being disintegrated by the rollers 73' is taken by elevator 74 and conveyer 75 to a point of delivery.

At times it may happen that the suction 18 becomes choked or stopped. In such case I close the gate 76 (Fig. 5) and inject water through pipe 77 from a suitably supplied pressure tank 78 to clear out the suction 18. The discharge 19 can also be flushed or washed with water from tank 78 led through pipe 79. A pipe 80 conveying a suitable disinfectant can also be made to lead to discharge 19.

An oil tank 81 has a discharge tube 82 with nozzle 83 leading to conveyer 75. The valve 84 can be made to regulate the ejecting stream of steam coming from a boiler through tube 85 to nozzle 83. The steam ejected oil being ignited will form a flame to burn the refuse which is led by elevator 74 and conveyer 75 to the point of delivery.

The dock A it is noticed is a wet dock, the scow being kept afloat in the compartment 14.

The mechanism for squeezing the juice or water from the refuse in the cylinders 73 operates as follows: These cylinders in suitable number (four in the drawings) are placed onto a base 87 having a step by step rotation so that the cylinders successively come under

conveyer 86 to receive wet or unsqueezed refuse therefrom. From under conveyer 86 a charged cylinder comes under the plunger B which descending will squeeze the juice or
5 water out of the refuse in said cylinder, the juice or water draining off through the broken or perforated side wall of the cylinder. The plunger B then rising will allow the cylinder
10 cylinder is directly over the disintegrating rollers 73'. The support under the rotary base 87 is open or broken at this point so that as the plunger B' descends the contents of the cylinder can be forced down to fall out
15 of the cylinder to the rollers 73'. The emptied cylinder then passes in its turn back again under conveyer 86 to be recharged.

What I claim as new, and desire to secure by Letters Patent, is—

20 1. A wet dock provided with a yielding gate, composed of a stiffened strip of flexible material, and an unloading grapple substantially as described.

25 2. A wet dock provided with a yielding gate, composed of a stiffened strip of flexible material, and with a pump for discharging dumped matter from the dock substantially as described.

3. A dock provided with a boom for collect-

ing material floating in said dock substantially as described. 30

4. A dock provided with a suction pipe, said suction pipe being provided with a branch for collecting floating refuse or material, and a gate valve for closing said branch substantially as described. 35

5. A dock provided with a suction pipe having a gate valve located at a distance from the suction inlet, in combination with a pressure pipe made to enter the suction pipe close 40 to the suction side of the gate valve for enabling the interior of the suction pipe to be cleared, substantially as described.

6. A dock provided with a discharge pipe, and a disinfectant supply tube connected to 45 the discharge pipe substantially as described.

7. A dock provided with a gate of canvas or flexible material, combined with a supporting cord, a steadying piece, and links made to connect the cord and piece substantially as described. 50

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

CHRISTOPHER GULLMANN.

Witnesses:

WM. C. HAUFF,

E. F. KASTENHUBER.