

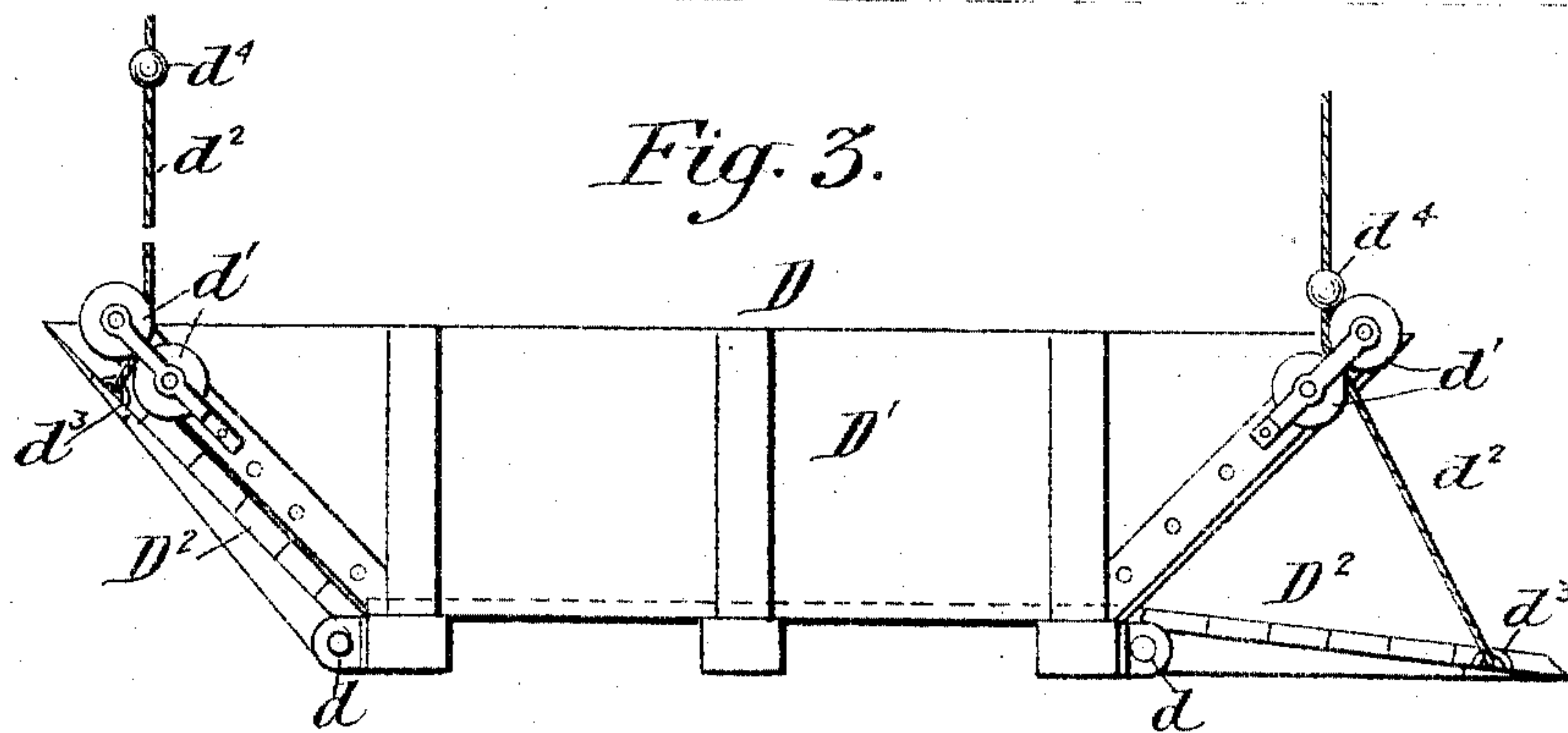
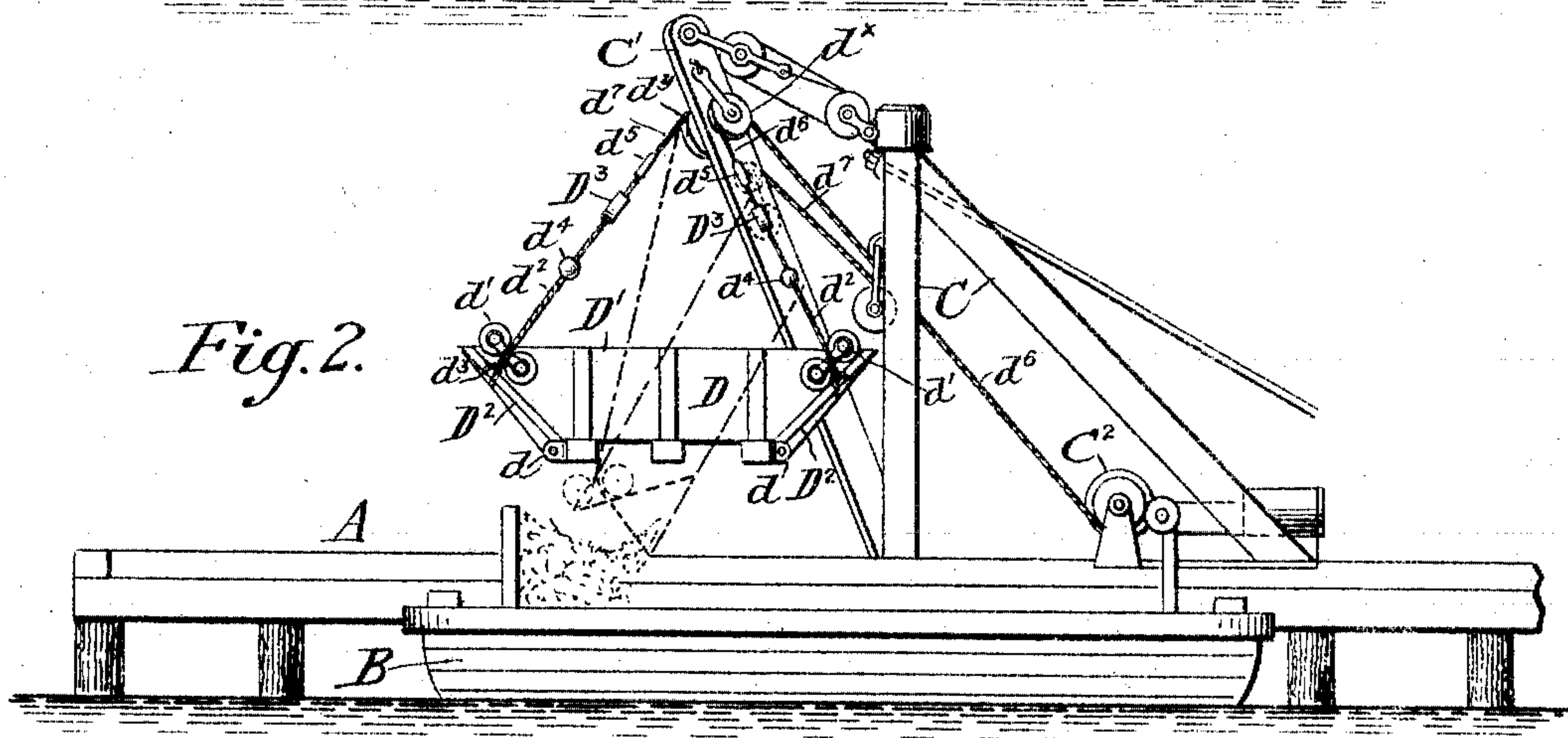
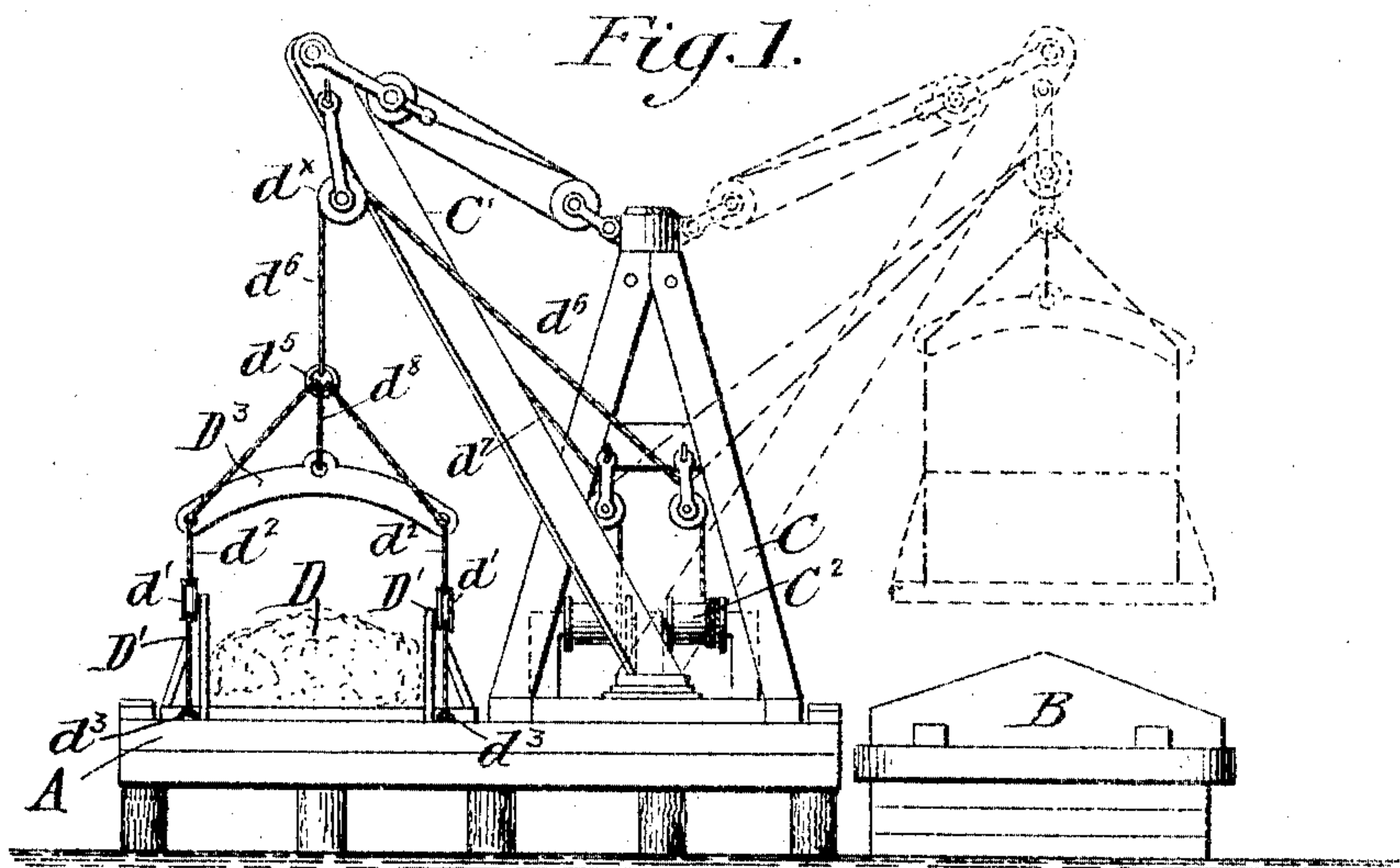
No. 766,817.

PATENTED AUG. 9, 1904.

M. H. FLANNERY.
ELEVATING AND DUMPING PLATFORM.

APPLICATION FILED SEPT. 23, 1903.

NO MODEL.



Witnesses:

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UNITED STATES PATENT OFFICE.

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ELEVATING AND DUMPING PLATFORM.

SPECIFICATION forming part of Letters Patent No. 766,817, dated August 9, 1904.

Application filed September 23, 1903. Serial No. 174,368. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL H. FLANNERY, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Elevating and Dumping Platforms, of which the following is a specification.

The present invention relates to a novel system and apparatus for loading material, particularly that in loose form, onto cars, boats, barges, &c., said system and apparatus having more particularly in view a simple and efficient arrangement whereby inclines and stationary chutes are dispensed with and means provided by which carts at the normal level can be dumped and the material then expeditiously conveyed and delivered in bulk into the car, boat, barge, &c., the operation being repeated continuously for as long a period as may be desired.

It may be well to here state that the invention is particularly adapted for service on a pier or dock with a contiguous boat or barge mooring, and the improvements will be so set forth.

With the above-mentioned purposes in view the invention comprehends the location on a pier or dock of a derrick, the boom of which has a sweep for alternately bringing said boom over a cart-discharge point on said pier or dock and also above the mooring location, a platform being suspended from the boom and of a capacity and so conditioned that when lowered to rest on the pier or dock a cart may be driven thereover and dumped to deposit its material thereon, suitable connections and operating means coactive with the boom and platform whereby the latter can be elevated, swung conjointly with the boom to a position above the mooring, and while so suspended operated to discharge its load into the boat or barge beneath, the boom and platform being restored to their first positions and the operation repeated as often as required.

There are other important features connected with the invention, which besides those previously alluded to, are clearly set forth in the subsequent detailed explanation.

In the accompanying drawings, forming part of this specification, Figure 1 is a view of a pier or dock having certain apparatus thereon and adapted to operate in accordance with my invention, the full lines illustrating the position of the parts with the platform resting on the pier or dock and having material thereon and the dotted lines indicating the position of the boom and platform above the mooring suitable for delivering the material to a barge. Fig. 2 is a view of the pier or dock at a right angle to its position in Fig. 1, the boom and the platform being shown in a position above the mooring, the dotted lines illustrating the platform-discharging operation. Fig. 3 is an enlarged longitudinal view of the platform with one of its gates in a lowered position.

Similar reference characters are employed to designate corresponding parts throughout the several figures of the drawings wherein they occur.

Upon the pier or dock A and contiguous to the boat-mooring B is a derrick C, the boom C' of which is stepped and supported so that its upper outer end can be swung from above a point well on the pier or dock to a position over the mooring. Suspended from the outer end of the boom and operable in a manner to be presently described is a platform D, comprising a bottom or flooring and vertical side walls D' D', connected thereto, the opposite ends of said walls D' being relatively downwardly converged, as shown most clearly in Fig. 3, whereby gates D², hinged at the ends of the bottom, as indicated at d, will when raised close the end openings between the walls without said gates attaining a vertical position. On the outer side of each side wall, at each of the upper corners thereof, are companion guide-rollers d', between which is led one of a series of four cables d², the others passing between the other rollers d', the lower end of each cable being connected to a suitable staple or eye d³ therefor, carried at the nearest side of the adjacent gate contiguous to the outer end thereof. Stops or buttons d⁴, appropriately located on the cables d², serve to limit the lowering movements of the gates in an obvious manner.

The two cables d^2 at one end of the platform are mutually connected with a ring d^5 , to which is attached a cable d^6 , guided around a pulley suspended from the outer portion of the boom, said cable d^6 being in operative relation with a drum C^2 , the cables d^2 at the other end of the platform being connected to a second ring, to which is attached the end of a cable d^7 in operative relation with a drum C^3 , forming part of the derrick equipment. These drums through suitable clutch provision well understood in this class of machinery are capable of being driven both independently and conjointly, as may be desired.

A spreader D^3 is provided for each pair of cables d^2 to maintain the same in such spreading relation that they will not interfere with the cart when driven over the platform, a short cable d^8 centrally connecting each spreader with the ring of its particular pair of cables d^2 .

It will be understood that the dimensions of the platform D will be such that when the same is in a position resting on the appropriate part of the pier or dock and the gates D^2 are lowered a loaded cart can be driven over the bottom and stopped at one end of the platform to permit the material within the cart to be dumped and retained upon the platform-bottom, as illustrated in Fig. 1. The attendant then manipulates the controlling devices of the derrick, so that the drums C^2 C^3 are revolved to effect the winding of the cables d^6 d^7 , causing the closing of the gates and elevation of the platform from the pier or dock. It will be observed that the cables d^6 d^7 are guided around pulleys d^x d^y , located on opposite sides of the boom. This arrangement will enable the drums to be so operated at this stage that one of the cables d^6 d^7 will be slackened as the other continues to be wound on its drum, with the result that the boom, with the suspended platform, will be swung to a position immediately over the boat at the mooring B , at which time by stopping one drum and revolving the other to slacken its cable the corresponding end of the platform will be lowered and its gate permitted to drop and effect the discharge of the load. The boom and platform can then be restored to the first position on the dock and the previously-described operation repeated.

The closing of the gates D^2 prior to the raising and swinging of the platform serves to prevent the material from dropping from the platform and being objectionably strewn and blown around.

As before stated, the novel system and apparatus are highly efficient and useful and capable of conducting the loading of the material on boats or barges at a comparatively low cost.

I am aware that it has heretofore been proposed to employ a drop-chute in connection

with the loading of coal into boats, barges, &c., means being provided whereby one end of the chute can be lowered while the other is raised, or vice versa, to effect the discharge of the coal or the restoration of the chute to a position for receiving another body of coal. My invention will be readily distinguished from such arrangement, in that it comprehends a system of loading wherein a derrick is so located that its boom-sweep includes a driveway to which carts can be driven and a distinct loading-point—as, for instance, a boat or mooring—in addition to which an elevating-platform is suspended from and operable by way of the derrick-boom, so that said platform can be lowered to rest on said driveway to permit carts to be driven over said platform and dump their load thereon, after which the platform, with its load, can be elevated, swung to a position over the unloading-point, and then caused to discharge its load to deposit the same into a car or boat or other transporting means.

I do not desire to be understood as limiting myself to the precise details and arrangement of parts shown and described, but reserve the right to all modifications that may be fairly considered within the scope of my invention.

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

1. In a system of loading, a derrick, the boom-sweep of which is in apposition to both a driveway and loading-point, together with an elevating-platform adapted when lowered, for the passage of carts thereon, connections suspending said platform from said boom, and means for elevating the platform, swinging the same and the boom to a position above the loading-point, and discharging said load.

2. In a system of loading, a pier or dock with contiguous boat-mooring, a derrick on the pier or dock, and having a boom, the sweep of which is in apposition to both a driveway on the pier or dock and a point above the mooring, together with an elevating-platform adapted when lowered on the pier or dock for the passage of carts thereon, connections suspending said platform from said boom, and means for elevating the platform, swinging the same and the boom to a position above the mooring, and discharging said load.

3. In a system of the character described, the combination with a derrick, of a platform suspended from said derrick and having vertical sides and upwardly-closing end-gates, together with removable drum provision, and connections and means coactive with and controlled by said drum provision for closing the gates, elevating and swinging the platform, and releasing one of the gates.

4. In a system of the character described, the combination with a derrick, of a platform having vertical sides with longitudinally-con-

verged inclined ends, upwardly-closing piv-
oted gates, cables connected with the latter
for operating the same, provision for limiting
the lowering movement of the gates, and con-
5 nections and means for successively closing the
gates, elevating and swinging the platform,
and releasing one of the gates.

Signed at New York, in the county of New
York and State of New York, this 31st day of
July, A. D. 1903.

MICHAEL H. FLANNERY.

Witnesses:

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