

J. C. CARTER.

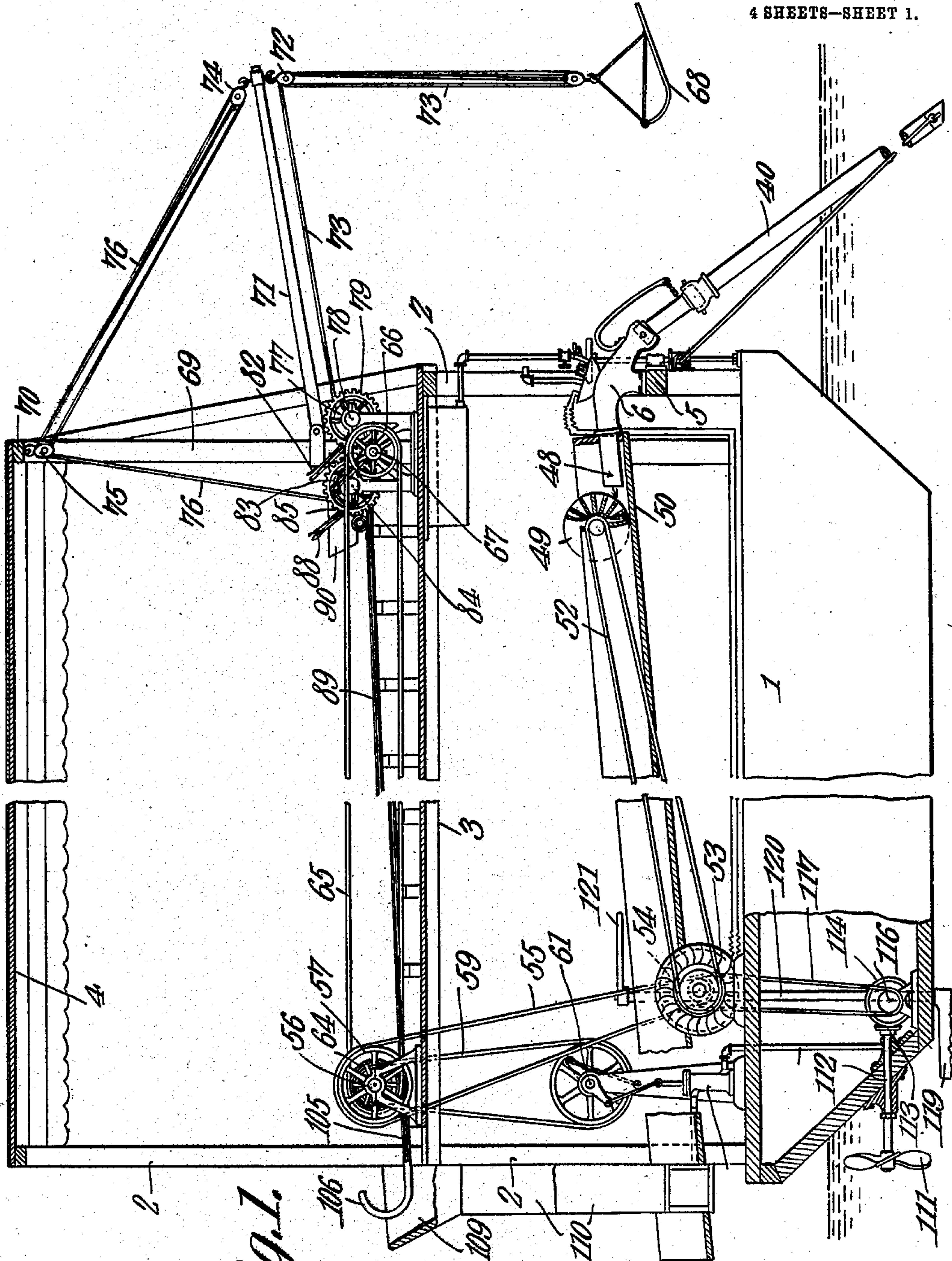
DREDGE.

APPLICATION FILED FEB. 6, 1907.

900,263.

Patented Oct. 6, 1908.

4 SHEETS—SHEET 1.



WITNESSES:

E. J. Stewart

F. J. Chapman

James C. Carter, INVENTOR.

By

C. A. Snow & Co.

ATTORNEYS

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4 SHEETS—SHEET 2.



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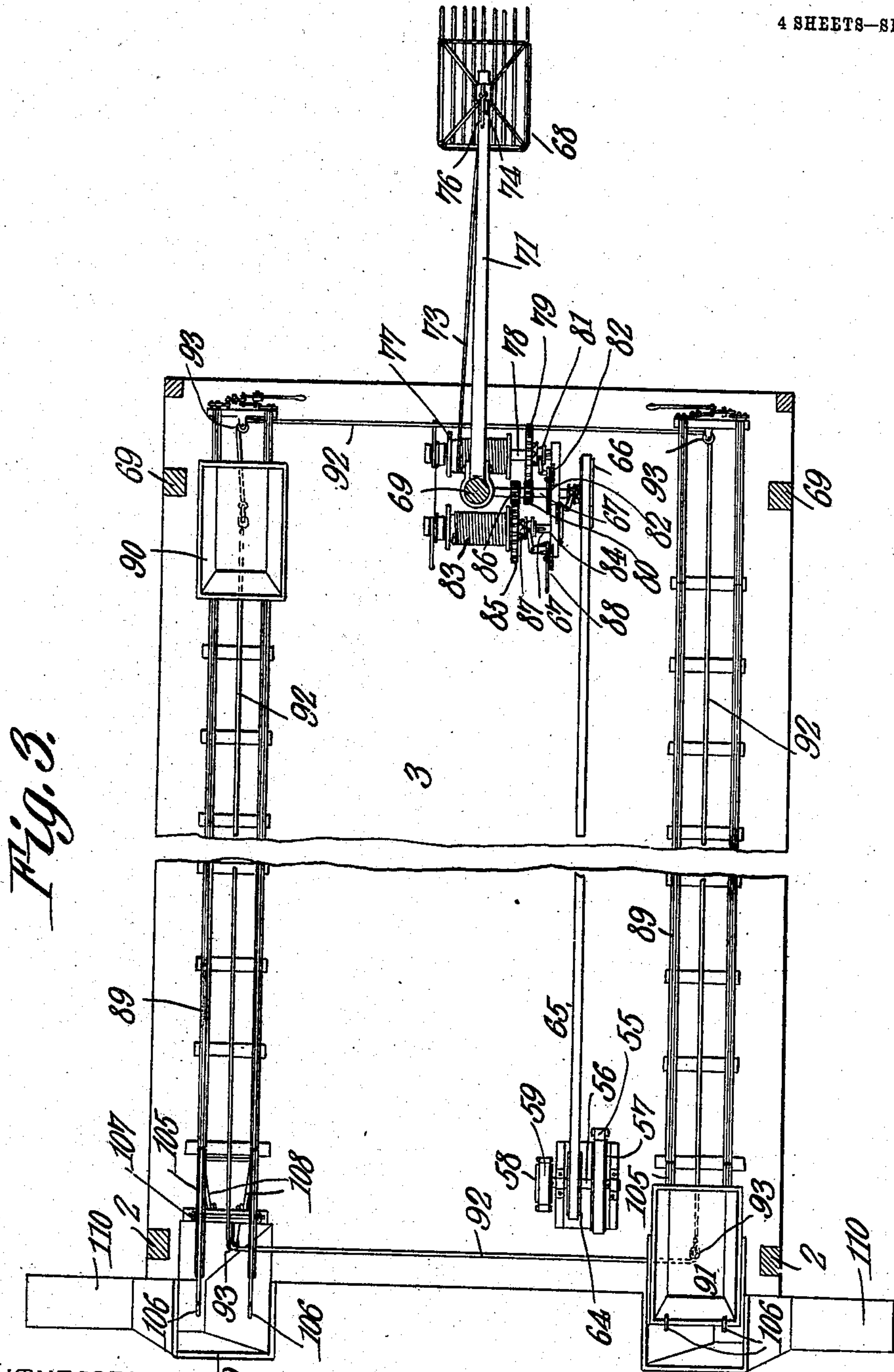


Fig. 3.

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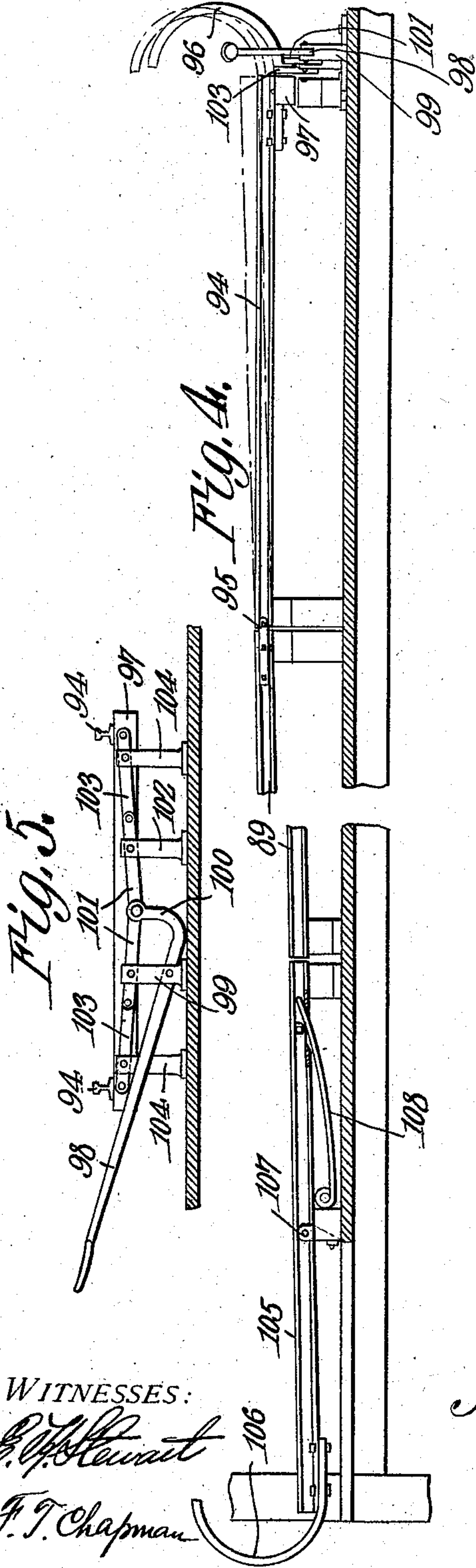
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UNITED STATES PATENT OFFICE.

JAMES C. CARTER, OF PIONEERVILLE, IDAHO.

DREDGE.

No. 900,263.

Specification of Letters Patent.

Patented Oct. 6, 1908.

Application filed February 6, 1907. Serial No. 356,067.

To all whom it may concern:

Be it known that I, JAMES C. CARTER, a citizen of the United States, residing at Pioneer-ville, in the county of Boise and State of Idaho, have invented a new and useful Dredge, of which the following is a specification.

This invention has reference to improvements in dredging machines, and its object is to provide a dredge in which the scoop mechanism is carried upon an upper deck and the dump cars are also carried there-upon so that the material from the scoop may be deposited in the cars and these latter may then move to the rear of the dredge and dump into chutes by which the material is conveyed to suitable vessels. There is carried upon the main deck of the scow a prime mover of any suitable type which may be, if desired, an explosive engine of a character adapted for the purposes of the present invention, and this engine will not only furnish power for several operations of dredging but may also be utilized to drive the scow.

The invention will be more particularly pointed out in the following description taken in connection with the accompanying drawings, in which,—

Figure 1 is a longitudinal section, partly in elevation, of the improved dredge; Fig. 2 is a sectional plan of the main deck of the same; Fig. 3 is a plan of the upper deck of the dredge, with parts shown in section; Fig. 4 is a longitudinal view, partly in section, of the conveyer track; and Fig. 5 is an end view of the same.

Referring to the drawings, there is shown a scow 1, which may be of the ordinary type and is designed to carry the various parts of the dredge and is therefore made of sufficient capacity for this purpose. This scow carries on suitable corner posts 2 and such intermediate posts (not shown) as may be found necessary, an upper deck 3, and above this latter a roof or canopy 4.

Between the corner posts 2 at the front of the scow and elevated a distance from the main deck of the scow is a cross-beam 5 upon which is mounted the prime mover 6. The prime mover 6 is connected to a pipe 40 which discharges through the end 48 to a

water wheel 49 in the trough 50, and this water wheel, through a belt 52, transmits power to a dynamo electric machine 53 of any desired type located near the rear of the scow. The dynamo feeds an electric motor 43 also of any desired type, and from this motor power is transmitted by a belt 55 to the countershaft 56 mounted on the upper deck 3 of the dredge near the rear end thereof, the belt 56 passing over a pulley 57 on this countershaft.

From another pulley 64 upon the countershaft 56 power is transmitted by a belt 65 to a pulley 66 upon the main driving shaft 67 of the operating mechanism for the scoop 68. This operating mechanism for the scoop may be of the usual type; that is, there is an upright 69 extending from the deck 3 to a cross-bar 70 in front of the canopy or roof 4, and this upright 69 carries a boom 71, to the outer end of which is fastened a pulley 72 over which a rope or cable 73 passes and serves to elevate and lower the scoop 68 in the usual manner with relation to the boom 71. Another pulley 74 at the end of the boom, coacting with a pulley 75 on the cross-bar 70 in conjunction with a rope or cable 76, serves to elevate or depress the boom. The rope or cable 73 is carried to a drum 77 on a shaft 78 on which latter there is a loose gear wheel 79 meshing with a pinion 80 on the shaft 67, and this gear wheel 79 is coupled to the shaft 78 through a clutch 81 manipulated by an operating lever 82. The rope or cable 76 is connected to a drum 83 upon a shaft 84, which also carries a loose gear 85 meshing with a pinion 86 on the shaft 67, and this loose gear 85 is coupled by means of a clutch 87 to the drum shaft 84, which clutch is operated by a manipulating handle 88.

The scoop-operating mechanism will, of course, be provided with suitable brakes for the drums, so that when these drums are uncoupled from the operating pinions they may be either held against rotation or allowed to slowly rotate at the will of the operator, and there may be provided a clutch between the pulley 66 and the shaft 67, so that the entire scoop-operating mechanism may be uncoupled from the driving motor without stopping the latter. Thus, while the

shaft 67 is running continuously, the two drums 77 and 83 may be brought into action at will to operate the scoop 68 in any desired manner.

5 On the upper deck 3, near each side thereof, is a longitudinally disposed track 89, inclined from the front toward the rear, and on this track travel two dump cars 90—91, connected by an endless cable 92 running
10 over pulleys 93—93 at each end of the track, so that the cars must move in unison. The car 90 is shown in the drawings, Fig. 3, as being located at the front end of one track and the car 91 as at the rear end of the
15 other track.

The front end of the track is arranged in a manner best shown in Figs. 4 and 5. The front section 94 of the track is hinged at 95 to the main body of the track, and the extreme front end of this hinged section is
20 provided with a hook-shaped bracket 96 fast on the front tie 97 and movable from a normally horizontal position upwardly, as indicated in dotted lines, by means of a link system best shown in Fig. 5. A nearly horizontal lever 98 is pivoted to a standard 99 and beyond the pivot it has an up-turned end 100 to which are coupled the adjacent
25 ends of two links 101—101, one pivoted in the standard 99 and the other in another standard 102. The links 101 are each pivoted to short levers 103—103 supported by standards 104—104 and connected at their outer ends to the cross-tie 97. Now, it will
30 be seen that if the free end of the lever 98 is depressed, say, by the foot, the lever system connecting this lever 98 to the cross-tie 97 will elevate the latter and the track carried thereby, so that said track is in an inclined position, as indicated by dotted
40 lines, Fig. 4. The car 90 or 91 located upon said track and assumed to be full of material elevated by the scoop 68, will tend to move by gravity down this track and on to the main track 89 and, largely overbalancing the car 91 if that be the empty car, will cause the car 91 to move toward the front of the scow as the car 90 gravitates to the rear of the scow.

50 At the rear of the scow there is a track section 105—105 to the extreme rear end of which there is secured a hook-shaped extension 106 in the path of the truck wheels. This track section 105 is pivoted at 107 at a point nearer its front end than its rear end,
55 so that when a loaded car reaches this track section and its truck wheels abut against the stop 106, this track section will be overbalanced and turn on its pivot, so that it will reach a nearly vertical position with the hook end 106 lowermost. This will cause the car to discharge its contents, when a
60 spring 108 fast at one end to the deck 3 and

at the other end to the track section 105 near its junction with the main portion 89, will
65 return the track section to the normal approximately horizontal position, the spring having been put under tension by the loaded car overbalancing the track section 105.

The contents of the car when the latter
70 dumps are received in a hopper 109 and conveyed therefrom by a chute 110 at the rear of the scow, from whence they may be discharged either into the water or into another scow appropriately located for the purpose.
75

The scow body 1 is provided at its rear with a propeller 111, the shaft 112 of which is connected by a beveled pinion 113 to a beveled gear 114 on a countershaft 115 on the other end of which latter is a pulley 116 receiving power through a belt 117 coming
80 from a pulley 118 on the shaft of the electric motor 54.

In order to steer the scow that is being propelled by the propeller 111, there is provided a rudder 119 fast on the lower end of
85 a rudder post 120, to the upper end of which, above the main deck of the scow, is attached a tiller 121.

The interior of the scow is accessible
90 through trap-doors 122, as indicated in Fig. 2.

I claim:—

1. A dredge comprising a scow, dredge mechanism mounted thereon, tracks on said
95 dredge, connected dump cars on said tracks and traveling thereon by gravity, gravity locking means at one end of each track and gravity dumping means at the other end of each track, a gravity scoop and operating
100 means therefor carried by the scow, and a prime mover carried by the scow and connected to the said scoop-operating means.

2. A dredge comprising a scow having a main deck and an elevated second deck, a
105 dredging mechanism mounted on the second deck, tracks on said second deck, dump cars on said tracks, a scoop and operating means therefor carried by the second deck, and a prime mover mounted upon the main deck
110 and connected for operation with the dredging means on the second deck.

3. A dredge comprising a scow having a main deck and an elevated second deck, a scoop and operating means therefor mounted
115 on the second deck, a prime mover on the main deck, and connections between said prime mover and the scoop-operating mechanism.

4. A dredge comprising a scow having a
120 main deck and an elevated second deck, a prime mover carried by the main deck, a propelling means connected to the prime mover, a scoop and operating means therefor operating on the second deck, cars
125 mounted on said second deck and movable

from the front to the rear thereof, chutes
from the rear of the second deck leading
downward therefrom at the rear of the
dredge and in line with the cars for receiv-
5 ing material therefrom, and connections be-
tween the prime mover and scoop-operating
mechanism.

In testimony that I claim the foregoing as
my own, I have hereto affixed my signature
in the presence of two witnesses.

JAMES C. CARTER.

Witnesses:

H. L. FISHER,

SHERMAN GLENN.