To all whom it may concern:

Be it known that I, George W. Otterson, citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented a certain new and useful Improvement in Apparatus for Removing Sediment from Sumps and Catch-Basins, of which the following is a specification.

My invention relates to improvements in apparatus for removing sediment, as sand and mud, from the catch-basins or sand-catchers of sewers, and the object of my improvement is to provide a portable hydraulic excavator parts of which may be lowered within a catch-basin and then connected with a source of water under pressure, as with a hydrant or with a pipe of a water distribution system, whereby such water may serve to operate such hydraulic excavator to raise the sediment from such catch-basin to the surface of the street there to be deposited for removal to a desired dumping ground. I accomplish such object by devices illustrated in the accompanying drawings wherein—

Figure 1 illustrates by a view in vertical section a catch-basin within which is operatively disposed portions of the apparatus embodying my invention which apparatus is shown by a view in side elevation; Fig. 2 is a view in side elevation of such apparatus as it appears when disposed in its portable form; and Fig. 3 is a plan view of the same.

Referring to the drawings, throughout which like reference numerals indicate like parts, 5 designates a sewer which leads through a chamber 6 which is provided with an opening 7 that leads to the surface of a street pavement 8, which opening 7 normally may be closed by a suitable cover not shown.

The chamber 6 extends downwardly through and below the sewer 5 for a sufficient distance to form a catch-basin 9 that may serve as a trap for catching sand and mud that may settle into it from the water flowing through the sewer.

Supported from an arm 10 is a hydraulic elevator, of well known form, which extends vertically downward through the opening 7 to such distance that its lower end is near the bottom of the catch-basin 9; such hydraulic elevator comprising a main pipe of three joined sections 11, 12 and 13 to the upper end of which is connected a screw-threaded elbow 14 and to the lower end of which is connected a vacuum jet 15 to which is attached a suction member 16 and a water supply pipe 17, which water supply pipe 17 is bent to lead upwardly parallel with the main pipe and adjacent thereto to extend through the opening 7, and to its upper end is connected a hose 18 which extends to and connects with a hydrant 19 located at any convenient distance from the opening 7; but in cases where no hydrant is located at a suitable distance from such opening 7, then in such cases, a hose like the hose 18 may be extended from the upper end of the pipe 17 downwardly through the opening 7 to connect with a valve-controlled pipe 20 that may communicate with one of the mains, not shown, of a system of water distribution as indicated by dotted lines in Fig. 1.

The main pipe of the hydraulic elevator is pivotally suspended to the outer end of the arm 10 and the inner end of such arm 10 is associated with a winch 21, which is disposed on the body 22 of a vehicle and which is adapted to swing such arm 10 from its rearwardly projecting position, shown in Fig. 1, upwardly and over to its position as shown in Fig. 2, whereby the hydraulic elevator will be raised out of the chamber 6 through the opening 7 to be disposed on the body 22 of the vehicle, as shown in Fig. 2, and when thus disposed the hydraulic elevator may be transported by the vehicle to another point of use.

When the hydraulic elevator is disposed for operation, as shown in Fig. 1, water is admitted from the hydrant 19 into the hose 18 to flow downwardly through pipe 17, thence upwardly through the vacuum jet 15, thence to flow upwardly through the sections 11, 12 and 13 out of the elbow 14 to which may be connected a suitable conducting pipe, not shown, that may lead to any desired point where the sand and mud from the catch-basin 9 are to be disposed.

The flow of water from the pipe 17 upwardly through vacuum jet 15 creates such suction within the suction member 16 that the sand and mud contained in the catch-basin 9 will be drawn into the lower open end of the suction member 16 and there-through into and through into the vacuum jet 15, and thence forced upwardly through the sections 11, 12 and 13 of the main pipe.
with the water from the pipe 17 in a well
known manner.

When the sediment is thus removed from
the catch-basin 9 the flow of water from the
hydrant 19 may be stopped and the hose
18 disconnected whereupon the winch 21
may be operated by turning the crank 23
to actuate the arm 10 to raise the hydraulic
elevator out of the chamber 6 through the
opening 7, thence on to the body 22 of the
truck to lay thereon in the position indicated
in Figs. 2 and 3, and thereupon the opening
7 may be closed with a suitable cover.

The arm 10, while suspending the hy-
draulic elevator in its operative position,
has its outer end portion supported by a
round bar 27 which extends through holes
28 in the top portions of two vertical stand-
ards 29 whose lower ends are fixed to the
top surface of the rear end of the body 22
of the vehicle, which round bar 27 may be
removed when the arm 10 is raised to lift
the hydraulic elevator from the chamber 6
thus permitting the hydraulic elevator to
fall between the two standards 28 to its po-
position on the body 22 shown in Figs. 2 and 3.

The sections 12 and 13 are joined together
and associated with the section 11 and with
the elbow 14 by couplings 24, 25 and 26
and if it be desired to lengthen or shorten
the main pipe of the hydraulic elevator in
order to operate on catch-basins of different
depths from the surface of the street, then in
such cases, the sections 12 and 13 may be
replaced by longer or shorter sections as 35
may be required.

Manifestly other hydraulic elevators hav-
ing different forms of vacuum jets may be
substituted for the form shown in Fig. 1 and
different forms of mechanism may be em-
ployed in connection with the vehicle for
lowering and raising a hydraulic elevator in
the operation of cleaning catch-basins with-
out departing from the spirit of my inven-
tion.

I claim—

In a device of the kind described, a vehicle
including a platform, a horizontal shaft sup-
ported from and spaced transversely above
the platform, means to rotate the shaft, re-
leasable means arranged to stop movement
of the shaft in one direction, combined
guides and supports mounted at one end
of the platform, a removable pin connecting
the guides, a rigid arm fixed to the shaft and
movable to rest on the pin when the device
is in operative position, and a carrier mem-
ber pivoted to the free end of the arm and
arranged to lie in transport position flat on
the platform with its free end between the
60 guides and beneath the pin.

In witness whereof, I, hereunto subscribe
my name this seventh day of October, A. D.
1914.

GEORGE W. OTTENSON.

Witnesses:

FRANK WARREN,
A. HASKINS.