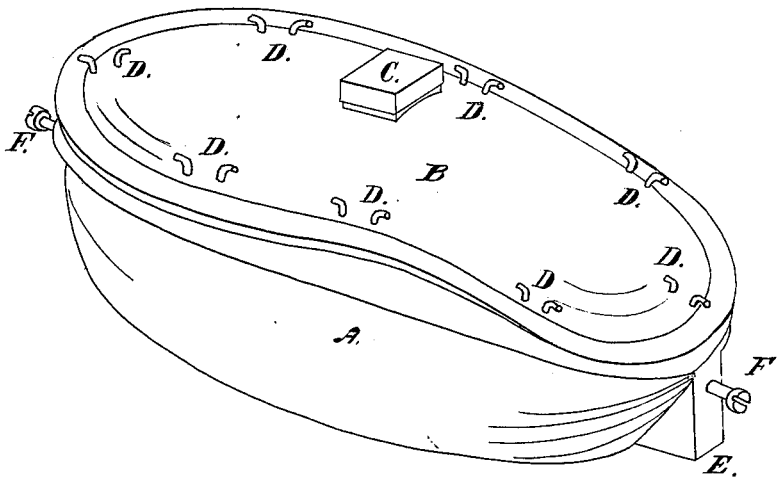
J. L. KETCHAM.

Reversible Dumping Boats.

No. 200,920. **Patented March 5, 1878.**



WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES L. KETCHAM, OF MILWAUKEE, WISCONSIN.

IMPROVEMENT IN REVERSIBLE DUMPING-BOATS.

Specification forming part of Letters Patent No. **200,920**, dated March 5, 1878; application filed December 8, 1877.

To all whom it may concern:

Be it known that I, JAMES L. KETCHAM, of the city of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Water-Cars; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, and to letters of reference marked thereon, which form a part of this specification.

The figure of the accompanying drawing represents a perspective view of my invention.

The object of my invention is to furnish improvements in vehicles for transporting coal, grain, and other commodities in bulk, which is adapted to float upon shallow water, and is intended to be towed by steam or horse power, which may be lifted bodily from the water with a crane and placed upon a car, or it may be unloaded by simply inverting the same when suspended by a crane above the place of deposit, thus avoiding the laborious process and delay of unloading now common; the construction of which vessel is further explained by reference to the accompanying drawing, of which—

A represents the body of the vessel, which is constructed in a substantial manner, of heavy sheet metal, similar in shape, but somewhat broader at the bottom in proportion to its capacity than ordinary vessels. B is the top of the vessel, which is constructed of the same material, and is secured to the body A of the vessel with bolts and rivets, in a substantial manner, so that when the vessel is inverted it will be capable of supporting the contents, which will thereby be thrown against it.

The cover B is made arching from both the ends and sides toward its center, by which arrangement the greatest strength of the metal is shaped to meet and resist the greatest strain of the vessel.

The inside of the vessel is convex, converging from all points toward the central opening C. Thus, when the vessel is inverted, the cover serves the purpose of a funnel or hopper, by means of which all its contents are discharged by their own gravity through the central opening.

D are coupling-arms, by means of which two or more vessels are coupled together when being towed, and are also convenient for handling and inverting the vessel, and also from which timbers are suspended against the sides of the vessel for their protection. E are bumpers, by which the ends of the vessels are connected together, and also serve to protect the ends of the vessels when they come in contact one with another; and they also provide a strong and convenient place of attachment for a crane or other device, by which the vessel is raised. F are gudgeons, which are attached temporarily to the bumpers when the vessel is being unloaded, and are removed when it is replaced in the water.

When desirous to elevate the vessel from the water, a bail extending from one of its ends to the other is thrown over it, and the arms of the bail are respectively attached to the gudgeons F, when a crane is attached to the bail, and the vessel is thereby raised, and, when thus suspended, it is easily inverted and the contents emptied.

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

1. A boat provided with pivots at each end, so as to be readily reversible, substantially as set forth.

2. Boat A, provided at each end with gudgeons or pivots F, and having cover D, constructed substantially as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JAS. L. KETCHAM.

Witnesses:

K. SHAWVAN,

JAS. B. ERWIN.