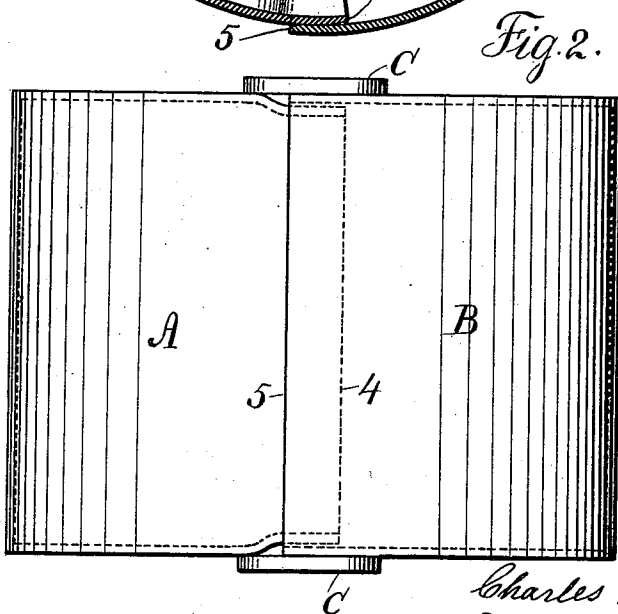
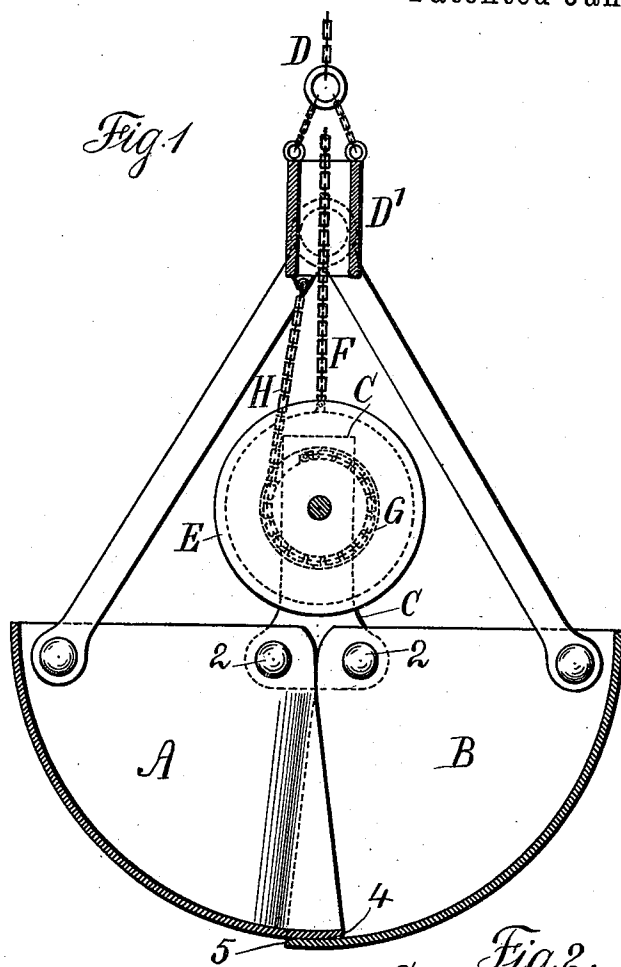


(No Model.)

C. W. HUNT.
EXCAVATING BUCKET.

No. 512,828.

Patented Jan. 16, 1894.



Witnesses:
J. Staib
Chas. H. Smith

Inventor:
Charles W. Hunt
per Lemuel W. Lovell

UNITED STATES PATENT OFFICE.

CHARLES W. HUNT, OF WEST NEW BRIGHTON, NEW YORK.

EXCAVATING-BUCKET.

SPECIFICATION forming part of Letters Patent No. 512,828, dated January 16, 1894.

Application filed September 21, 1893. Serial No. 486,124. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. HUNT, a citizen of the United States, residing at West New Brighton, in the county of Richmond and State of New York, have invented an Improvement in Excavating Buckets, of which the following is a specification.

In dredging machinery, buckets have been employed, made in two parts and hinged together, and these buckets have sometimes been provided with projecting teeth for engaging piles or wood-work to pull up or destroy the same; and the bucket itself in which sand, mud or similar material is excavated, has usually been made of two quarter cylindrical segments, the bottom edges of which have been brought into contact as the bucket was closed, but in consequence of the severe work and strain upon the parts of the excavating apparatus, it is very difficult to bring the straight bottom edges of the bucket closely together, and frequently the mud or other material will run out from within one end of the bucket, while the edges of the bucket are closely together at the other end of the bucket, thus lessening the excavating power of the bucket and causing considerable annoyance, and when the bucket becomes bent in this manner it is very difficult to straighten the same, and with loose materials, the presence of a piece of wood within one end of the bucket, or a stone or other obstruction will prevent the bucket closing tightly and some of the contents of the bucket will run out. Besides this the power exerted in closing the bucket is usually considerably greater near the end of the closing operation than it is in the commencement; this partially results from the sand or mud being more compact, and also from the materials packing or hardening between the edges as they come directly together.

My present invention is intended for obviating the before mentioned difficulties, and consists in an excavating bucket the lower edges of which are made to lap past each other, so as effectually to close the opening between the two buckets regardless of any roughness or inequality in the edges of the buckets and at the same time the edges of these buckets act in a manner similar to a

pair of shears to separate the materials that are to be hoisted and there is but little risk of a stone or similar obstruction being caught between the two parts of the bucket. The edges of the bucket do not act to pack the material, because one edge is moving in a different plane from the other and they go freely past one another. During the hoisting operation there is a constant tendency for the weight to open the bucket, but with the present improvement the resistance in cutting ceases and is done away with as soon as the edges slide past each other and the hoisting chain has nothing to do but to lift the weight.

In the drawings, Figure 1 is a vertical section illustrating the two halves or shells of the bucket, as closed together, and Fig. 2 is an inverted plan representing the manner in which the parts of the bucket lap one upon the other. The shells A and B of the bucket are pivoted at 2, so that they can be swung and opened or closed upon such pivots, and these pivots are usually upon a frame C, and such frame C usually carries a shaft and drum E to which the hoisting chain F is connected, and the smaller drums G are connected by chains H to the cross piece D' so as to open the bucket by drawing upon the chain, D or cross piece D' or to close the bucket by drawing upon the chain passing around the drum. These devices thus far described are well known and may be of any desired character.

In place of having the edge 4 of the bucket A come up against the edge 5 of the bucket B, I have the edge 4 to pass over and closely adjacent to the edge 5, the distance between the edge 4 and the pivot or axis of motion being less than the distance between its pivot or axis and the edge 5. For this reason the edge 4 of the bucket A can be made to pass over and lap upon the edge 5 of the bucket B to any desired extent, and the two edges of bucket are similar to the cutting edges of a pair of shears, so that as the bucket is closed, such edges will separate any substance that is easily cut or broken, and the bucket will close so that mud, sand or similar material will not run through between the two parts of the bucket in consequence of the parts having become twisted, notched, rough or

bent. The lapping of one bucket upon the other is not likely to be interfered with, even though the edges 4 and 5 may not be parallel with each other. Hence the risk of a portion 5 of the contents of the bucket running out as the bucket is elevated, is reduced to a minimum, and the bucket is rendered much more effective because less liable to be obstructed by foreign substances in the closing of the 10 two parts of the bucket, and the hoisting rope or chain is free from the strain connected with the closing of the bucket.

I claim as my invention—

In an excavating apparatus, the two parts or shells having the edge 5, of the bucket B, 15 below the edge 4 of the bucket A, so that in closing, the one edge passes above the other and the one bucket laps upon the other and the edges pass beyond the cutting point, substantially as set forth. 20

Signed by me this 18th day of September, 1893.

CHAS. W. HUNT.

Witnesses:

JAMES P. J. MORRIS,

GEO. S. HUMPHREY.