No. 764,907. PATENTED JULY 12, 1904.

G. P. WERN.

HOISTING BUCKET.

APPLICATION FILED NOV. 23, 1903.

NO MODEL.

Fig. 1.

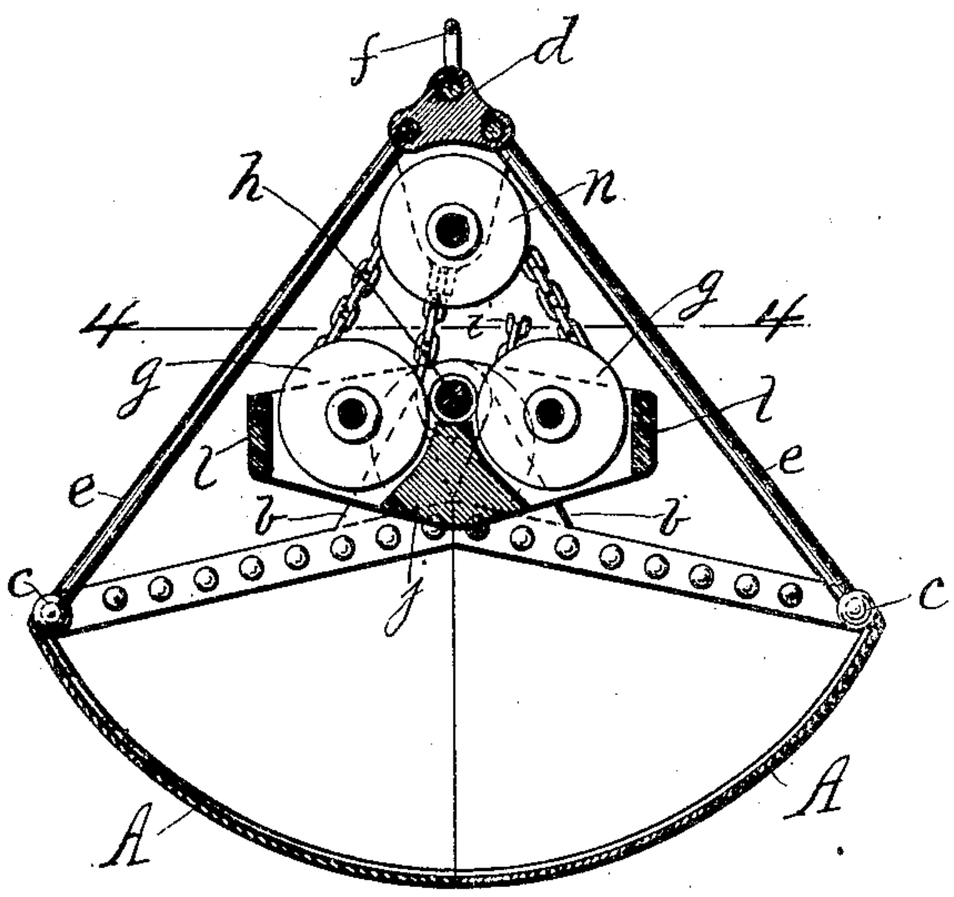



Fig. 2.

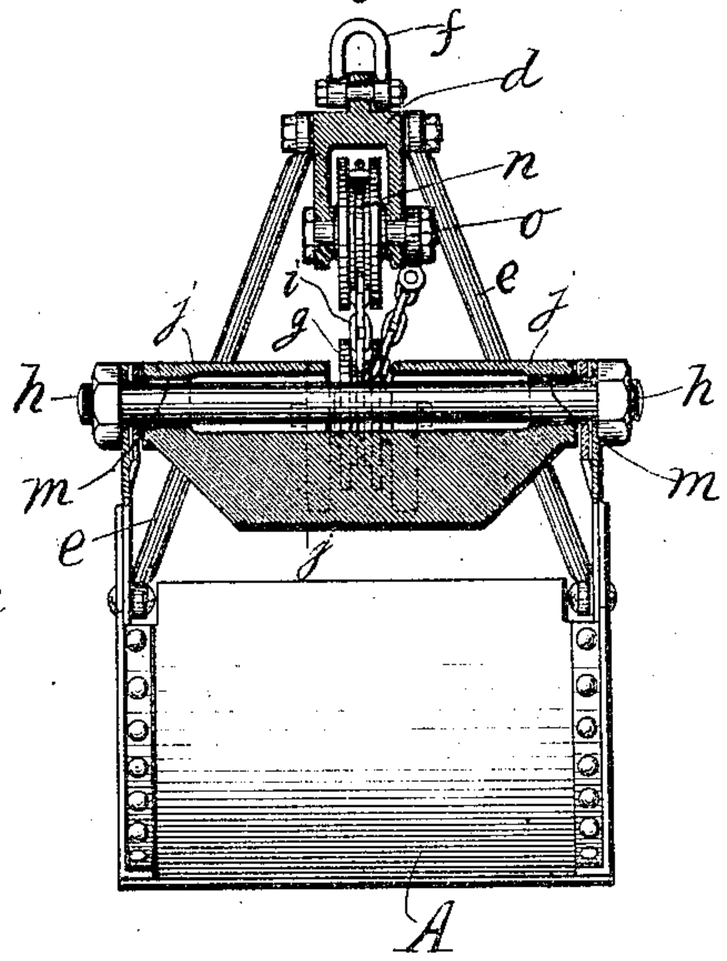



Fig. 3.

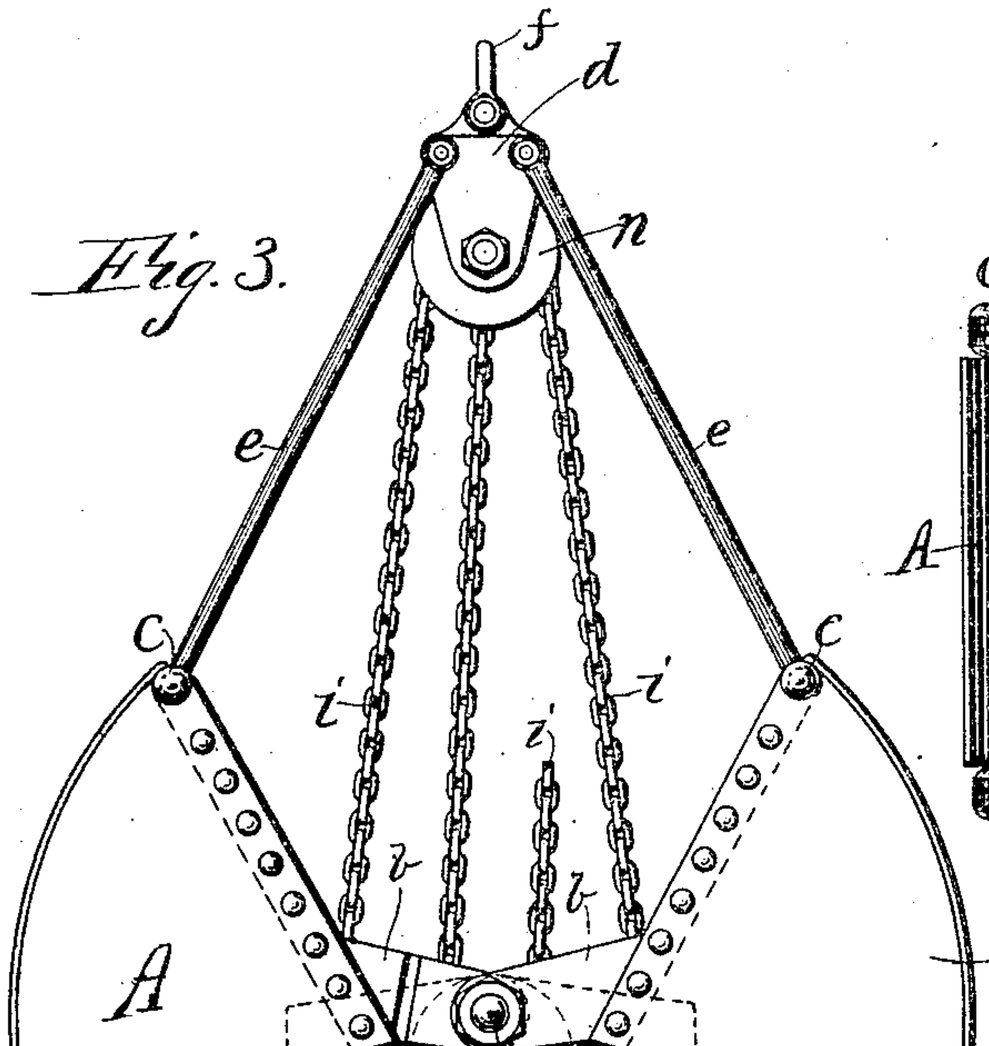
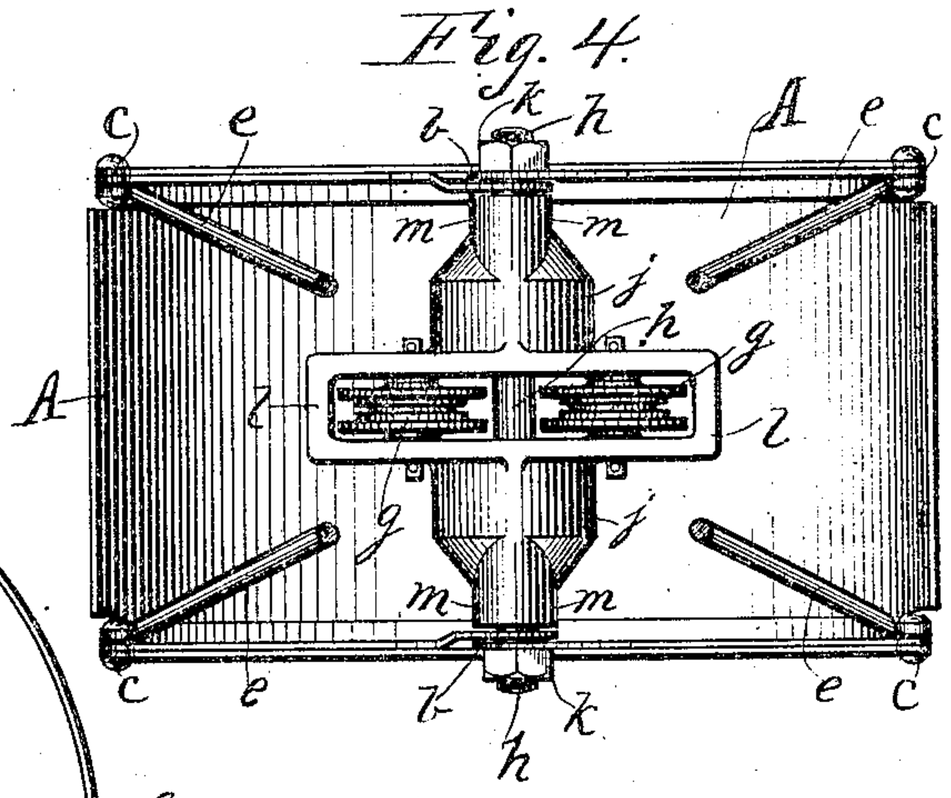



Fig. 4.




WITNESSES:

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No. 764,907. Patented July 12, 1904.

# UNITED STATES PATENT OFFICE.

GUSTAF PERS. WERN, OF NEW YORK, N. Y., ASSIGNOR TO RAWSON & MORRISON MANUFACTURING CO., OF CAMBRIDGEPORT, BOSTON, MASSACHUSETTS.

## HOISTING-BUCKET.

SPECIFICATION forming part of Letters Patent No. 764,907, dated July 12, 1904.

Application filed November 23, 1903. Serial No. 182,347. (No model.)

*To all whom it may concern:*

Be it known that I, GUSTAF PERS. WERN, a citizen of the United States of America, and a resident of New York city, county and State of New York, have invented certain new and useful Improvements in Hoisting-Buckets, of which the following is a specification.

My invention relates to hoisting buckets or scoops for dredges such as are employed for deepening waterways, hoisting coal, and the like; and it consists of an improved device for coupling the bucket opening and closing chain more substantially and durably and so that the coupling-pivot for the two jaws of the bucket may be more conveniently replaced when worn too much for further use, as hereinafter described, reference being made to the accompanying drawings, in which—

Figure 1 is a vertical section of the bucket transversely of the pivot-shaft with the two parts or jaws closed. Fig. 2 is a central vertical section parallel with the pivot-shaft. Fig. 3 is a side elevation as when suspended on the hoisting-chain and opened for descending to take a load. Fig. 4 is a plan view of the closed bucket with the suspending-rods sectioned on line 4 4, Fig.

A represents the two parts of the bucket or scoop, which are constructed in the usual form and pivoted together by ear-lugs *b* and suspended at the heels *c* from the suspending block *d* by rods *e* in the usual manner, and said block *d* is to be suspended from the lowering and hoisting chain (not shown) by the clevis *f*, also in the usual manner.

My invention is as follows: Instead of mounting-sheaves *g* for the bucket opening and closing chain *i* on the axial shaft *h*, whereon the ear-lugs *b* of the parts A of the bucket are pivoted, as commonly arrranged, I provide a head-block having a body part *j* reaching longitudinally of the axis of the parts A and pivoted on shaft *h* inside of the pivot-lugs *b*, through which the said pivot-shaft extends and receives the nuts *k*, confining said pivot-lugs on the pivot-shaft, and said body part is provided on each side at the middle with sheave pivot-housings *l*, in which the sheaves *g* are respectively pivoted on opposite sides of shaft *h* and independently of it.

The pivot-shaft has its bearings at *m* in the extremities of the body part *j* of the head-block close to the point where the shaft sustains the weight of the bucket, and the stresses of the bucket opening and closing chain *i* are delivered through the sheave-housings *l* and body part *j* of the head-block on the shaft at its bearings *m*, whereby through the head-block being a rigid structure, as it has to be for considerable weight to open the bucket, there is no tendency of the shaft to spring and wear unduly as when the sheaves *g* are carried on it and near its center apart from its bearings in the common way.

It will be seen that in the construction the bearings *m* may be of considerable length for durability in wear, and the improved construction affords simple and easy removal of the pivot-shaft when necessary.

The bucket-suspending block *d* carries the usual sheave *n* for the bucket-closing chain *i*, one end of which is connected to the sheave-pivot at *o*, while the other end, after passing over one of the sheaves *g* and over sheave *n* and thence around the other sheave *g*, passes on to the usual bucket-closing device employed in the operation of such buckets, but which it is not necessary to show or describe herein.

What I claim as my invention is—

1. The combination with the two parts of a hoisting-bucket, shaft by which said parts are pivoted together, hoisting-chain, and bucket-opening chain, of the head-block having the body part in the extremities of which the bucket pivot-shaft has bearings in close proximity to the bucket-pivots respectively, and the sheave-housing part carrying the sheaves of the bucket-closing chain independently of the pivot-shaft.

2. The combination with the two parts of the hoisting-bucket, shaft by which said parts are pivoted together, hoisting-chain, and bucket-opening chain, of the head-block having the body part in the extremities of which the bucket pivot-shaft has bearings in close

proximity to the bucket-pivots respectively, and the sheave-housing part carrying the sheaves of the bucket-closing chain independently of the pivot-shaft and on opposite sides of said shaft respectively.

3. The combination with the two parts of the hoisting-bucket, shaft by which said parts are pivoted together, hoisting-chain and bucket opening and closing chain, of the head-block having the body part in the extremities of which the bucket pivot-shaft has bearings in close proximity to the bucket-pivots respectively, and the sheave-housing part carrying the sheaves of the bucket-closing chain independently of the pivot-shaft and on opposite sides of said shaft respectively, said shaft being removable independently of the sheaves.

Signed at New York this 25th day of October, 1903.

GUSTAF PERS. WERN.

Witnesses:
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