No. 676,189. Patented June 11, 1901.

J. C. HOSHOR.

CLAM SHELL BUCKET.

(Application filed Oct. 1, 1900.)

(No Model.)

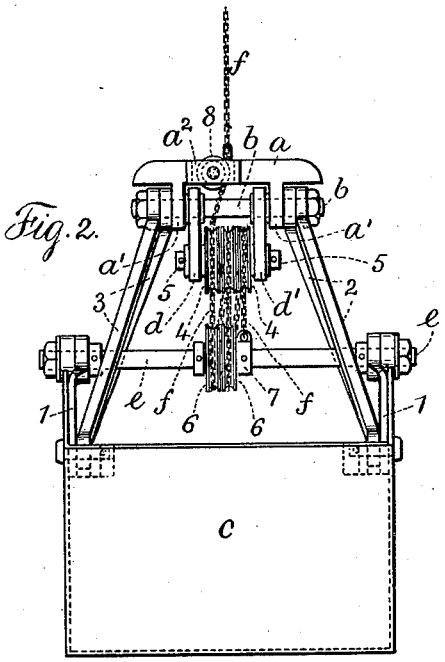


Fig. 2.

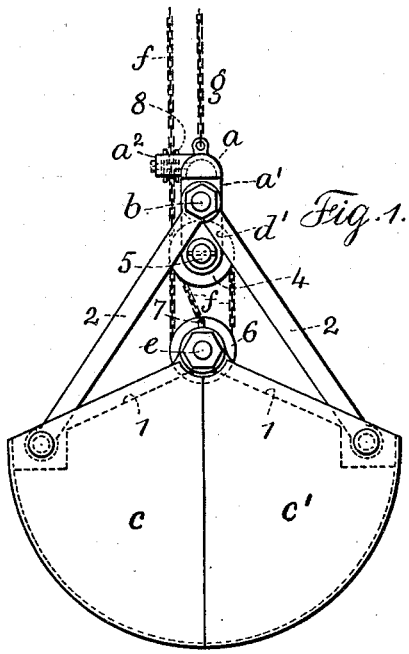
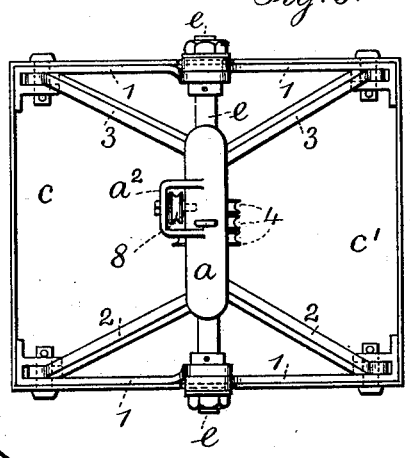


Fig. 1.

Fig. 3.



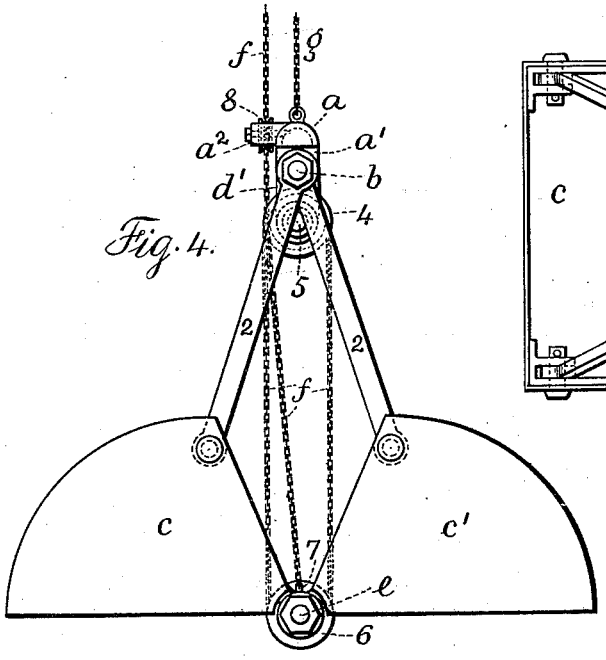


Fig. 4.

Witnesses:
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UNITED STATES PATENT OFFICE.

JOSEPH C. HOSHOR, OF PATERSON, NEW JERSEY, ASSIGNOR TO HIMSELF AND THOMAS E. PLATT, OF SAME PLACE.

CLAM-SHELL BUCKET.

SPECIFICATION forming part of Letters Patent No. 676,189, dated June 11, 1901.

Application filed October 1, 1900. Serial No. 31,606. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH C. HOSHOR, a citizen of the United States, residing at Paterson, in the county of Passaic and State of New Jersey, have invented an Improvement in Clam-Shell Buckets, of which the following is a specification.

My invention relates to improvements in clam-shell or hoisting buckets, with the object of simplifying the construction and making more effective the operation of the parts. I provide the head-block with a shaft acting as a common support for the pairs of links extending to the halves of the clam-shell bucket and for other links supporting a shaft and sheaves around which the closing-chain passes, so that the latter links are adapted to swing on the same device or pivot as the buckets and the aforesaid links regardless of the position assumed by the bucket in picking up the material forming the load. The two parts of the bucket are pivoted together to a shaft which carries other sheaves around which the closing-chain passes, and the respective sets of sheaves are close together, and they are not pulled out of line in operation because of the swinging of the set of sheaves nearest the head-block upon the links and shaft provided therefor.

In the drawings, Figure 1 is a side elevation, Fig. 2 an end elevation, and Fig. 3 a plan, representing my invention; and Fig. 4 is a side elevation showing the parts of the clam-shell bucket as fully open.

The head-block *a* is provided with lugs *a'*, extending downward from the under side, and with a loop a^2, extending out at one side, and the lugs and loop are preferably made integral with the head-block. A shaft *b* passes through the lugs *a'* and forms a common support for the pairs of links 2 3, pivoted thereto and extending from the said shaft to opposite corners of the halves *c c'* of the clam-shell bucket, which halves are preferably stiffened along the inclined upper edges by ribs 1, which provide sufficient metal for the pivots by which the lower ends of the pairs of links 2 3 are connected to the halves of the bucket.

I provide links *d d'*, suspended or hanging from the shaft *b* and at their lower ends receiving a short shaft 5, forming a support for the sheaves 4, located on said shaft between the said links. The halves *c c'* of the bucket are pivotally connected to a shaft *e*, which extends across and passes through lugs offset from one another and formed as central continuations of the ribs 1. This shaft *e* carries sheaves 6 and collars around the shaft *e* on opposite sides of the sheaves to hold the same in position, one of said collars 7 forming a point of attachment for the closing-chain *f*, which extends therefrom progressively and alternately around the sheaves 4 and 6 and upward through the loop a^2 and over the edge of a grooved roller 8, preferably pivoted to the loop and to the head-block.

The hoisting-chain *g* is connected to the head-block in any desired manner. I have for the purpose of illustration shown the same connected to a simple eye formed integral with or secured to the central portion of the head-block. In the closed position of the bucket (shown in Figs. 1, 2, and 3) it will be noticed that the sheaves 4 and 6 are close together, so that no great length of chain is employed and the power devices are close to one another. It will also be noticed that the parts of the bucket, whether the same are closed or open, are free to swing on the shaft *b*. This is especially advantageous when the bucket is open and rests upon the mass of material part of which is to form the load of the bucket, as in this case the open mouth of the bucket may assume any inclination corresponding with the inclination of the surface of the material. Whatever this inclination may be, it is advantageous that the closing-chain, as between the sheaves, should draw in a straight line without putting any undue strain on the parts of the mechanism and that the devices in my improvement permit of the chain drawing straight, because with this inclination the links *d* will swing on the shaft *b* to conform thereto, so that the parts of the closing-chain, as extending between the sheaves 4 and 6, which are close together, will draw straight and always at right angles to the open mouth of the bucket. With this construction and because the sheaves 4 are not on the shaft *b*, but on the separate shaft 5, less power is

required to operate the bucket than would be the case in a device not susceptible to such adjustability.

I claim as my invention—

1. In a bucket, the combination with the pivoted halves of the bucket and the shaft therefor, the pairs of links and the head-block, of a shaft passing through the head-block and to which the said pairs of links are pivotally connected, sheaves and supporting-links therefor pivotally connected to the shaft of the head-block and adapted to swing with the movement of the bucket below the head-block, the sheaves upon the shaft pivotally connecting the halves of the bucket and the closing-chain passing around the sheaves whereby the closing-chain will at all times draw straight and at right angles to the open mouth of the bucket, substantially as set forth.

2. The combination with the halves of the bucket, a shaft pivotally connecting the same and pairs of links extending from the corners of the halves of the bucket, of a head-block with lugs on the under side, a shaft passing through the lugs and to which the upper ends of the pairs of links are pivotally connected, links upon the said shaft between the said lugs and hanging therefrom, a shaft carried by the lower free ends of the links, sheaves upon said shaft between the links, sheaves upon the pivotal shaft of the halves of the bucket, a chain passing around the sheaves for closing the bucket and a chain for hoisting the bucket, substantially as set forth.

3. The combination with the halves of the bucket, a shaft pivotally connecting the same, and pairs of links extending from the corners of the halves of the bucket, of a head-block with lugs on the under side, a shaft passing through the lugs and to which the upper ends of the pairs of links are pivotally connected, links upon the said shaft between the said lugs, and hanging therefrom, a shaft carried by the lower free ends of the links, sheaves upon said shaft between the links, sheaves upon the pivotal shaft of the halves of the bucket, collars upon the pivotal shaft of the halves of the bucket at either side of the sheaves, a closing-chain connected to one of said collars and passing progressively and alternately around the respective sheaves, and a guide for the said closing-chain in the said head-block, substantially as set forth.

Signed by me this 24th day of September, 1900.

JOSEPH C. HOSHOR.

Witnesses:
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