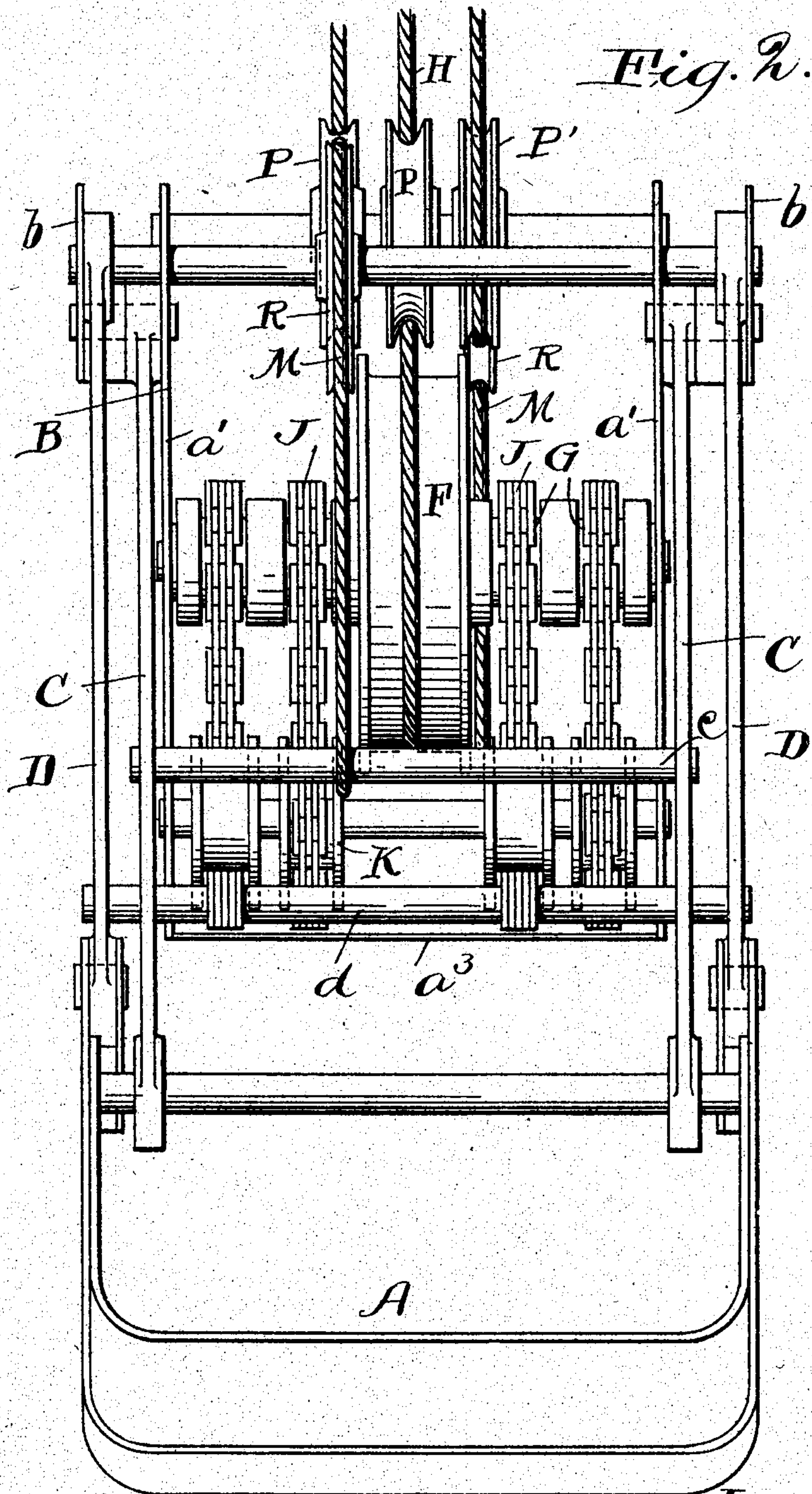


J. McMYLER.
CLAM SHELL BUCKET.
APPLICATION FILED DEC. 5, 1904.

3 SHEETS—SHEET 2.



Witnesses.
E. B. Gilchrist
N. L. Brennan

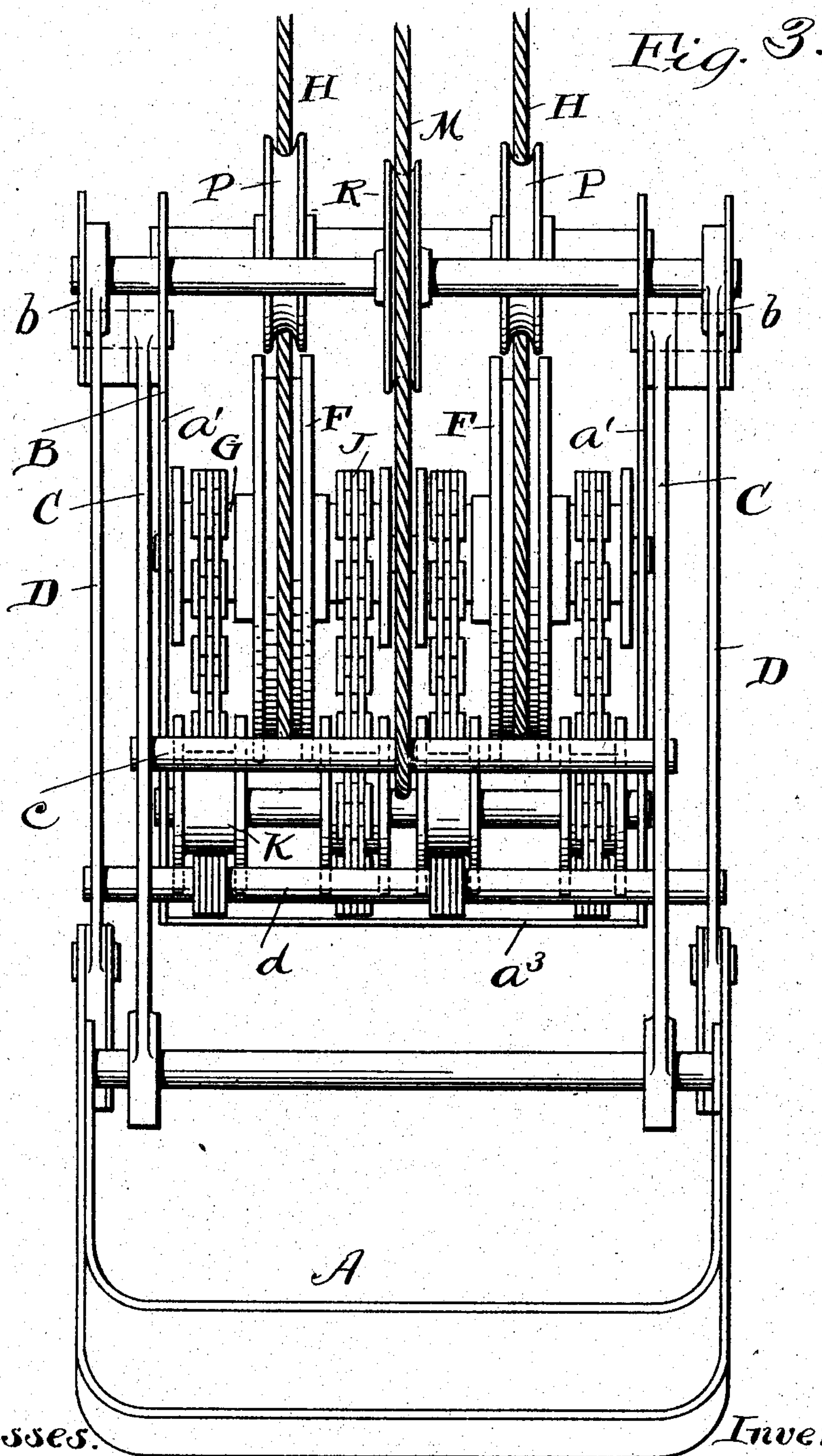
Inventor.
John McMyler,
By his Attorneys
Thurston & Bates

No. 796,003.

PATENTED AUG. 1, 1905.

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UNITED STATES PATENT OFFICE.

JOHN McMYLER, OF CLEVELAND, OHIO.

CLAM-SHELL BUCKET.

No. 796,003.

Specification of Letters Patent.

Patented Aug. 1, 1905.

Application filed December 5, 1904. Serial No. 235,455.

To all whom it may concern:

Be it known that I, JOHN McMYLER, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Clam-Shell Buckets, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention is a novel clam-shell bucket which is especially designed for use in unloading ore-boats.

One object of the invention is to provide a clam-shell bucket which when open has a very wide reach, but is very short-measured from top to bottom—qualities which are especially useful for the purpose stated, as well as for use in any place where it is desirable to have the buckets reach under low beams or platforms or the like and draw the material toward the center.

Another object is simplicity of construction and ease and certainty of operation.

The invention may be summarized as consisting of the combinations of parts hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation of a bucket embodying my invention, the full lines showing it closed and the dotted lines showing it open. Fig. 2 is an end view of one form of the invention in which there is one power-wheel. Fig. 3 is an end view of a form of the invention which employs two power-wheels.

Referring to the parts by letters, A A represent the two bucket-scoops. B represents the frame from which said scoops are suspended, each of two links C C and two links D D. These links are all freely suspended from the sides of the bucket-frame and from points near the upper end thereof. The links C are suspended from pivots placed about midway between the ends of the frame, and preferably all four of these links are suspended so as to swing about the same centrally-placed axis. These links are pivotally connected at their lower ends with the bucket-scoops at points near the outer ends of the latter. The links D D are pivotally connected with the bucket-scoops near the front ends thereof, and the pivots from which these links are suspended are located on opposite sides of the axis of the links C and preferably near the ends of said frame. The described construction is clearly illustrated in the drawings, from which it appears that the

links C C cross the links D D. At the upper end of the frame, on each side thereof, are two horizontal bars *b*, which are secured to the frame and really form a part thereof. The upper ends of the links lie between these bars and the associated side plates *a'* of the frame. The frame, however, may be of any suitable construction. The frame shown consists, in addition to the bars referred to, of two parallel plates *a'* and numerous transverse bars *a''*, which connect them, and the lower ends of these plates are preferably connected by a horizontal plate *a'''*, which serves to protect the mechanism mounted in the frame from contact with the load in the scoops.

A power wheel or wheels F are rotatively mounted in the frame between the two side plates thereof, and winding-drums G are secured to the power-wheel or power-wheels. The hoisting-rope H is wound upon the power-wheel. Closing-chains J (or ropes) are wound upon the winding-drums and are connected to the links D. Preferably these closing ropes or chains pass around idler-wheels K, mounted in the frame below the winding-drums. These idler-wheels are provided so that the pull upon the links to close the scoops will be exerted in the most effective direction during the entire closing movement of the scoops. The opening-ropes M are connected with the links C, or, to be more exact, they are connected with cross-bars *c*, which extend between and are secured to corresponding links C. Similarly the closing-chains J, of which, preferably, four are employed, are not connected directly with the links D, but are connected with transverse bars *d*, which extend between and are connected with corresponding links D.

It will be understood that there are as many guide-sheaves mounted in the upper end of the frame as occasion requires. For example, if two power-wheels are employed there will be two hoisting-ropes, and these will pass upward in contact with two guide-sheaves P. In this case the two opening-ropes M will be placed midway between the sides and will pass upward in contact with two guide-sheaves R. If only one power-wheel is employed, there will, of course, be only one hoisting-rope, which will be midway between the sides, and it will require only one guide-sheave P, in that event opening-ropes, which will pass over two guide-sheaves R, then to and under two other guide-sheaves P P', and thence upward, are provided.

I claim—

1. In a clam-shell bucket, the combination of a frame, and two bucket-scoops, with two links C, C pivotally suspended from each side of the frame and pivotally connected with the scoops respectively near the rear ends thereof, two links D, D on each side of the frame which are pivotally connected at their lower ends with the front ends of the scoops respectively, and which cross the links C, C and are pivotally connected at their upper ends to the frame at points outside of the pivots of the links C, C, and means for opening and closing said scoop.

2. In a clam-shell bucket, the combination of a frame, and two bucket-scoops, with two links C, C pivotally suspended from each side of the frame and pivotally connected with the scoops respectively near the rear ends thereof, two links D, D on each side of the frame which are pivotally connected at their lower ends with the front ends of the scoops respectively, and which cross the links C, C and are pivotally connected at their upper ends to the frame at points outside of the pivots of the links C, C, opening-ropes connected with the links C, C and closing-ropes connected with the links D, D.

3. In a clam-shell bucket, the combination of a frame, and two bucket-scoops, with two links C, C pivotally suspended from each side of the frame and pivotally connected with the scoops respectively near the rear ends thereof, two links D, D on each side of the frame which are pivotally connected at their lower ends with the front ends of the scoops respectively, and which cross the links C, C and are pivotally connected at their upper ends to the frame at points outside of the pivots of the links C, C, transverse bars connecting the links on one side of the frame with the corresponding links on the other side of the frame, opening-ropes connected with the cross-bars which connect the links C, C, and closing-ropes connected with the cross-bars which connect the links D, D.

4. In a clam-shell bucket, the combination of a frame, and two bucket-scoops, with two links C, C pivotally suspended from each side of the frame and pivotally connected with the scoops respectively near the rear ends thereof, two links D, D on each side of the frame which are pivotally connected at their lower ends with the front ends of the scoops respectively,

and which cross the links C, C and are pivotally connected at their upper ends to the frame at points outside of the pivots of the links C, C, opening-ropes connected with the links C, C, a power-wheel mounted in the frame, a hoisting-rope wound thereon, winding-drums mounted in said frame and operated by said power-wheel and upon which the closing-ropes are wound, and guide-sheaves mounted in the upper end of said frame.

5. In a clam-shell bucket, the combination of a frame, and two bucket-scoops, with two links C, C pivotally suspended from each side of the frame and pivotally connected with the scoops respectively near the rear ends thereof, two links D, D on each side of the frame which are pivotally connected at their lower ends with the front ends of the scoops respectively and which cross the links C, C and are pivotally connected at their upper ends to the frame at points outside of the pivots of the links C, C, opening-ropes connected with the links D, D, and closing-ropes connected with the links C, C, a power-wheel mounted in the frame, a hoisting-rope wound thereon, winding-drums mounted in said frame and operated by said power-wheel and upon which the closing-ropes are wound, idler-wheels over which said closing-ropes run in passing from the links to the winding-drums, and guide-sheaves mounted in the upper end of said frame.

6. A clam-shell bucket, the combination of a frame consisting of two side plates, a plate connecting the bottom of said plates, and a plurality of connecting-bars, with two bucket-scoops, two links C, C pivotally suspended from each side of the frame and pivotally connected with the scoops respectively near the rear ends thereof, two links D, D on each side of the frame which are pivotally connected at their lower ends with the front sides of the scoops respectively and which cross the links C, C and are pivotally connected at their upper ends to the frame at points outside of the pivots of the links C, C, opening-ropes connected with the links D, D, and closing-ropes connected with the links C, C.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

JOHN McMYLER.

Witnesses:

E. L. THURSTON,
ALBERT H. BATES.