

No. 776,081.

PATENTED NOV. 29, 1904.

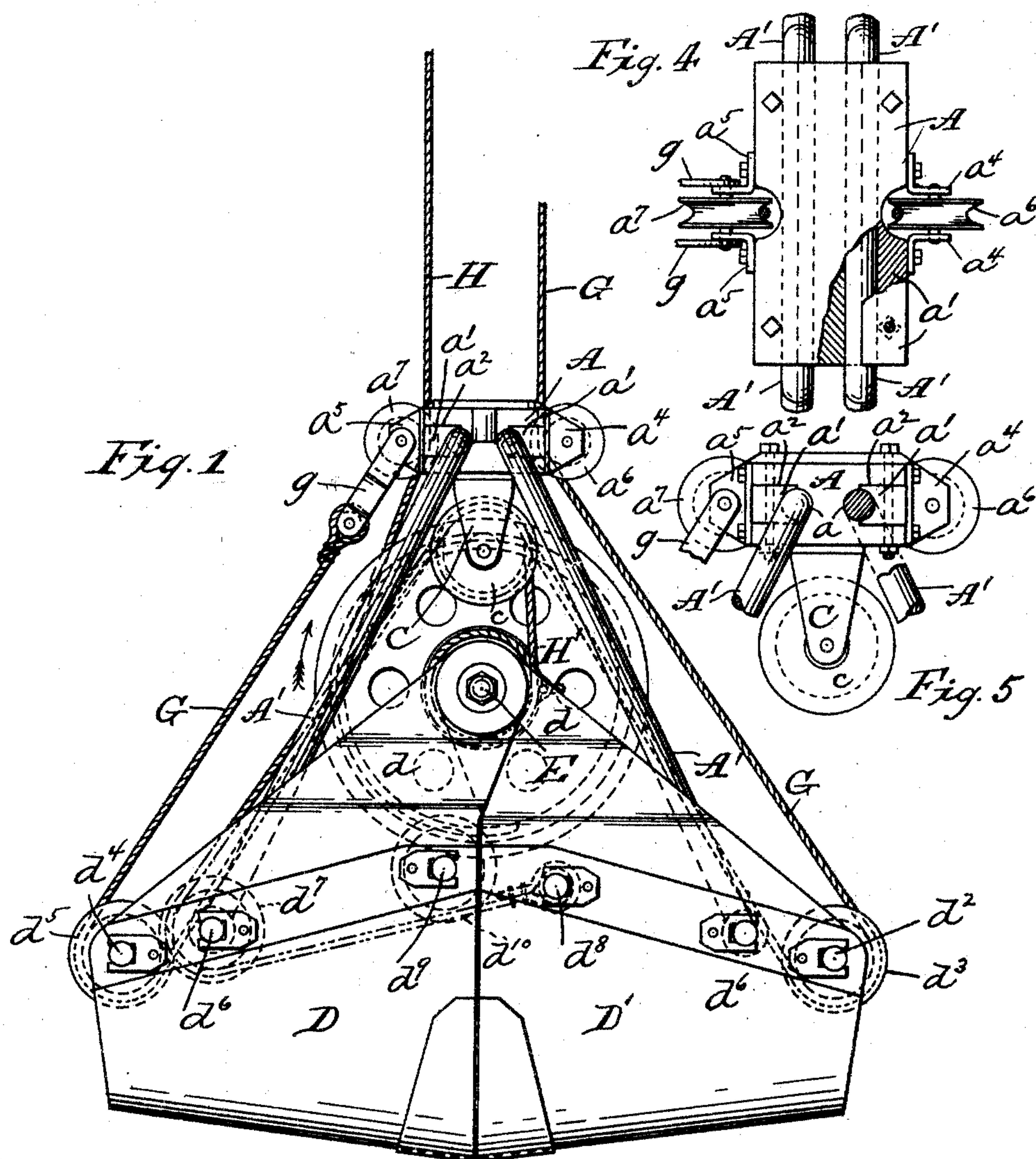
J. McMYLER & F. W. LOVELL.

CLAM SHELL BUCKET.

APPLICATION FILED DEC. 21, 1903.

NO MODEL.

3 SHEETS—SHEET 1.



Witnesses:

A. L. Lord,
B. W. Brockett.

Inventors.

John McMyler
Frederick W. Lovell
By Thurston M. Bates,
Attorneys.

No. 776,081.

PATENTED NOV. 29, 1904.

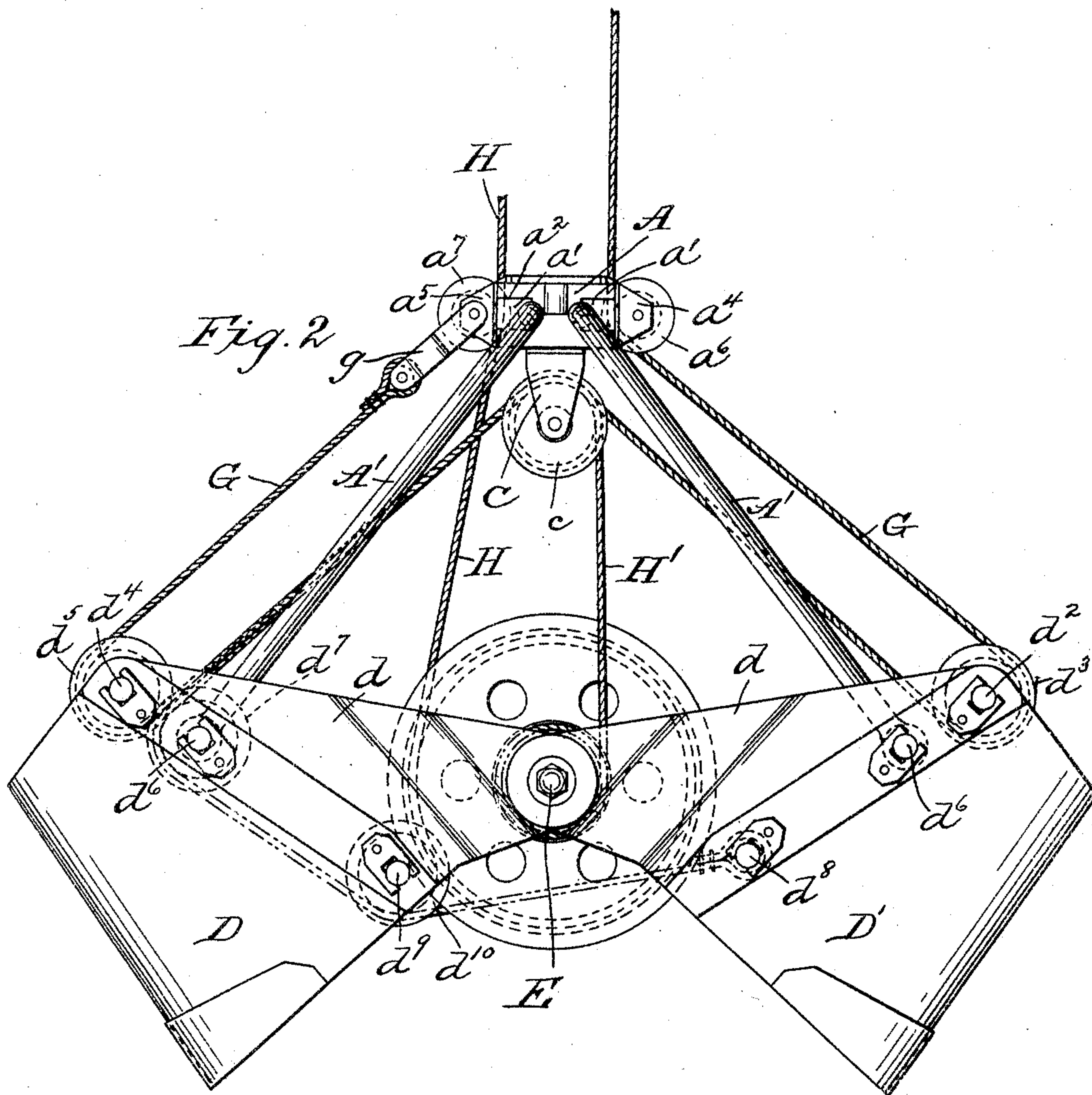
J. McMYLER & F. W. LOVELL.

CLAM SHELL BUCKET.

APPLICATION FILED DEC. 21, 1903.

NO MODEL.

3 SHEETS—SHEET 2.



Witnesses:

A. L. Lord.

B. W. Brockett.

Inventors.

John McMyler.

Frederick W. Lovell.

By Thurston & Bates

Attorneys.

No. 776,081.

PATENTED NOV. 29, 1904.

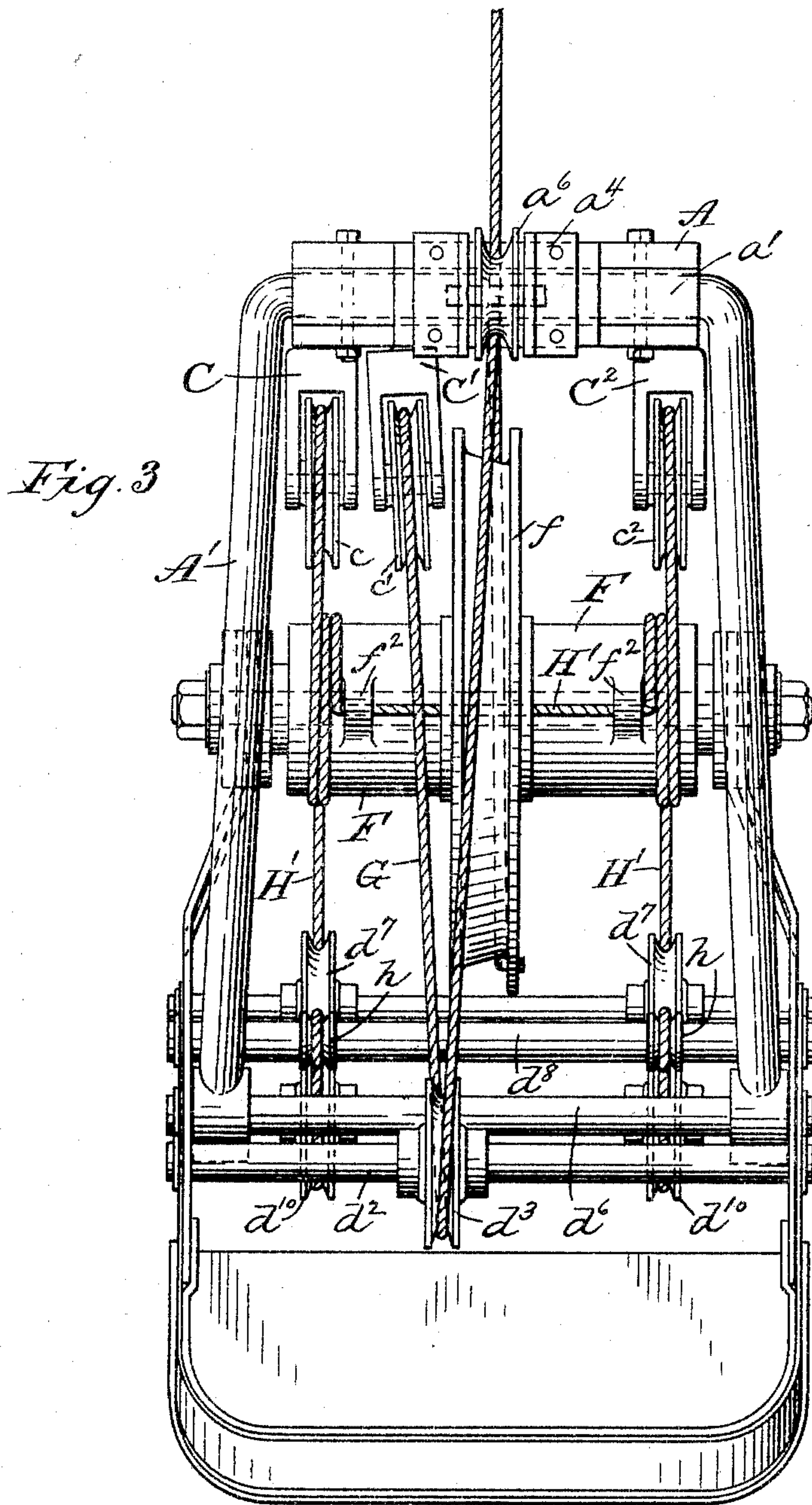
J. McMYLER & F. W. LOVELL.

CLAM SHELL BUCKET.

APPLICATION FILED DEC. 21, 1903.

NO MODEL.

3 SHEETS—SHEET 3.



Witnesses:-

A. L. Lord.
B. W. Brockett.

Inventors.

John McMyler,
Frederick W. Lovell,
By Thurston & Bates,
Attorneys.

UNITED STATES PATENT OFFICE.

JOHN McMYLER AND FREDERICK W. LOVELL, OF CLEVELAND, OHIO;
SAID LOVELL ASSIGNOR TO SAID McMYLER.

CLAM-SHELL BUCKET.

SPECIFICATION forming part of Letters Patent No. 776,081, dated November 29, 1904.

Application filed December 21, 1903. Serial No. 185,949. (No model.)

To all whom it may concern:

Be it known that we, JOHN McMYLER and FREDERICK W. LOVELL, both citizens 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.

The invention relates to improvements in clam-shell buckets, the object being to simplify and cheapen the construction of such devices.

The invention consists in the construction and combination of parts constituting the bucket, substantially as shown, and in the arrangements and connections of the opening and closing ropes, all as hereinafter described, and definitely set forth in the claims.

In the drawings, Figure 1 is a side elevation of the bucket in its closed position. Fig. 2 is a side elevation showing the bucket when open. Fig. 3 is an end elevation. Fig. 4 is a plan view, partly in section, of the head-block and associated parts; and Fig. 5 is an enlarged side view of the same parts.

The bucket includes two scoops D D'. Both sides of each scoop, near the front end thereof, extend upward, thereby forming arms d , said arms being pivoted together by the cross-shaft E. It is about the axis of this shaft that the two scoops swing as they are opened and closed. Each scoop, near the rear end thereof, is pivotally connected, by means of the cross-shafts d^6 , to the lower ends of the side bars of swinging frames A', whereby said rear ends of the scoops are supported and guided. Each of these swinging frames, of which there are two, one for each scoop, is approximately U-shaped and consists of two side bars and a horizontal cylindrical middle portion, which in the best construction is integral with the two side bars and approximately at right angles thereto. These middle portions of the two frames are mounted, so as to be capable of turning, in a head-block A. This head-block has in its opposite ends horizontal re-

cesses a^2 , which extend from one side to the other thereof, the inner wall of each recess being of semicylindrical form. The blocks a' are respectively secured in these recesses a^2 , and the inner ends of these blocks are provided with semicylindrical grooves, wherefore there is formed within each recess a^2 a cylindrical bearing in which the middle part of a swinging frame A' is mounted. By having outwardly-opening recesses in the head-block we are able to make the swinging side frames integral, which increases their strength and rigidity, as well as reduces their cost.

The brackets a^4 and a^5 are secured to the ends of the head-block a , and in these brackets the sheaves a^6 a^7 are respectively mounted. These brackets C C' C² are secured to the under side of the head-block, and in these brackets the sheaves c c' c^2 are respectively mounted.

The winding-drums F and intermediate operating-drum f , which is of larger diameter, are rotatably mounted upon the shaft E, and said drums are rigidly connected together.

Near the rear end of the scoop D is the cross-shaft d^2 , and this shaft carries the rotating sheave d^3 . The scoop D' is provided with similarly-placed cross-shafts d^4 , upon which is the rotatable sheave d^5 . The shaft d^6 of the scoop D also carries two rotatable sheaves d^7 .

The opening-rope G passes down in the groove of the sheave a^6 , around sheave d^3 , over sheave c' , under sheave d^5 , and up to the head-block A, to which it is attached by a clevis g . By pulling up on the rope G the scoops obviously are drawn apart.

The closing-rope H passes down in the groove of the sheave a^7 to the large drum f , to which it is attached and upon which it is wound. Another rope H' is attached to both of the drums F by means, for example, of the eyes f^2 , and the ends respectively pass up over sheaves c and c^2 , then down under sheaves d^7 d^7 , then under sheaves d^{10} d^{10} on a cross-shaft a^9 , carried by the scoop D, and the ends of the rope are finally fastened to the eyes h , which embrace the cross-shaft d^8 , carried by the scoop D.

Having described our invention, we claim—

1. In a clam-shell bucket, the combination with a head-block having a recess opening to the exterior of the block, a U-shaped swinging frame consisting of two side bars, and an integral middle portion which seats in said recess, means for retaining such middle portion in the recess, and a scoop held by the free end of said frame.
2. In a clam-shell bucket, the combination with a head-block having recesses, and of swinging frames each having a portion which is pivotally mounted in one of said recesses, and blocks removably secured in said recesses, of scoops pivoted to the free ends of the side bars of said swinging frames, said scoops being pivoted together, and means for opening and closing said scoops.
3. In a clam-shell bucket, the combination with a head-block having recesses opening to the exterior of the block, U-shaped swinging frames each consisting of two side bars and an integral middle portion which seats in one of said recesses, a filling-block for each recess pivotally holding said middle portion within its recess, means for holding the filling-blocks in place, scoops pivoted to the free ends of said frames, said scoops being pivoted together, and means for opening and closing said scoops.
4. In a clam-shell bucket, the combination with a head, of swinging frames pivoted thereto, scoops supported by said frames, a rotatable drum, a support for said drum connected with the scoops, a closing-rope arranged to rotate the drum, a sheave carried by the head, a sheave carried by one of the scoops, and a rope passing from said drum over the sheave carried by the head around the sheave carried by the scoop, the rope being fastened to the other scoop.
5. In a clam-shell bucket, the combination of a head, swinging frames pivoted thereto, a cross-shaft, scoops pivoted thereon, and also

pivotally connected to the free ends of said frames, a drum mounted on said shaft, a closing-rope arranged to rotate said drum, a sheave carried by said head, a pair of sheaves in alinement carried by one of the scoops, one near the forward end and the other near the rear end, and a rope passing from said drum around the sheave carried by the head-block under the sheaves carried by the scoop, said rope being anchored to the other scoop.

6. In a clam-shell bucket, the combination of a head, swinging frames pivotally carried thereby, a pair of scoops supported by said frames, means for closing said scoops, a sheave carried by each scoop near its outer end, a sheave carried by the head, and an opening-rope passing down under the sheave carried by one of the scoops, then up over the sheave carried by the head, then down under the sheave carried by the other scoop, then upward and anchored to the head.

7. In a clam-shell bucket, the combination with a head-block, of swinging frames pivotally carried by said block, a pair of scoops pivoted together and pivoted to the free ends of the side bars of said frames, means for closing said scoops, and an opening-rope passing down under the sheave on the head-block around a sheave at the extreme end of the nearest scoop, back to a sheave upon the head-block, down around a sheave upon the extreme end of the other scoop, and back to a fastening-clevis upon the head-block whereby a draw upon said rope will tend to open said scoops.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses.

JOHN McMYLER.
FREDERICK W. LOVELL.

Witnesses:

ALBERT H. BATES,
B. W. BROCKETT.