

(No Model.)

L. G. LADD.
HOISTING BUCKET.

No. 413,524.

Patented Oct. 22, 1889.

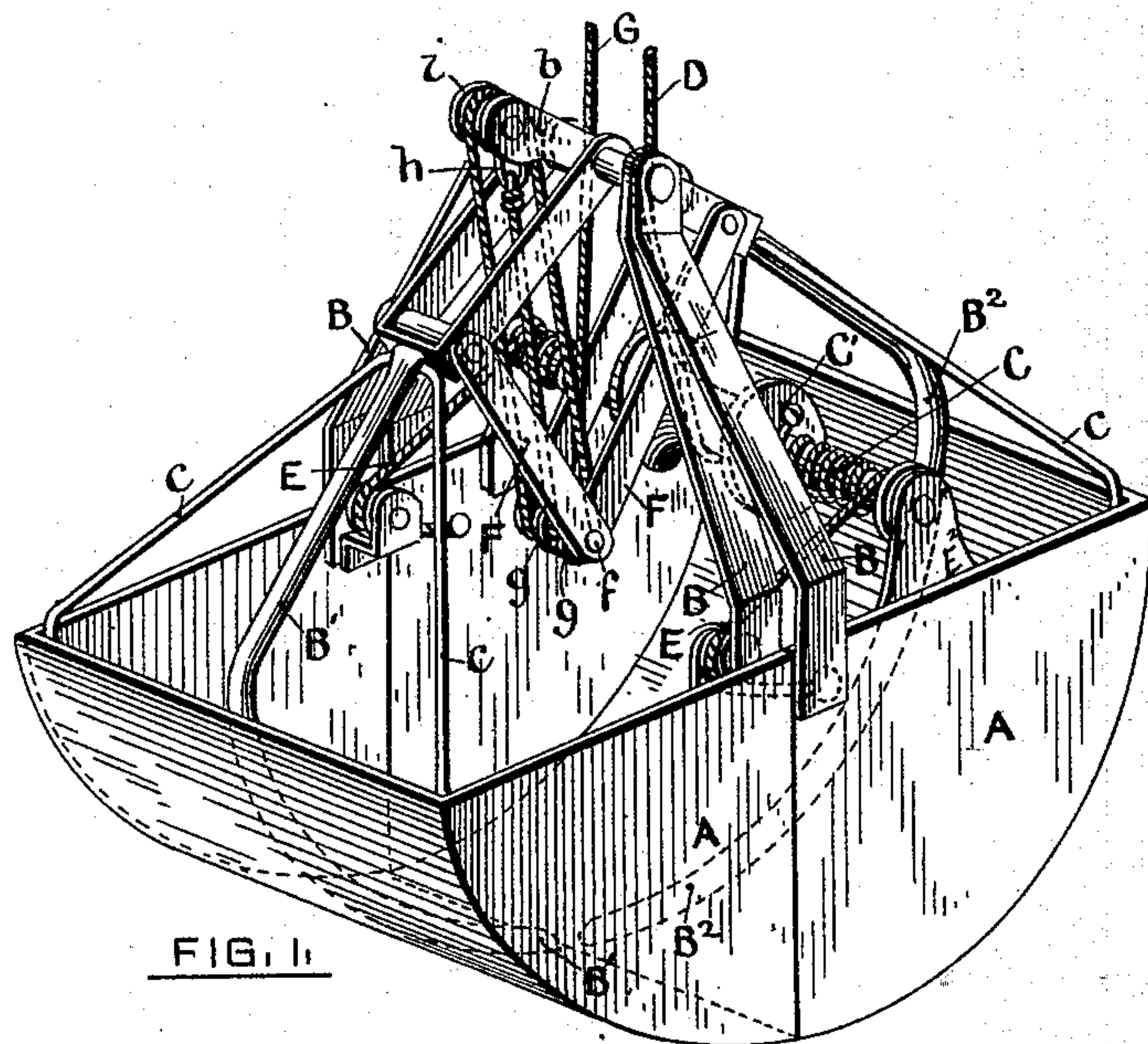


FIG. 1.

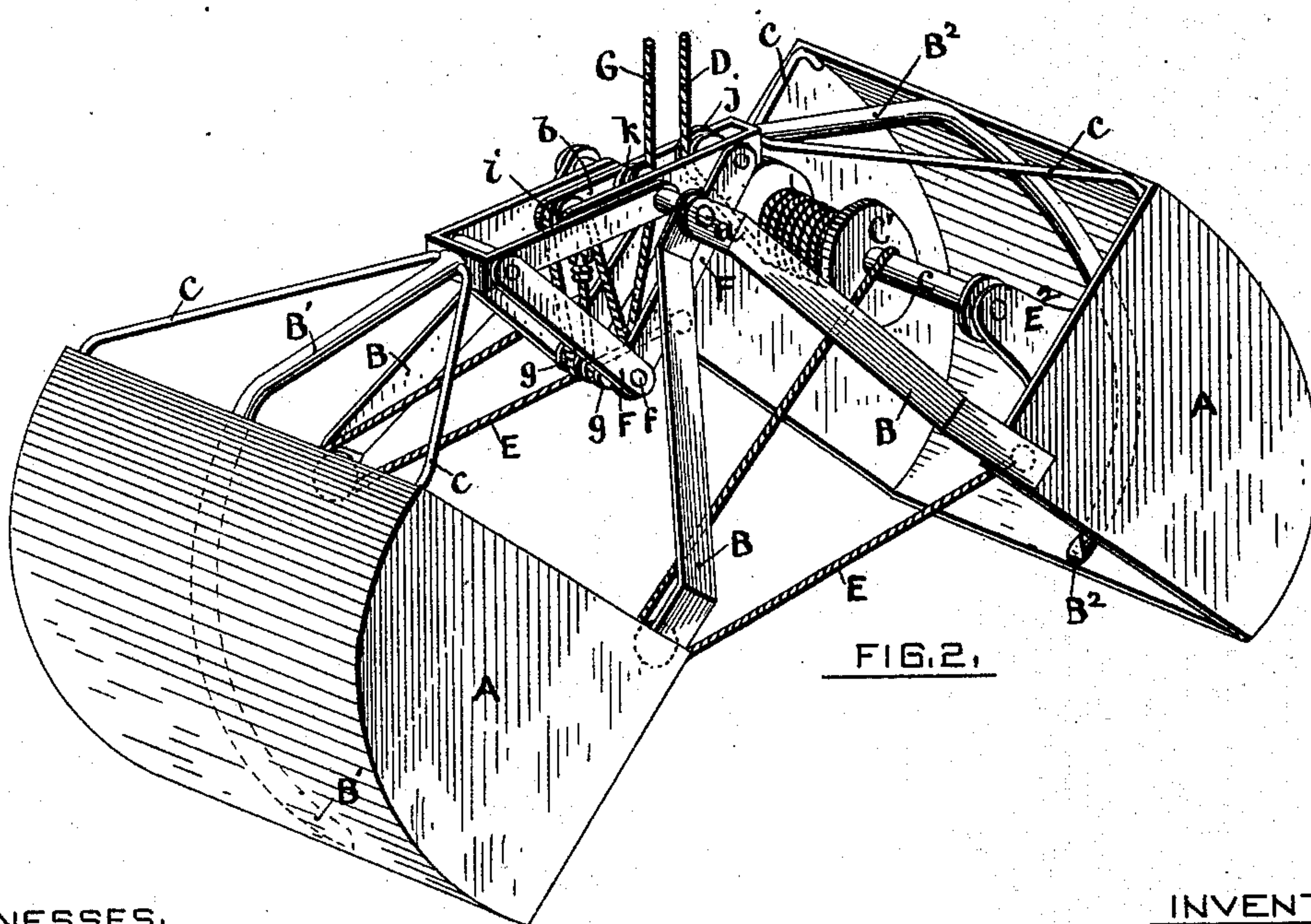


FIG. 2.

WITNESSES.

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LOREN G. LADD, OF PAWTUCKET, RHODE ISLAND.

HOISTING-BUCKET.

SPECIFICATION forming part of Letters Patent No. 413,524, dated October 22, 1889.

Application filed February 23, 1889. Serial No. 300,795. (No model.)

To all whom it may concern:

Be it known that I, LOREN G. LADD, of Pawtucket, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Hoisting-Buckets; and I do hereby declare the following specification, taken in connection with the accompanying drawings, forming a part of the same, to be a full, clear, and exact description thereof.

The present invention is an improvement upon the hoisting-bucket shown and described in the Letters Patent granted to me, No. 369,798, dated September 13, 1887; and it consists in the features hereinafter pointed out.

In the bucket shown and described in said prior patent the windlass shaft and drum, instead of being centrally located and in line with the pivotal connection between the two halves of the bucket, as had theretofore been customary, were located at one side and upon one of the halves of the bucket, and connected to the opposite half of the bucket so as to secure a direct pull from one half to the other. At the same time the arrangement of the hoisting-ropes and the pulleys for the same was such that the leverage upon the two halves of the bucket in opening was equal. It was found that this location of the windlass shaft and drum upon one-half of the bucket threw the bucket out of balance and caused it to tip up on end, and especially so in opening the bucket, by reason of the fact that there was no provision for additional leverage upon one-half of the bucket to counteract the additional weight thereon.

The present invention has for its object to overcome the difficulties referred to.

Referring to the drawings, Figure 1 is a view in perspective of my improved bucket with the parts in closed position and Fig. 2 is a view in perspective showing the bucket open.

The main features of my improved bucket are like those of the bucket shown and described in my said prior patent, and a detailed description of the same will not be necessary. The bucket is constructed in two halves A A, each provided with the upwardly-projecting bars B B, which said bars are pivoted together at their outer ends by the pivot-pin α , thereby

pivotaly connecting the two parts of the bucket, which in opening or closing swing upon said pivot-pin α . Upon one of the halves of the bucket is mounted the windlass shaft and drum C C'. To the windlass-drum is secured the rope D, for closing and hoisting the bucket, and from the windlass-shaft the two ropes E E extend to the other half of the bucket so as to secure a direct pull from one half of the bucket to the other.

The two halves of the bucket shown in the drawings instead of being provided at their outer corners with a pair of upwardly-projecting arms are each provided with a single arm or rod secured thereto midway the width of the bucket, as shown in the drawings. These arms (marked B' and B², respectively) are each forked at their upper ends, the fork upon the arm B' being wider, so as to straddle the forked end of the arm B² and permit the play of the latter therein, all as clearly shown in the drawings. The forked extensions of the arms B' B² are both pivoted to the pivot-pin α . The fork upon the arm B' is pivoted thereto practically at its extreme end; but the fork upon the arm B², which is connected with that half of the bucket upon which the windlass shaft and drum are mounted is made longer, and so as to extend, as at b , beyond the point where it is pivoted to the pin α .

Pivoted to the arms B' B², or to the forked extensions thereof, are the toggle-levers F F, for opening the bucket, said toggle-levers being pivoted together at f . Upon the pivot-pin f and between the levers F are mounted two pulleys or sheaves $g g$. At the end of the extension b of the forked end of the arm B² are mounted an eye h and a pulley i . To the eye h one end of the opening and hoisting-rope G is secured. The other end is then passed down around one of the pulleys g , up over the pulley l , down around the other pulley g , and finally upward, forming a double fall, as shown. The pulleys j and k serve to guide the ropes D and G, respectively, as they pass upward.

The operation of the bucket in opening and closing and in being hoisted and lowered is substantially the same as that of the bucket shown and described in my said prior patent. It will be observed, however, that by reason

of the extension of the forked end of the arm B^2 beyond the point where it is pivoted to the pin a , and by reason of the location of the eye h and pulley i at the end of this extension, instead of upon the pivot-pin a , a leverage is obtained which serves to overcome the additional weight of that part of the bucket to which the arm E^2 is secured, due to the location of the windlass shaft and drum thereon, and prevents the bucket from tipping up on account of such unbalanced weight.

I do not wish to limit myself to a hoisting-bucket the two halves of which are each provided with a single upwardly-extending arm secured thereto midway the width of the bucket, as it is obvious that my invention is equally applicable to a bucket having a pair of arms extending from the pivot a to the outer corners of each half of the bucket, as shown in my said prior patent, No. 369,798.

What I claim as my invention is—

In a hoisting-bucket composed of two parts pivoted or hinged together and having a windlass shaft and drum mounted upon one of the halves of the bucket, the combination, with toggle-levers for opening the two parts of the bucket, of arms extending upwardly from each of the sections of the bucket and pivoted together, the arm secured to that half of the bucket which carries the windlass shaft and drum extending beyond the pivot-point and connected at its outer end with the joint of said toggle-levers, substantially as described.

LOREN G. LADD.

Witnesses:

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S. J. MURPHY.