

(No Model.)

G. H. MILLER & C. GOYETTE.

HOISTING BUCKET.

No. 298,606.

Patented May 13, 1884.

Fig. 1.

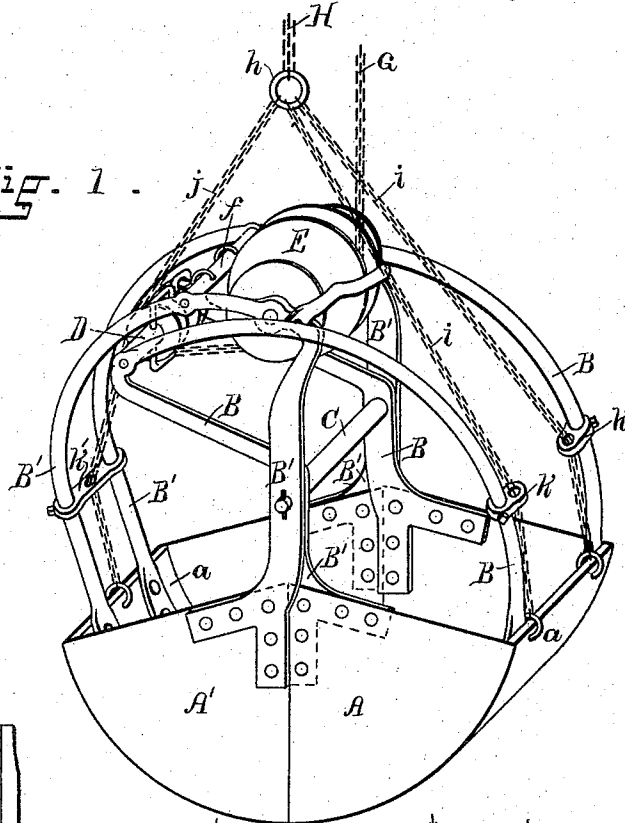


Fig. 3.

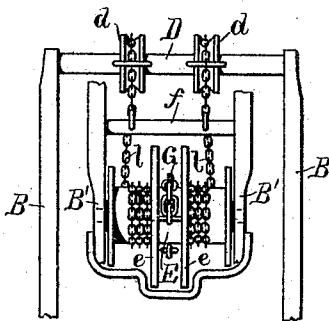


Fig. 4.

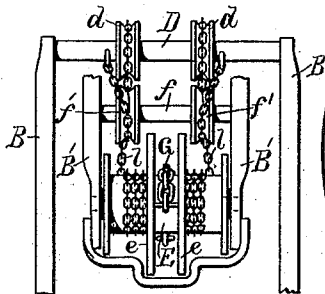
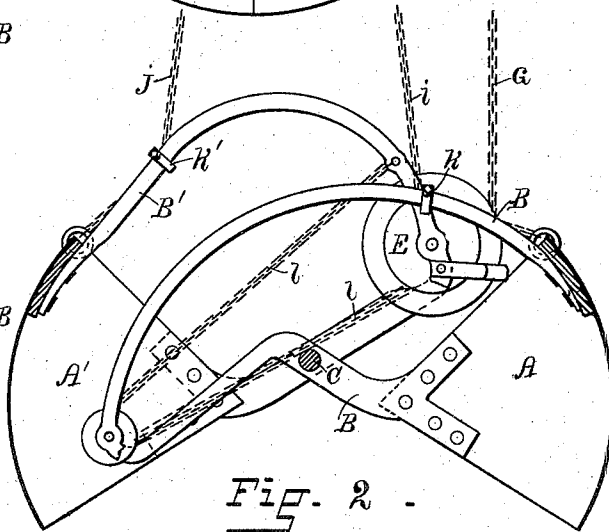


Fig. 2.



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UNITED STATES PATENT OFFICE.

GEORGE H. MILLER AND CASIMIR GOYETTE, OF PAWTUCKET, R. I.

HOISTING-BUCKET.

SPECIFICATION forming part of Letters Patent No. 298,606, dated May 13, 1884.

Application filed March 18, 1884. (No model.)

To all whom it may concern:

Be it known that we, GEORGE H. MILLER and CASIMIR GOYETTE, both of Pawtucket, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Hoisting-Buckets, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

Our invention relates to that class of buckets which are used in loading and unloading coal from vessels, &c.; and the object of our invention is to produce a bucket which may be opened and closed by the exercise of less power than has heretofore been necessary in buckets of this kind, and also to lessen the amount of wearing-strain brought upon the bucket while in use.

To the above ends our invention consists in the peculiar and novel construction of the bucket, as hereinafter described and claimed.

In order that our invention may be fully understood, we will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 is a perspective view of our improved bucket in closed position. Fig. 2 is a sectional view of the same in open position. Fig. 3 is a view of the drum and pulleys in detached position. Fig. 4 is a similar view of a modified arrangement of the same parts as are shown in Fig. 3.

The body of the bucket is composed of two half-sections, A A', each of which is formed with a curved portion, *a*, which portions, when the half-sections are in closed position, constitute the semicircular bottom of the bucket. The section A of the bucket is provided with the two standards B B—one at each of its sides—while the section A' is provided with the two standards B', similarly arranged, the standards of the two sections being pivoted upon the cross-bar C. Each of the standards B extends upward and laterally from the outer portion of the section A beyond the pivotal point, then suddenly bends backward, extending downward to a point just above the pivot, and then extends directly downward to a connection with the inner side of the section. The upper abrupt bends in the standards are con-

nected by a cross-bar, D, which carries two pulleys, *d*. Each of the standards B' extends upward from the outer side of the section A', and curves over to a point above the pivotal point, and then suddenly bends downward and extends directly to its point of connection with the inner side of the section. The abrupt bends of the standards are connected by a drum, E, while just behind the drum is mounted a cross-bar, *f*.

G designates the chain by which the closed bucket is raised, and H designates the chain by which the bucket is opened.

The drum E is divided into three parts by two deep flanges, *e e*, and the chain G passes around that portion of the drum which is between the flanges *e e*. To the lower end of the chain H are attached three branch chains, *i i j*. The branches *i i* extend to the upper edge of the curved portion *a* of the section A, and pass through eyes formed in the guides *k*, one of which is secured adjustably upon each standard B at its outer portion. The branch *j* extends to the upper edge of the curved portion *a* of the section A', and passes through an eye formed in the center of the cross-piece *k'*, which is secured adjustably at each end to each of the standards B'. The purpose of the adjustable devices *k k'* is to regulate the extent of opening of the bucket, and to lessen the degree of strain upon the working parts in opening and closing the bucket. As shown in Fig. 3, two chains, *l l*, extend each from one of the end portions of the drum E—upon which said chains are wound in reverse direction to that of the chain G—around one of the pulleys *d*, and thence to a connection with the bar *f*. As shown in Fig. 4, each chain *l* passes from the drum around the pulley *d*, thence around a pulley, *f'*, upon the shaft *f*, and finally to a connection with the bar D. The difference between these two arrangements is that in the latter arrangement of pulleys less power is required to operate the bucket by the chain G. The bucket is opened by throwing the chain G slack and holding the chain H taut. The bucket will then open, and the slack in the chain G will be wound upon the drum E. When the bucket is to be closed, the chain G is drawn taut, paying it off of the drum E, and

winding the chains *ll* upon the drum, during which action the pulleys *d d'* and *f' f'* render the action rapid and easy, and the empty bucket may be closed as readily as when filled.

5 Having thus described our invention, we claim—

1. The combination, with the bucket *A A'*, of the standards *B B'*, carrying the drum and pulleys, the chains *G H j*, and the chains *ll*,
10 connecting the drum with the pulleys, such parts being arranged to operate substantially as set forth.

2. The combination, with the bucket, of the standards carrying the drum and pulleys and the adjustable guides *k k'*, and the chains *G, H, i, j*, and *l*, substantially as and for the purposes set forth.

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Witnesses:

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