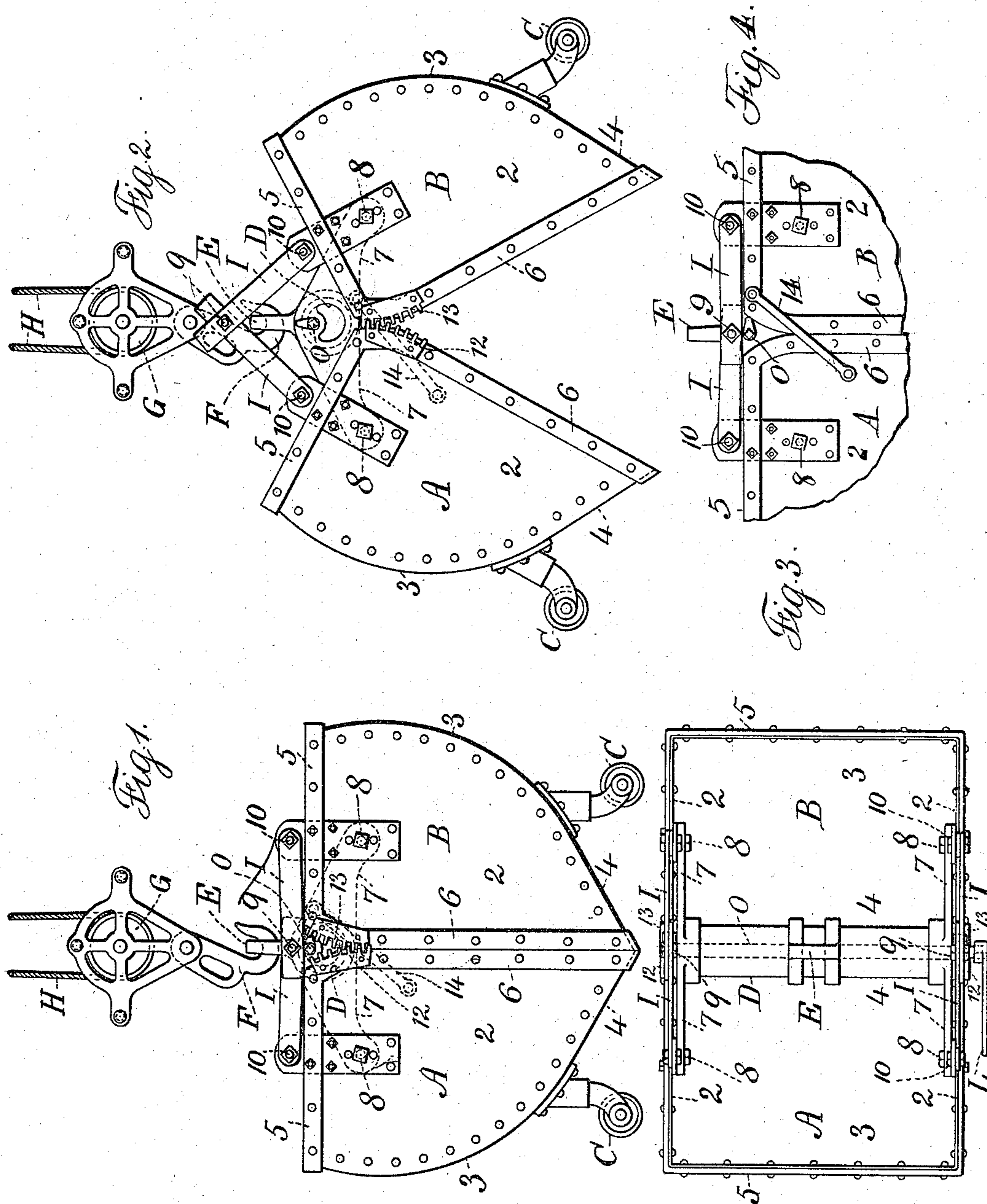


(No Model.)

C. W. HUNT.
COALING TUB.

No. 559,384.

Patented May 5, 1896.



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES W. HUNT, OF WEST NEW BRIGHTON, NEW YORK.

COALING-TUB.

SPECIFICATION forming part of Letters Patent No. 559,384, dated May 5, 1896.

Application filed January 10, 1895. Serial No. 534,426. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. HUNT, a citizen of the United States, residing at West New Brighton, in the county of Richmond and State of New York, have invented an Improvement in Coaling-Tubs, of which the following is a specification.

In the present invention I make use of two half-buckets pivoted to a hoisting-bail in line, or nearly so, with the centers of gravity of the half-buckets, and the half-buckets are connected by gears, or their equivalents, so that both the half-buckets swing together upon their pivots while being opened or closed, and I employ toggle-links near the upper edges of the half-buckets that when straightened hold the parts of the bucket with their edges together, and when bent into an angle the half parts are allowed to swing for discharging the contents.

In the drawings, Figure 1 is an end view of the tub as closed for retaining the contents while being transported. Fig. 2 is a similar view of the tub as opened to discharge the contents. Fig. 3 is a plan view representing the relative positions of the toggles and yoke; and Fig. 4 is a diagram of the half-buckets, illustrating a modification in the connections between them.

The tub or bucket may be of any desired shape. It is generally advantageous to make the same of nearly the shape represented—that is to say, the half-buckets A and B are provided with flat ends 2, curved sides 3, and with inclined bottoms 4 as a continuation of the curved sides, and these half-buckets are advantageously made of sheet iron or steel properly flanged and riveted together and provided with stiffening edge bars 5 and 6, and the wheels C are usually provided for supporting the tub when standing on a floor or platform.

The bail D is provided with projections 7, to which the respective half-buckets A and B are pivoted at 8, such pivots being located at some little distance below the top edges of the half-buckets, and in line, or nearly so, with the centers of gravity of the half-buckets, and upon these pivots the half-buckets swing as they are either opened or closed. This bail D is advantageously made of a tube, to the ends of which the arms 7 are rigidly connected, and

in the middle portion of the yoke there is a loop or eye E, to which the hoisting device is applied. This hoisting device is represented in the form of a hook F, connected to the pulley G, around which the hoisting rope or chain H is passed.

The toggle-links I are pivoted together in pairs by the center pivots 9, and the end pivots 10 are connected with the half-buckets above the pivots on which the half-buckets swing. Hence when the pivots of the toggle-links are closed down and into line with each other the end pivots 10 are forced apart, so as to close the lower edges of the half-buckets tightly together and hold them firmly in the position represented in Fig. 1 while the tub or bucket is being filled and transported to the place of discharge, and it is only necessary to pry up the center pivots 9 of the respective pairs of toggle-links, so as to cause said toggle-links to swing upwardly as the pivots 10 approach each other and the half-buckets open for discharging the contents, as indicated in Fig. 2, such half-buckets swinging upon their pivots 8. If the parts thus far described only were made use of, one half-bucket might swing upon its pivot to a greater extent than the other half-bucket, and hence the lower edges of the half-buckets would not come properly together. To prevent this occurring, any suitable connection may be made use of between one half-bucket and the other, so as to cause them to move equally. I have represented the gear-segments 12 and 13 upon the upper adjacent edges of the buckets, so that the teeth of these gear-segments remain in contact with each other whether the bucket is opened or closed, and it will be understood that these gear-segments are arcs of circles described from the pivots 8. Any equivalent for these gear-segments may be used—such, for instance, as a diagonal link, (represented in Fig. 4 at 14)—the ends of such diagonal link being pivoted to the respective half-buckets, so as to cause them to swing equally upon the respective pivots of the yoke. It will be observed that the pivots 8 are near the centers of gravity of the respective half-buckets. Hence the buckets swing open easily by the action of the weight of coal or other contained material, and when such material has run out the halves will swing toward each other and

close without the severe concussion and risk of injury usual with buckets that are pivoted at or near the top edges.

5 A hand-lever may be used to pry up the toggle-links, but I find it advantageous to employ a shaft O, running through the tube of the bail and provided with arms or cams near its ends to act below the pairs of toggle-bars to swing them upwardly and open the
10 bucket. This shaft may be turned by a lever or handle L at one end.

I do not limit myself to a tubular bail, as the same can be made in any desired manner.

I claim as my invention—

15 1. The combination in a tub or bucket for coal or other material, of two half-buckets, a bail having rigid arms at its ends extending out laterally in opposite directions and within the tub, pivots connecting the half-buckets
20 near their centers of gravity to the arms, and two toggle-bars connected together in the middle and pivots connecting the ends of the toggle-bars with the upper edges of the half-buckets for holding such half-buckets closed
25 when the toggle-bars are in line with each other, substantially as set forth.

2. The combination in a tub or bucket for coal or other material, of two half-buckets, a bail having rigid arms at its ends extending

out laterally in opposite directions and within 30 the tub, pivots connecting the half-buckets near their centers of gravity to the arms, interlocking segmental gear-teeth upon the adjacent edges of the buckets to insure uniformity in the swinging movements, toggle- 35 bars jointed together in the middle and pivots connecting the ends of the toggle-bars with the upper portions of the half-buckets for holding such half-buckets closed when the toggle-bars are in line with each other and 40 means for moving the toggle-bars in relation to each other to allow the half-buckets to swing open, substantially as set forth.

3. The combination in a tub for coal or other material, of a tubular bail having arms ex- 45 tending laterally at its ends, half-buckets pivoted at or near their centers of gravity to the arms, toggle-bars hinged together and connected at their ends to the half-buckets, a shaft passing through the tubular bail and a 50 cam thereon for acting upon the toggle-bars to liberate the half-buckets and allow them to open, substantially as set forth.

Signed by me this 4th day of January, 1895.

CHAS. W. HUNT.

Witnesses:

JAMES P. J. MORRIS,

GEO. S. HUMPHREY.