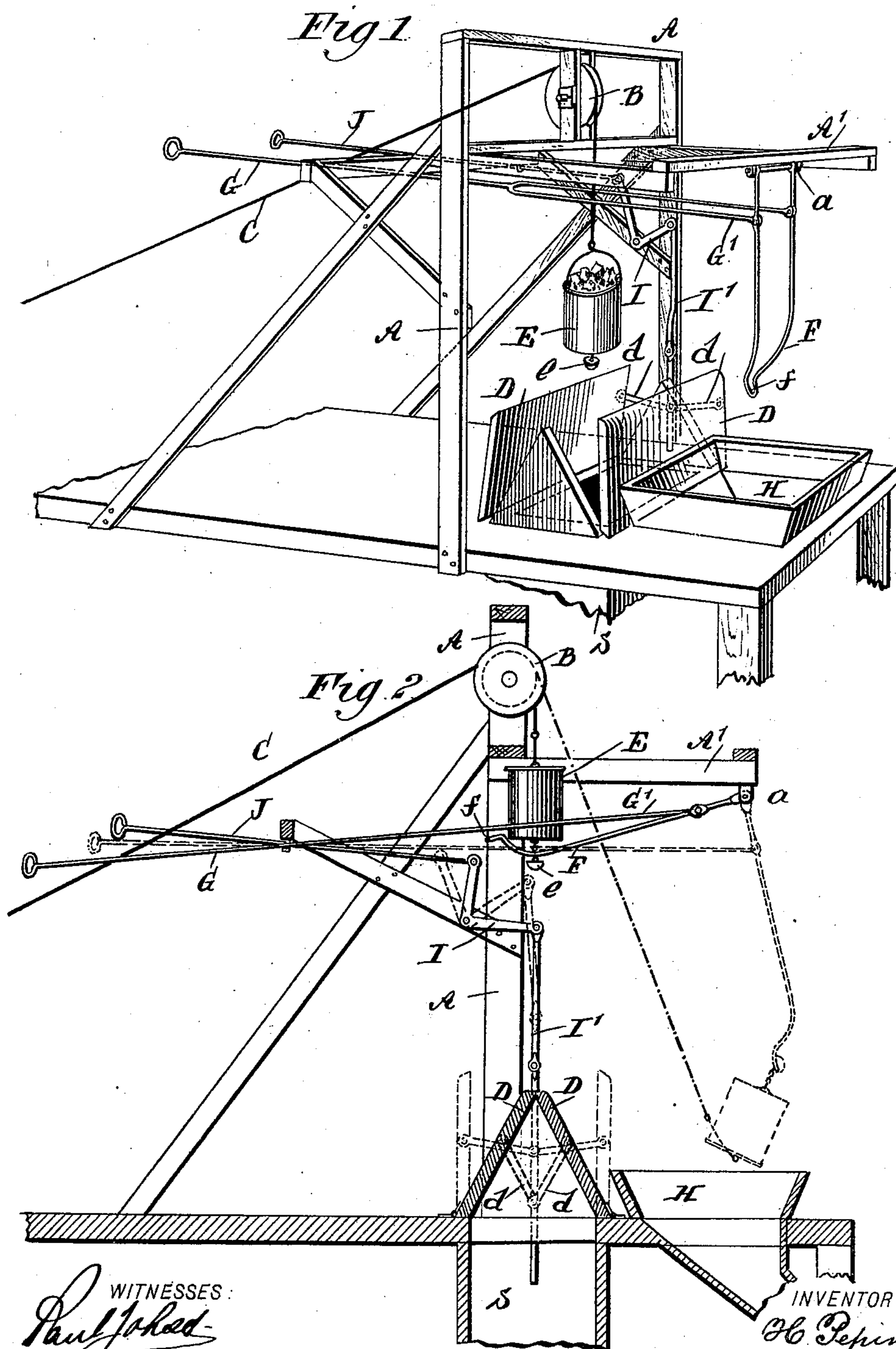


(No Model.)

H. PEPIN.  
DUMP FOR ORE BUCKETS.

No. 601,903.

Patented Apr. 5, 1898.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

HECTOR PEPIN, OF VICTOR, COLORADO.

## DUMP FOR ORE-BUCKETS.

SPECIFICATION forming part of Letters Patent No. 601,903, dated April 5, 1898.

Application filed November 29, 1897. Serial No. 660,069. (No model.)

*To all whom it may concern:*

Be it known that I, HECTOR PEPIN, of Victor, in the county of El Paso and State of Colorado, have invented a new and Improved Dump for Ore-Buckets, of which the following is a full, clear, and exact description.

My invention relates to an improvement in means for dumping buckets which have been hoisted from a shaft; and it consists of certain novel features, which will be hereinafter described, and particularly pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both views.

Figure 1 is a perspective view showing my device as applied to a shaft, and Fig. 2 is a sectional elevation of the same.

Above the shaft S is erected a suitable framing A to carry the sheave-wheel B, over which the cable C used for hoisting the buckets passes. The top of the shaft is covered by two trap-doors D, which are pivoted upon opposite sides of the shaft and meet above the shaft, forming an A-shaped cover. The two doors D are connected by means of two links d, which are pivoted to the doors and to each other, so as to form a toggle-joint. To the center pivot of this toggle-joint a rod I' is connected and passes through suitable guides, so as to maintain it in a central position between the two doors. As shown in the drawings, this is accomplished by extending the lower end of the rod I' through the floor or a beam at the side of the shaft. The rod I' is connected to a bell-crank lever I, which is pivoted upon the framing A, and the lever is operated by means of a rod J, which is extended to any convenient point. By operating the rod J the doors D may be opened, as shown in dotted lines, or closed, as shown in full lines, in Fig. 2. When the bucket is within the shaft, the doors may be left open or closed, as desired. When the bucket has been hoisted above the shaft, the doors are closed, so as to prevent any ore from dropping down the shaft while the bucket is being emptied.

Upon an extension A' projecting to one side from the main framing is pivoted at a lever F, which, as shown in the drawings, consists

of a double lever the members of which are united at the lower end, so as to form a yoke or hook, which terminates in a narrow point at the outer end. It is evident, however, that said lever might be constructed as a single bar having a corresponding hook or yoke at its outer end. This hook or yoke is bent toward the shaft at its outer end and tapers until the two sides thereof are close together at the extremity f. To the lever or rod F is connected an operating-rod G, which at its outer end G' is shown as being forked into two arms, each of which is connected to a corresponding member of the lever F. This latter construction is, however, not an essential one. The rod G is carried to a convenient point for operation by the engineer.

The bucket E which is used for hoisting the ore has a knob or ball e suspended from the lower end of the bucket by means of a short chain or similar flexible connector. The ball or knob is of such size that it cannot pull through the narrow part f of the yoke at the extremity of the lever F. Said lever is of such a length that when it is thrown up to a substantially horizontal position, as shown in Fig. 2, the larger part of the yoke will be directly beneath the bucket. When the bucket is hoisted, the doors D are closed and the lever F is swung beneath the bucket. The bucket is then loaded. The chain carrying the knob e will enter the yoke and as the lever is swung to one side by the descent of the bucket will be drawn into the narrow outer end thereof, where the knob e cannot pull out. In consequence of this as the bucket is lowered it will be swung to one side and inverted, as shown by dotted lines in Fig. 2. Beneath the lever F, and at such a point where it will receive the ore when dumped from the bucket, is placed a hopper H, which discharges into a chute leading either to a car or to any desired receptacle.

This apparatus is simple and cheap of manufacture and enables the engineer to attend to the dumping of the buckets as they are hoisted, and thus dispenses with the services of one man. It is also perfectly safe, as the top of the shaft is covered while the bucket is being dumped and it is impossible for particles of ore to fall down the shaft.

Having thus described my invention, I



claim as new and desire to secure by Letters Patent—

1. A dumping device for bucket-hoisting apparatus, comprising a ball or knob suspended from the bottom of the bucket by a short chain or similar connector, and a lever pivoted at one side of the bucket and terminating at its outer end in a fork or yoke which narrows at its extremity, said lever being adapted to be swung beneath the bucket when it is raised, and to embrace the knob suspended from the bucket, substantially as described.

2. A dumping device for bucket-hoisting apparatus, comprising a ball or knob suspended from the bottom of the bucket by a short chain or similar connector, a lever pivoted at one side of the bucket and terminating at its outer end in a fork or yoke which narrows at its extremity, said lever being adapted to be swung beneath the bucket when it is raised and to embrace the knob suspended therefrom, and a hand-lever connected with said swinging lever, to control it, substantially as described.

3. A dump for bucket-hoisting devices, comprising a knob suspended from the bottom of the bucket, a lever pivoted at one side of the bucket, having a fork or yoke which narrows to a point at its outer end, said lever being adapted to swing beneath the bucket when it is raised and to embrace the knob suspended therefrom, and a hopper located beneath said lever to receive the contents of the bucket, substantially as described.

4. A dump for bucket-hoisting devices, comprising a ball or knob suspended from the bottom of the bucket, a lever pivoted at one side of the bucket, having a fork or yoke which is narrow at its outer extremity, said lever being adapted to swing beneath the bucket when it is raised and to embrace the knob suspended therefrom, trap-doors hinged at the upper end of the shaft and at opposite sides thereof, and levers by which said doors may be opened or closed, substantially as described.

5. A dump for bucket-hoisting devices, comprising a ball or knob suspended from

the bottom of the bucket, a lever pivoted at one side of the bucket, having a fork or yoke which is narrow at its outer extremity, said lever being adapted to swing beneath the bucket when it is raised and to embrace the knob suspended therefrom, trap-doors hinged at the upper end of the shaft and at opposite sides thereof, levers by which said doors may be opened or closed, and a hopper located beneath said swinging lever to receive the contents of the bucket, substantially as described.

6. A dump for bucket-hoisting devices, comprising a ball or knob suspended from the bottom of the bucket, a dumping-lever pivoted at one side of the bucket and having a fork or yoke which at its outer extremity is narrow, said lever being adapted to swing beneath the bucket when it is raised and to embrace the knob suspended therefrom, trap-doors hinged on opposite sides of the shaft and adapted to meet above the shaft to form an A-shaped cover therefor, links pivoted to said doors and to each other to form a toggle-joint, and levers connected to the center of said toggle-joint to operate the doors, substantially as described.

7. A dump for bucket-hoisting devices, comprising a ball or knob suspended from the bottom of the bucket, a dumping-lever pivoted at one side of the bucket and having a fork or yoke which at its outer extremity is narrow, said lever being adapted to swing beneath the bucket when it is raised and to embrace the knob suspended therefrom, trap-doors hinged on opposite sides of the shaft and adapted to meet above the shaft to form an A-shaped cover therefor, links pivoted to said doors and to each other to form a toggle-joint, levers connected to the center of said toggle-joint to operate the doors, and a hopper located beneath said dumping-lever to receive the contents of the bucket, substantially as described.

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Witnesses:

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