No. 671,134. Patented Apr. 2, 1901.

W. HASZ.

HOISTING BUCKET.

(Application filed Oct. 29, 1900.)

(No Model.)

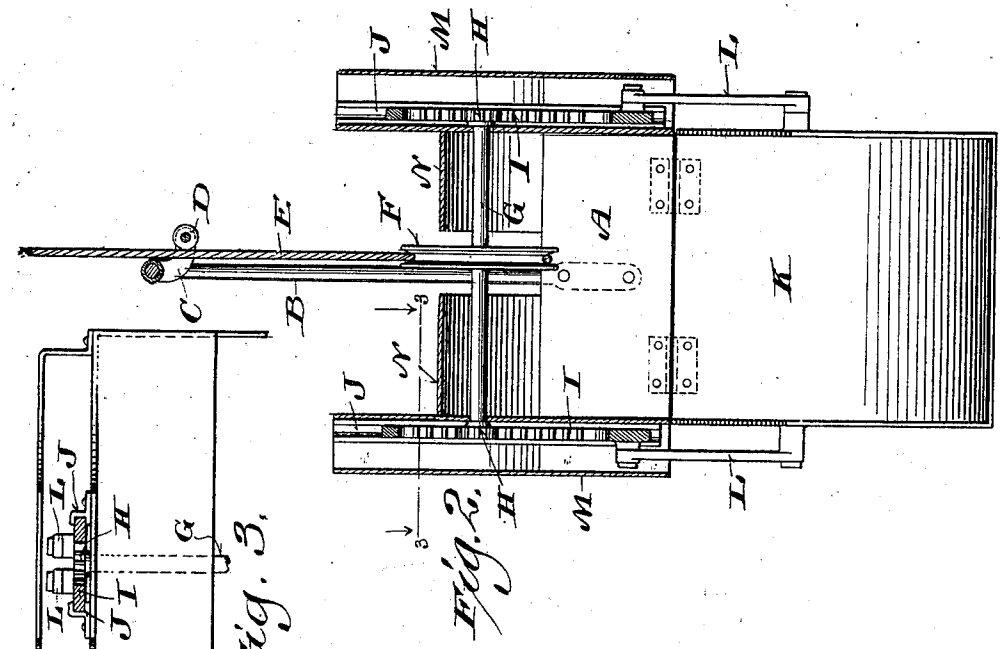

Fig. 2.

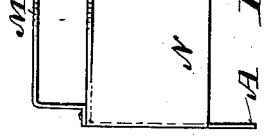

Fig. 3.

Fig. 1.

Witnesses:
Geo. W. Young.
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UNITED STATES PATENT OFFICE.

WILLIAM HASZ, OF MILWAUKEE, WISCONSIN.

HOISTING-BUCKET.

SPECIFICATION forming part of Letters Patent No. 671,134, dated April 2, 1901.

Application filed October 29, 1900. Serial No. 34,733. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HASZ, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Hoisting-Buckets; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has for its object to provide simple economical separable hoisting-buckets the opening and closing of which depend upon slack and draw of a suspending-cable, said invention consisting in certain peculiarities of construction and combination of parts hereinafter particularly set forth with reference to the accompanying drawings and subsequently claimed.

Figure 1 of the drawings represents a side elevation of my improved hoisting-bucket, having parts thereof broken away and in section, a shield that would otherwise appear in this view being omitted; Fig. 2, a sectional view of the bucket indicated by line 2 2 in the first figure, and Fig. 3 a detail sectional view indicated by line 3 3 in the second figure.

Referring by letter to the drawings, A indicates a shell constituting a non-separable portion of my improved bucket, and made fast to the shell is a bail B, a bracket C in rigid connection with the bail, central of same, being provided with arms that serve as bearings for the journals of a roller D, between which and said bracket is a suspending-cable E, having a loop thereof under a pulley F, fast on a spindle G, that turns in the sides of said shell. Arms rigid with the bail are essential for the purpose stated; but it is not absolutely necessary that said arms be made parts of a bracket, as the stretches of the cable may work between the roller and bail without the interposition of anything on said bail connecting the aforesaid arms. Owing to the position of the roller, as herein shown, it is evident that it will have antifriction contact with the cable, and that portion of bracket C also herein shown fast on the bail between the roller-supporting arms is made round, as shown in Fig. 2, so as not to present an edge to said cable. While it is practical to omit the roller, the same is preferably employed as a guard for the cable. In practice the ends of the cable will be made fast to separate rotary drums geared to run at uniform speed, the loop of said cable being under pulley F, aforesaid. The bucket being down and open, one hoisting-drum is started to wind enough of the cable to close said bucket, after which the other drum is started, the rotation of both drums at uniform speed serving to hoist the load.

Fast on the ends of spindle G are pinions H, that mesh with rack-tooth inner edges of longitudinally-slotted bars I, for which vertical guides J are provided on the sides of the aforesaid shell.

In hinge connection with the ends of shell A are the separable sections K of my bucket, and by means of links L these sections are connected to the rack-bars aforesaid.

To protect the rack-and-pinion mechanism herein set forth, shields M are preferably secured to the sides of the non-separable shell portion of the bucket. Other shields N are shown as flanges of the shell A over the spindle G, above specified.

In practice if the cable E be slacked the bucket-sections K will swing out, the bucket being thus opened, and on descent its weight will force it into coal or other loose material to be elevated, after which draft is exerted on the cable to close said bucket and hoist the same, there being limited play of the rack-bars in their guides. The bucket being hoisted and the cable slacked, there is automatic gravity-discharge of the contents of said bucket.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A hoisting-bucket comprising a non-separable shell provided with vertical guides, rack-bars having limited play along the guides, separable bucket-sections hinged to the shell and linked to the rack-bars, a spindle carried by the aforesaid shell, pinions on the spindle engaging said rack-bars, and a pulley in union with said spindle to engage with a loop of a suspending-cable.

2. A hoisting-bucket comprising a non-separable shell provided with vertical guides and a bail, rack-bars having limited play along the guides, a roller journaled in arms extending from the bail, separable bucket-sections hinged to the shell and linked to the

rack-bars, a spindle carried by the aforesaid shell, pinions on the spindle engaging said rack-bars, and a pulley in union with said spindle to engage with a loop of a suspending-cable run between said bail and roller.

3. A hoisting-bucket comprising a non-separable shell provided with vertical guides, rack-bars having limited play along the guides, separable bucket-sections hinged to the shell and linked to the rack-bars, a spindle carried by said shell, pinions on the spindle engaging said rack-bar, a pulley in union with said spindle to be opposed to a loop of a suspending-cable, and shields in connection with aforesaid shell arranged to protect the rack-and-pinion gear.

4. A hoisting-bucket comprising a non-separable shell provided with vertical guides, rack-bars having limited play along the guides, separable bucket-sections hinged to the shell and linked to the rack-bars, a spindle carried by said shell, shell-flanges constituting shields above the spindle, pinions on said spindle engaging said rack-bars, and a pulley in union with the aforesaid spindle to engage with a loop of a suspending-cable.

5. A hoisting-bucket comprising a non-separable shell provided with vertical guides, rack-bars having limited play along the guides, separable bucket-sections hinged to the shell and linked to the rack-bars, a spindle carried by said shell, shell-flanges constituting shields above the spindle, pinions on said spindle engaging said rack-bars, a pulley in union with the aforesaid spindle to engage with a loop of a suspending-cable, and shields in connection with the aforesaid shell arranged to protect the rack-and-pinion gear.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

WM. HASZ.

Witnesses:
N. E. OLIPHANT,
ALBERT KUSSROW.