

No. 815,823.

PATENTED MAR. 20, 1906.

F. V. HETZEL & F. F. WAECHTER.

HOISTING BUCKET.

APPLICATION FILED APR. 19, 1905.

Fig. 1.

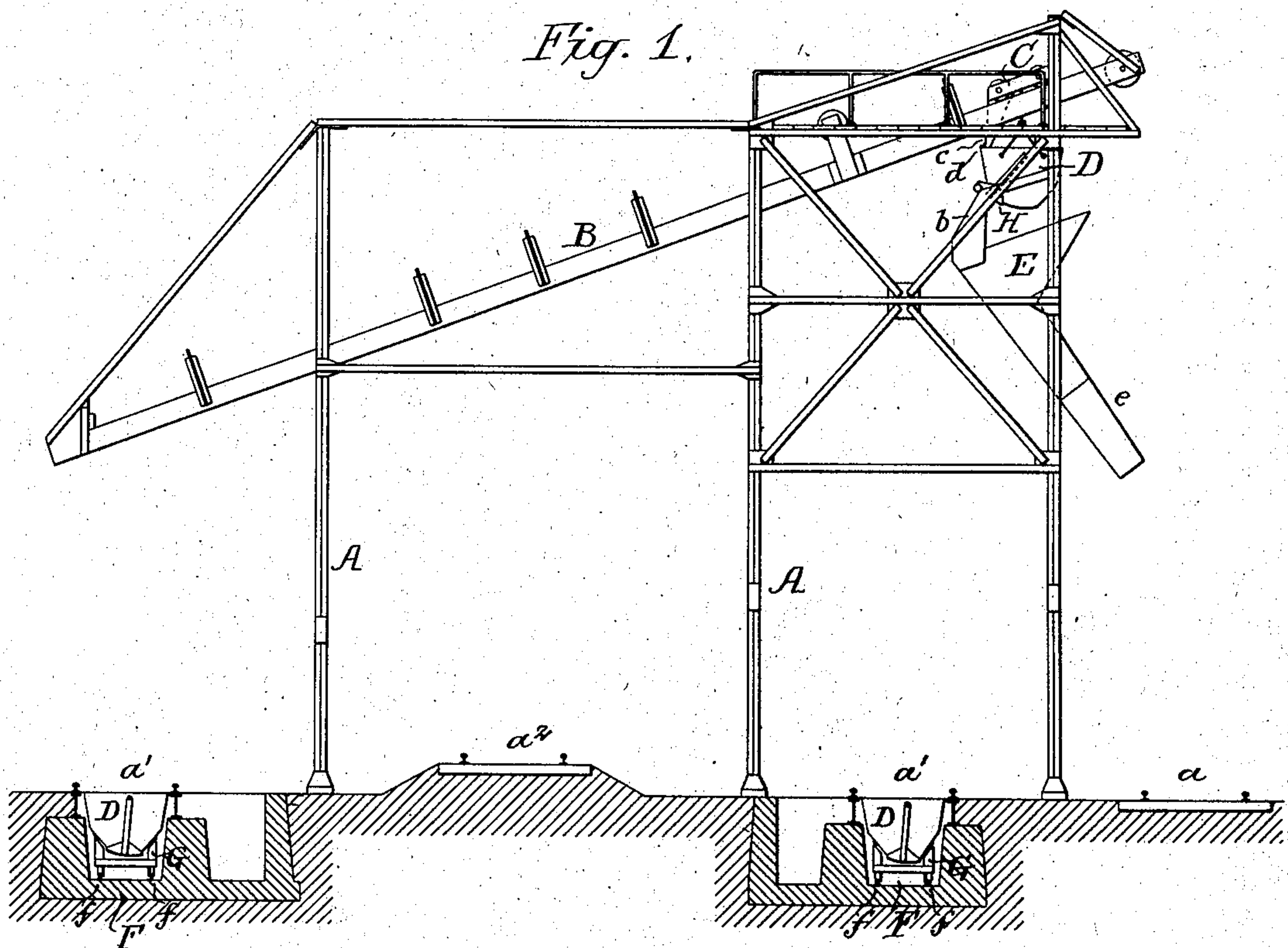


Fig. 2.

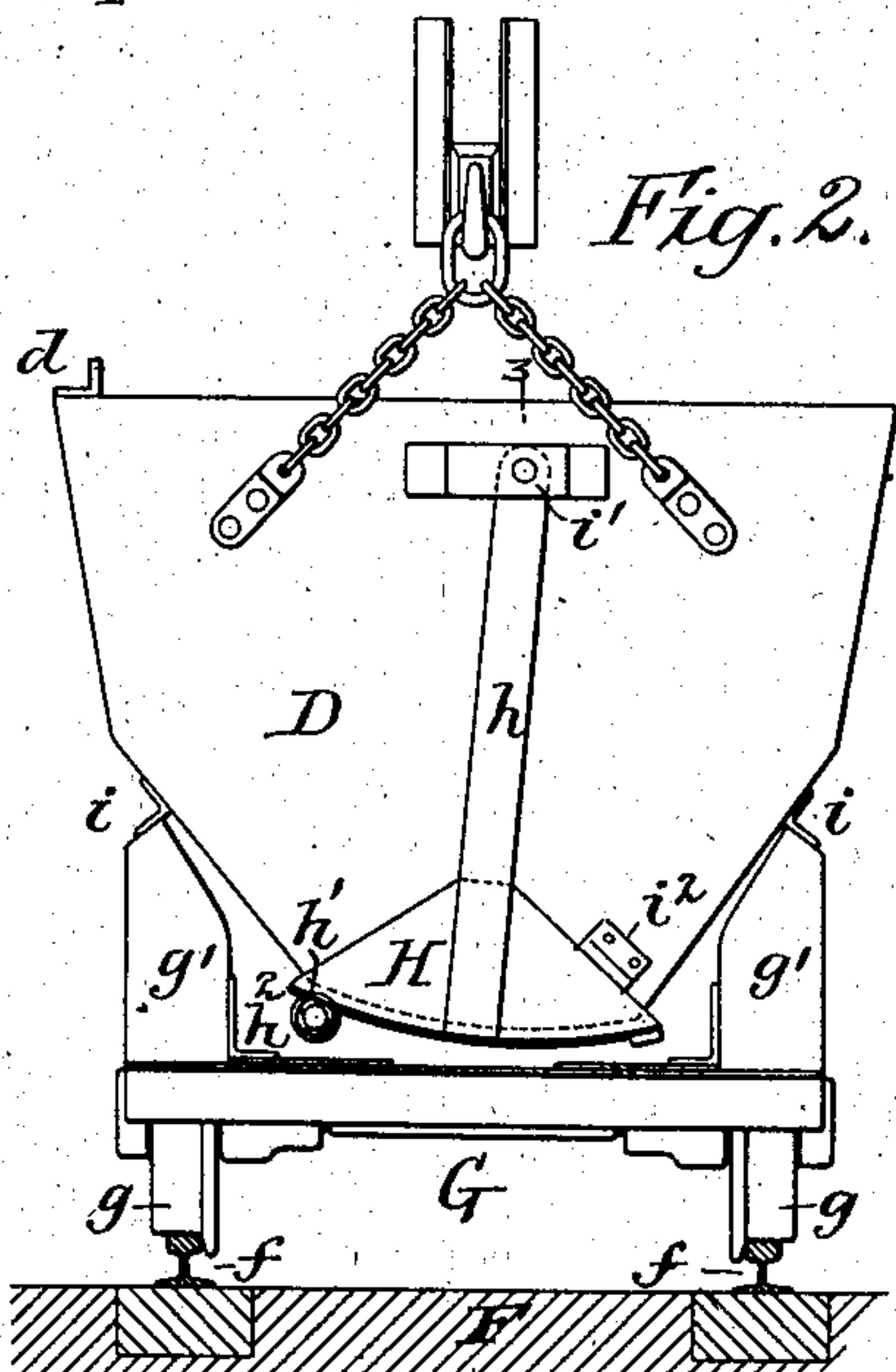


Fig. 3.

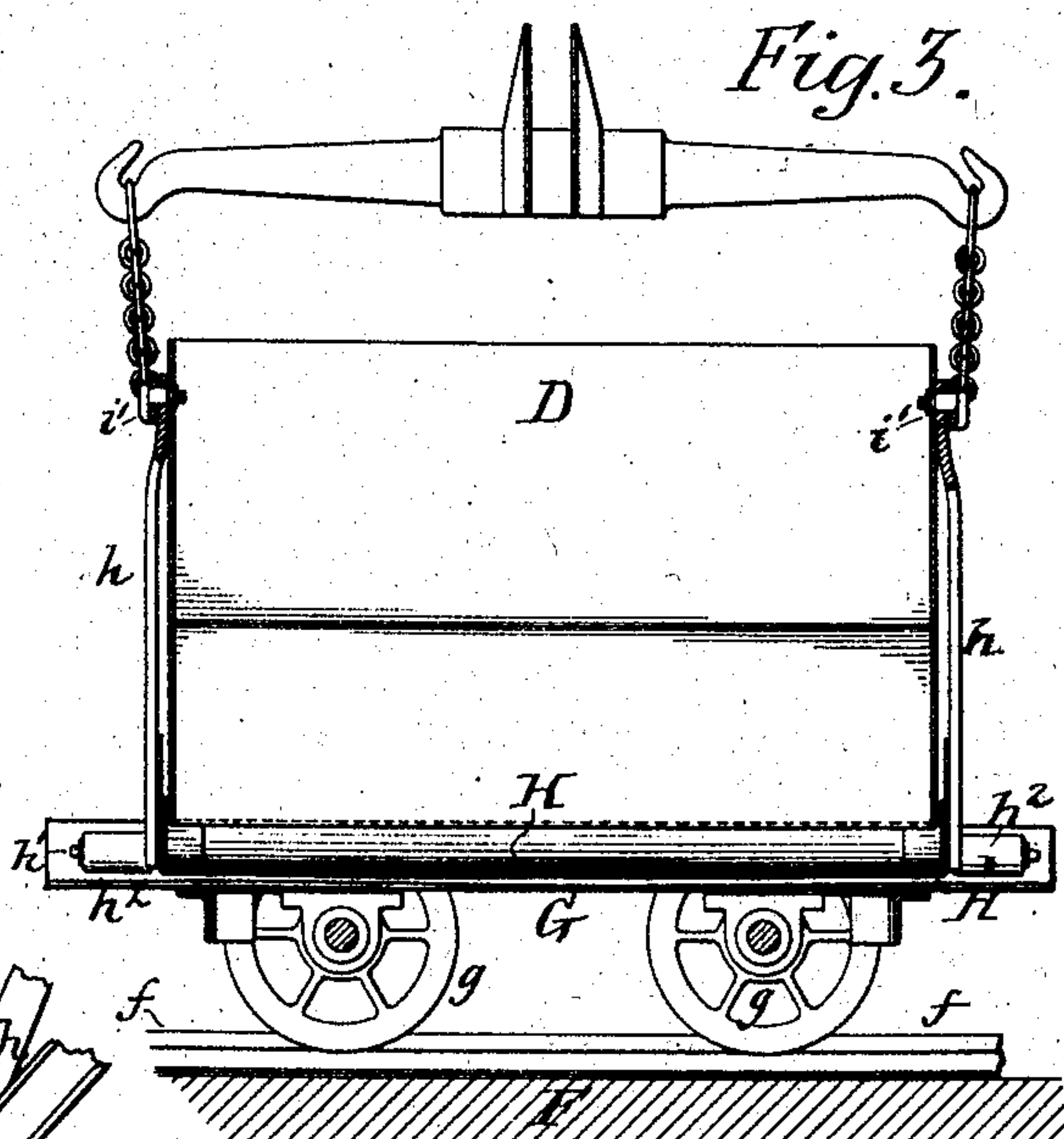
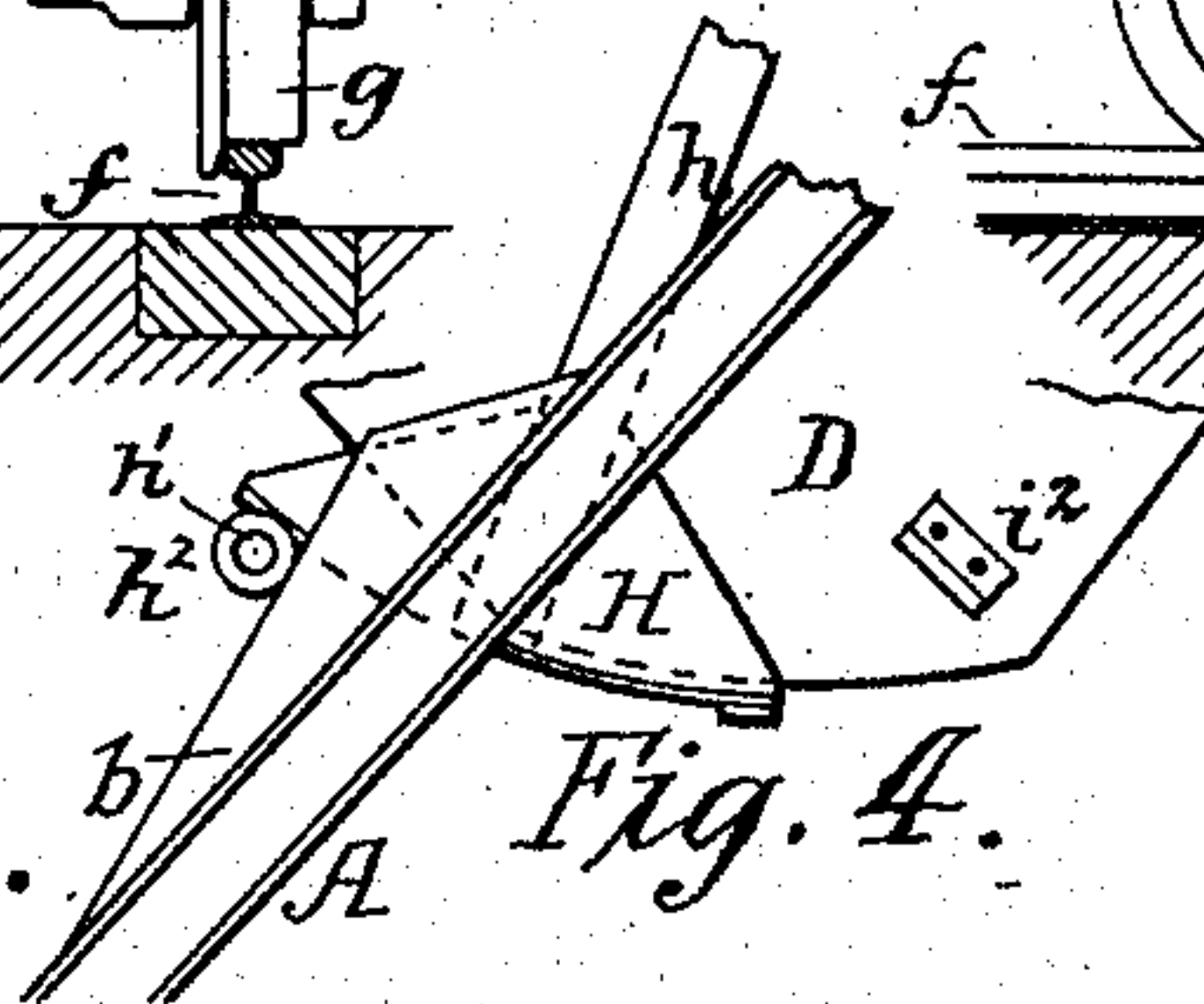


Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

FREDERIC V. HETZEL AND FERDINAND F. WAECHTER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNORS TO THE LINK BELT ENGINEERING COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

HOISTING-BUCKET.

No. 815,823.

Specification of Letters Patent.

Patented March 20, 1906.

Application filed April 19, 1905. Serial No. 256,507.

To all whom it may concern:

Be it known that we, FREDERIC V. HETZEL and FERDINAND F. WAECHTER, citizens of the United States, residing at Philadelphia, Pennsylvania, have invented certain Improvements in Hoisting-Buckets, of which the following is a specification.

Our invention relates to certain improvements in the ash-hoist for which application for patent was filed by Charles Piez on the 3d day of March, 1904, under Serial No. 196,380.

The object of the present invention is to simplify the means for discharging the load and to make the gate self-closing, as fully described hereinafter.

Referring to the accompanying drawings, Figure 1 is a cross-sectional view of a series of railway-tracks with an ash-hoist in elevation, illustrating our invention. Fig. 2 is an end view of one of the tubs mounted on a truck. Fig. 3 is a section on the line 3-3, Fig. 2; and Fig. 4 is an enlarged detail view of part of Fig. 1.

A is a frame supporting inclined tracks B, on which travels a trolley C, having a hoisting chain or rope from which is suspended the bucket or tub D, into which the ashes are dumped. Directly under the highest portion of the inclined tracks B is a hopper E, having a chute *e* so arranged that the ashes discharged into the hopper will flow through the chute into a car on the railway-track *a*. In the present instance there are four tracks *a a' a' a'*. Between the rails of the tracks *a'* is a pit F, and in the bottom of the pit are rails *f f*, on which travel trucks G, as clearly shown in Figs. 2 and 3. These trucks have wheels *g g* and have sides *g'* so shaped as to receive the tubs or buckets D, which are preferably so proportioned as to fit snugly between the tracks, as indicated in Fig. 1. These buckets have flanges *i i* on each side, resting on the sides *g'* of the trucks, so as to hold the bottom of the tub clear of the truck.

H is an undercut gate which has arms *h h* pivoted at *i'* to the body of the tub, and the gate closes against stops *i'* on each end of the tub. On the gate is a heavy cross-shaft *h'*, having rollers *h'* at each end, by which the gate is opened. The shaft is so situated that it will tend to close the gate, and by pivoting the gate off center, as shown at *i'*, the gate will always close against the stop *i'*. In or-

der to automatically open the gate when the tub is elevated above the hopper E, we provide cams *b* on the frame A directly above the hopper, Figs. 1 and 4, so that when the tub is carried by the hoisting mechanism to the point above the hopper the rollers *h'* strike the cam-surface *b*, withdrawing the gate as the tub moves forward, thus allowing the ashes to flow freely through the opening in the bottom of the tub into the hopper E and through the chute *e* to the car or other receptacle into which the ashes are loaded. As the bucket is elevated from the pit it is carried up to a point near the trolley, so that a flange *d* on the bucket will come in contact with an arm *c* on the trolley, preventing the bucket accidentally tipping when the gate strikes the cam *b*.

It will be understood that any suitable hoisting mechanism may be provided for operating the trolley C on the track B and any means may be provided for raising or lowering the tub or bucket D without departing from the essential feature of our invention. We may use the hoisting mechanism illustrated in the application above alluded to.

While we have described our invention especially in connection with an ash-hoist, it will be understood that our improved hoisting-bucket can be used to carry any suitable material.

The operation of the mechanism is as follows: The tubs D are placed on the trucks G in the pits between the tracks and the ashes are discharged from the locomotives directly into these buckets, and the buckets may be traversed in the pit to a point directly under the overhanging portion of the frame A, so that the hoisting mechanism of the trolley can be readily coupled to each bucket in turn. The bucket is then lifted out of the pit and traversed up to a point above the hopper E, where the gate is automatically opened and the contents of the bucket allowed to be discharged into the hopper and through a chute into a car on the track *a*. The buckets may be discharged directly into cars on the tracks *a'*, or the buckets may be bodily shifted onto trucks on the tracks where it is desired to carry the buckets to a dump.

We claim as our invention—

1. The combination of a bucket having an

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open bottom, with an undercut gate pivoted to the bucket and closing the opening in the bottom.

2. The combination of a bucket having an opening in the bottom, an undercut gate pivoted to the bucket, at one side of the center, and a stop on the bucket to limit the movement of the gate.

3. The combination of a bucket having an opening in the bottom, a gate having arms pivoted to the bucket at a point off the center, a stop to limit the closing of the bucket, and a weight on the gate aiding in the closing of said gate.

4. The combination of a bucket having an opening in the bottom, an under cut gate piv-

oted to the bucket and arranged to close the opening, a stop on the bucket to limit the movement of the gate, and a projection on the gate so arranged that when the bucket has been elevated to the discharge-point the projection will strike a cam and cause the gate to open.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

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Witnesses:

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