

W. REUBOLD.

DEVICE FOR AUTOMATICALLY CHARGING THE DELIVERY BUCKETS OF ELEVATORS.

APPLICATION FILED MAY 15, 1908.

1,003,511.

Patented Sept. 19, 1911.

2 SHEETS—SHEET 1.

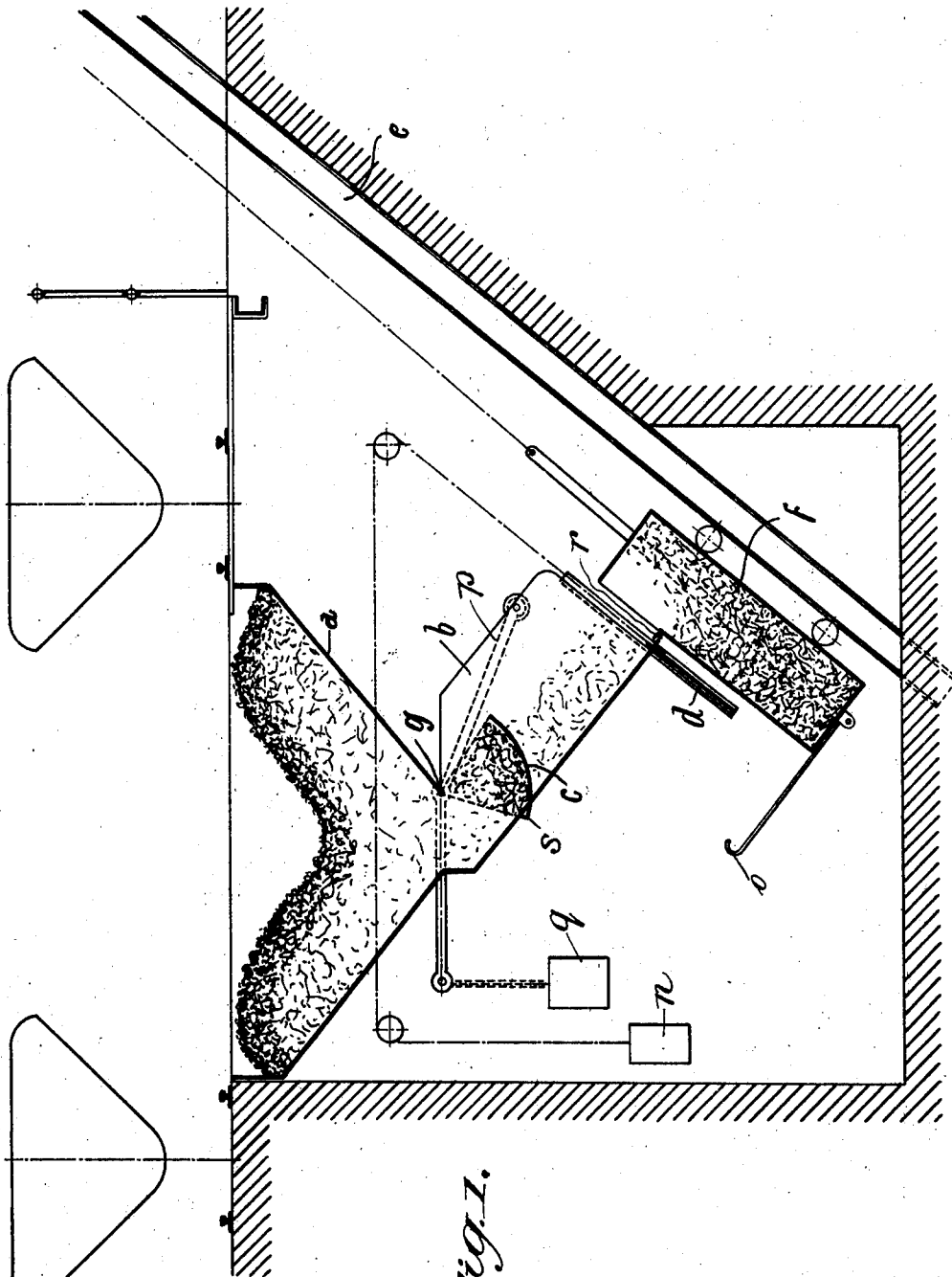


Fig. 1.

Witnesses:

Stanley Wood.

Henry W. Blake

Inventor:
Wilhelm Reubold
by
Attorney

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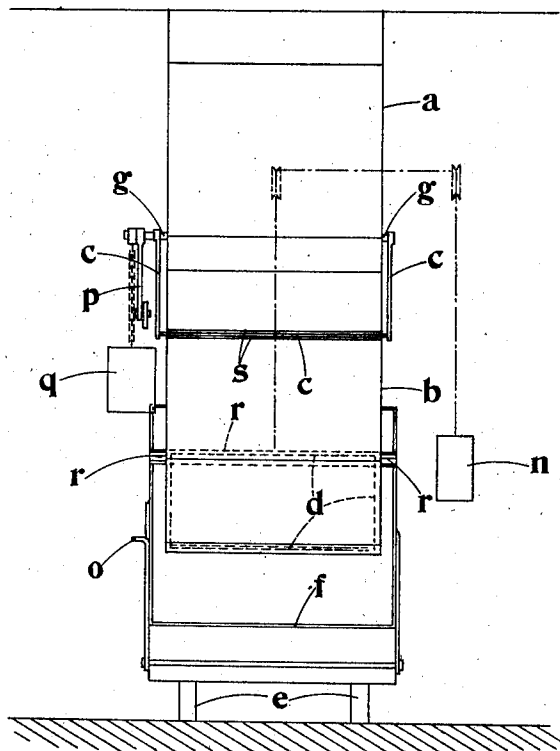


Fig. 2.

Witnesses—

Stanley Wood
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Inventor

Wilhelm Reubold

by

W. E. Evans

Attorney.

UNITED STATES PATENT OFFICE.

WILHELM REUBOLD, OF KARLSHORST, NEAR BERLIN, GERMANY.

DEVICE FOR AUTOMATICALLY CHARGING THE DELIVERY-BUCKETS OF ELEVATORS.

1,003,511.

Specification of Letters Patent. Patented Sept. 19, 1911.

Application filed May 15, 1908. Serial No. 433,086.

To all whom it may concern:

Be it known that I, WILHELM REUBOLD, a subject of the German Emperor, residing at 7 Rodelstrasse, Karlsruhst, near Berlin, Germany, engineer, have invented a Device for Automatically Charging the Delivery-Buckets of Elevators, of which the following is a specification.

The object of the invention is a device for automatically charging the delivery buckets of elevators and the like, especially those of the inclined elevators for blast furnaces.

According to this invention an intermediate hopper is provided between the charge hopper and the bucket the said intermediate hopper being provided with movable covers which separate it from the charging hopper and the bucket. The movable covers are adapted to be opened and closed by the movement of the bucket. For the purpose of always charging the bucket with the same amount of material either the movable covers are so arranged that the intermediate hopper is filled with material sufficient to fill the bucket or the intermediate hopper is of the same content as the bucket.

In the drawing is diagrammatically shown a constructional form in connection with the lower end of an inclined elevator.

Figure 1 is a diagrammatic side elevation of a truck below a hopper and Fig. 2 is an elevation at right angles to Fig. 1.

As may be seen in the drawing, there is arranged in front of the hopper *a* a second hopper *b* open at the top, of which the walls *c* and *d* are movable and are held in a closed position by weights or other means. The part *c* forms a partition between the hoppers *a* and *b* and is adapted to retain the material in the upper hopper *a* while the lower hopper *b* is being discharged. This part *c* is of such a size that when in the position shown in the drawing no material will fall from the upper hopper into the lower hopper; the size thereof being determined by observation and not theoretically. On descending the path *e* of the elevator which may be of any suitable construction, the empty bucket *f* comes into contact by means of a projection *o* or the like with a lever *p*, which is rigidly connected to the wall *c* of the measuring hopper *b*, rotatably con-

nected to the hopper *a* at *g*. The wall *c* thus passes through a slot 3 in the rear of the measuring hopper so that the material in the charge hopper *a* can fall into the measuring hopper *b*. At the moment when the projection *o* releases the lever *p*, the discharge opening of the hopper *a* is again closed by the weight *q* also attached to the wall *c*. On the further downward movement of the bucket *f* the base *d* of the hopper *b* is opened by means of a projection *r* fixed to the bucket so that the material contained within the hopper *b* can be discharged into the bucket. On the return movement of the bucket the base *d* is moved back into the closed position by means of the action of a weight *n* and the operation is then repeated.

What I claim as my invention and desire to secure by Letters Patent is:—

1. A device for automatically charging the delivery buckets of elevators and the like comprising a charge hopper, an intermediate hopper provided below the charge hopper, movable walls, provided in the intermediate hopper and means for opening and closing the walls of the intermediate hopper, said means consisting of projections provided on the delivery buckets and balance weights substantially as described.

2. A device for automatically charging the delivery buckets and the like comprising a charge hopper, an intermediate hopper provided below the charge hopper, the said hopper being provided at its rear with a slot, a movable wall between the charge hopper and the intermediate hopper, said movable wall being adapted to pass through the slot when being opened, and a movable base provided in the intermediate hopper and means for opening and closing the movable wall and base of the intermediate hopper, said means consisting of projections provided on the delivery buckets and balance weights substantially as described.

In testimony whereof I have hereunto signed my name to this specification in the presence of two subscribing witnesses.

WILHELM REUBOLD.

Witnesses:

HENRY HASPER,
WOLDEMAR HAUPT.