G. N. ST. CLAIR.

ELEVATOR.

APPLICATION FILED JAN. 12, 1911.

**1,008,996.** Patented Nov. 14, 1911.

Fig. 1.

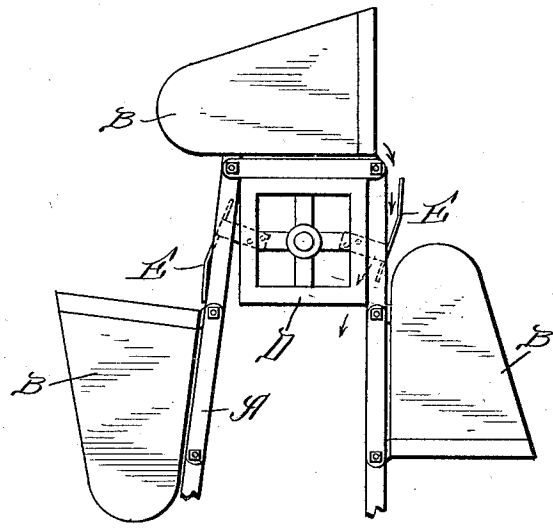



Fig. 2.

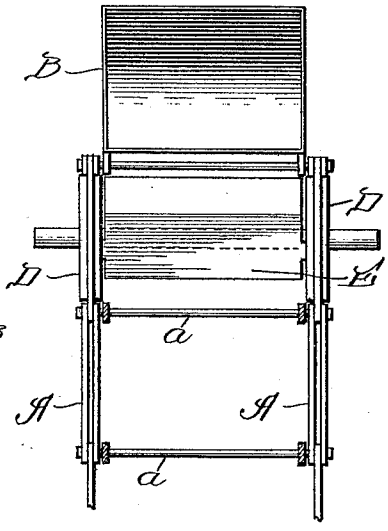



Fig. 3.

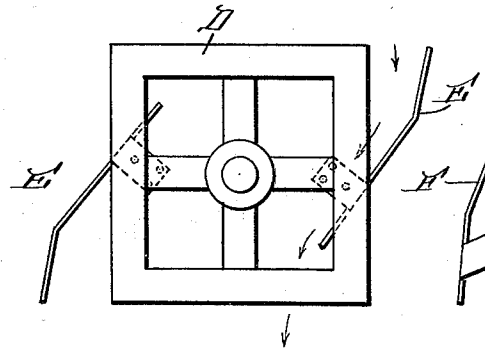
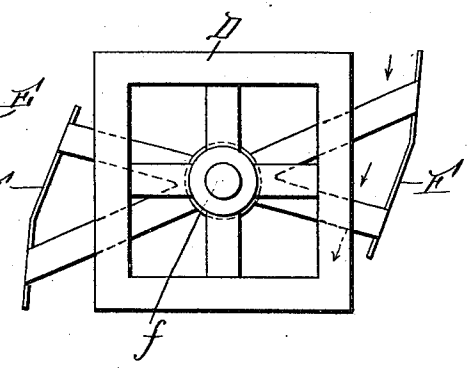



Fig. 4.

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# UNITED STATES PATENT OFFICE.

GUY N. ST. CLAIR, OF SPRINGFIELD, ILLINOIS.

## ELEVATOR.

1,008,996. Specification of Letters Patent. Patented Nov. 14, 1911.

Application filed January 12, 1911. Serial No. 602,203.

*To all whom it may concern:*

Be it known that I, GUY N. ST. CLAIR, a citizen of the United States of America, and resident of Springfield, Sangamon county, Illinois, have invented a certain new and useful Improvement in Elevators, of which the following is a specification.

My invention relates to elevators, in general, but more particularly to elevators for use in washing coal, such, for example, as the usual chain and bucket arrangement, and especially those in which means are employed for deflecting the water away from the path of the falling load, when each bucket is upset, whereby the load is delivered in a nearly dry condition.

The object of my present invention is to provide an improved construction and arrangement whereby the deflectors, instead of being on the chain or on the buckets, are on the tumbling head, or on some other adjacent part of the construction, and do not, therefore, travel with the buckets or chain, but simply revolve at the top of the elevator.

It is also an object, therefore, to provide an improved arrangement whereby the number of deflectors may be less than the number of buckets.

To the foregoing and other useful ends, my invention consists in matters hereinafter set forth and claimed.

In the accompanying drawings—Figure 1 is a side elevation of the upper part of an elevator embodying the principles of my invention. Fig. 2 is a front elevation of the structure shown in Fig. 1. Fig. 3 is a side elevation of the tumbling head. Fig. 4 is a side elevation of the tumbling head, showing another form of my invention.

Referring to Figs. 1 and 2, the elevator comprises the usual chains A and buckets B thereon, which chains run over the usual tumbling head D. The deflectors E are secured to the tumbling head and adapted to revolve therewith. When a bucket is upset, and at the same time that it reaches a horizontal portion, one of the deflectors is brought into position to receive the water which discharges first (see the bucket at the top of Fig 1), and the load then discharges and falls forward, but the water is deflected away from the path of the load, and falls in a different direction. The buckets are on the rods *a* that connect together the two chains or link belts. The deflectors are automatically presented between these rods, and are withdrawn therefrom, in the manner shown. If the buckets are farther apart, only one deflector will be necessary. And, in any event, the deflectors can be less in number than the buckets.

In Fig. 4 the construction is about the same, except that here the deflectors E are secured to the shaft *f*, instead of to the tumbling head as in the previous construction or form of my invention.

Other modifications are obvious, and I do not limit myself to any particular way of operating deflectors of this kind which are not on the chains or buckets.

What I claim as my invention is:

1. In an elevator, an endless series of elevating buckets, each bucket adapted to carry a quantity of water with the load of solid materials, a tumbling head for upsetting the buckets to discharge the load, and means for separating and deflecting the water away from the path of discharge of the load, comprising one or more plates which are each operative to deflect the water backward and underneath a bucket which is being upset, adapted to permit the load to then pass over and fall forward, said plate or plates being associated with and adapted to revolve with the said tumbling head.

2. In an elevator, a bucket adapted to carry water with the load of solid materials, means for upsetting the bucket to discharge the load, and means for separating and deflecting the water away from the path of discharge of the load, comprising a deflector for causing any water which discharges first to fall away from the path of the load which discharges afterward, said deflector being structurally distinct and separate from said bucket, whereby the bucket and deflector come together and then separate during the operation of the elevator, the water being deflected away from the path of the load each time the bucket passes the deflector.

3. In an elevator, an endless series of buckets, each bucket adapted to carry a quantity of water with the load of solid materials, means for causing the buckets to discharge their loads, and means for separating and deflecting the water away from the path of discharge of the load, comprising one or more deflecting plates which are operative to cause any water which is car-

ried up in the buckets to fall away from the path of the load in discharging therefrom, and means for supporting and thereby preventing said plate or plates from partaking of the traveling motion of said buckets.

4. In an elevator, a traveling bucket adapted to carry water with the load of solid materials, means for upsetting the bucket to discharge the load, and means for separating and deflecting the water away from the path of discharge of the load, comprising a plate, which, when the bucket is upset, is in position to deflect the water away from the path of the falling load, and means for supporting said plate in such position that the bucket will pass in operative relation thereto.

Signed by me at Chicago, Cook county, Illinois, this 9th day of January, 1911.

GUY N. ST. CLAIR.

Witnesses:
R. KEARNS,
E. H. CLEGG.