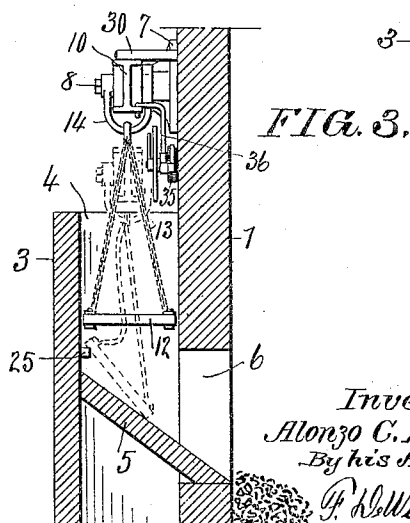
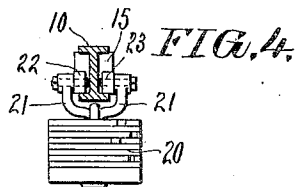
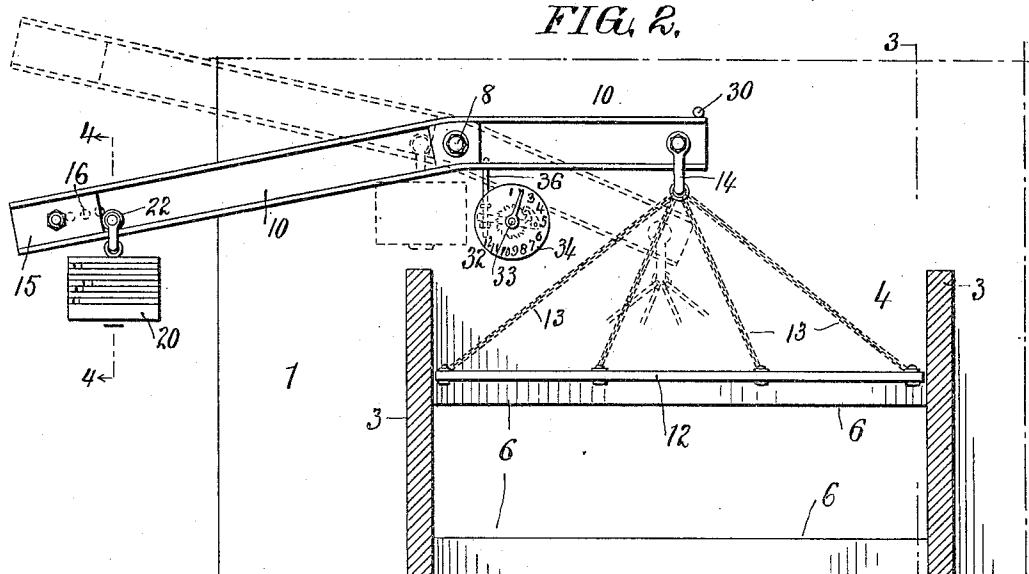
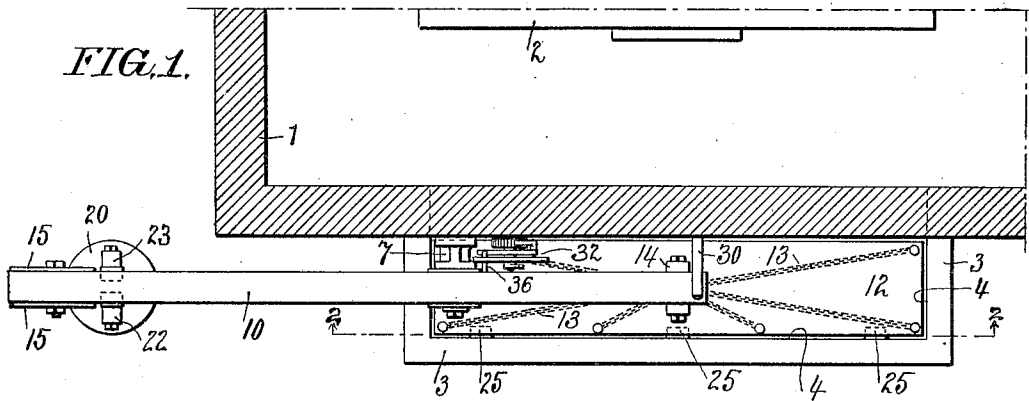


A. C. MATHER.
WEIGHING DEVICE.
APPLICATION FILED JUNE 18, 1907.

935,214.

Patented Sept. 28, 1909.



Witnesses:
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UNITED STATES PATENT OFFICE.

ALONZO C. MATHER, OF CHICAGO, ILLINOIS.

WEIGHING DEVICE.

935,214.

Specification of Letters Patent. Patented Sept. 28, 1909.

Application filed June 18, 1907. Serial No. 379,534.

To all whom it may concern:

Be it known that I, ALONZO C. MATHER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Weighing Devices, of which the following is a specification.

My invention relates to improvements in an automatic weighing and discharging device and the invention relates particularly to a device for weighing and discharging coal or the like.

The object of the invention is to provide a pivoted beam, carrying at one end a platform which is suspended in a shaft, through which the coal is discharged. Said beam carries at its other end a counter-balance and a movable weight, which latter is adapted to slide toward the fulcrum of the beam, so as to allow the platform to descend and be tilted automatically to discharge the load and when empty to return slowly to its normal position.

Referring to the drawings: Figure 1 is a plan view of my weighing device applied to a boiler house; Fig. 2 is a vertical section on line 2—2 Fig. 1; Fig. 3 is a transverse section on line 3—3 Fig. 2; Fig. 4 is a vertical section on line 4—4 Fig. 2.

In the drawings 1 represents the wall of a boiler house, containing the boiler 2, 3 is an outside wall forming a shaft or chute 4, having an inclined floor 5, adjacent an opening 6 formed in the wall 1 of the boiler house. A bearing 7 is secured to the wall 1, having a stud shaft 8 on which is pivoted a beam 10. The beam 10, made in the form of an I-beam, carries a platform 12 suspended by chains 13 connected to a link 14 pivoted to the inner end of the beam. The outer end of the beam 10 is provided with weights 15 bolted to either side of the same. Said beam has a series of apertures 16 formed therein, so that the weights 15 may be adjusted to counter-balance the platform 12. A weight 20 is suspended from a yoke 21 having rollers 22 and 23 which slide upon the flanges of the I-beam as shown in dotted lines, Fig. 2.

Secured in the wall 3 are pins or stops 25 upon which rest one edge of the platform 12 after sufficient load has been placed upon the platform to overbalance the weights on the outer end of the beam and cause the platform to descend. As the platform descends

the outer end of the beam will be raised sufficiently to cause the weight 20 to slide toward the fulcrum of the beam 10. When the weight 20 is near the fulcrum of the beam the platform will descend still farther and the stops 25 will cause the platform to tilt and empty the load, which will travel down the inclined bottom 5, through the opening 6 and into the boiler house.

When the platform is entirely empty the weight 20 will slowly depress the outer end of the beam and return the beam and platform to their normal positions as shown in full lines Fig. 2. A stop 30 is provided in the wall 1 to engage the beam and prevent the platform from rising too high. Ample time is given for the platform to be emptied as the weight 20, being in a position near the fulcrum of the beam, will not raise the platform until it is entirely empty.

A registering device 32 is provided to indicate the number of times the beam is tilted. A pointer is carried by a shaft 33 and rotates in front of a dial 34. The said shaft has a ratchet-wheel 35 which is engaged by a pawl carried by a rocking arm which is connected by a rod 36 with the beam 10. When the beam is operated the pawl will advance the ratchet-wheel, which will move the pointer and indicate the number of times upon the dial that the beam is tilted.

The operation of my invention is as follows: After the parts have returned to their normal positions as shown in full lines Fig. 2, and the weights are adjusted to weigh the desired amount, the chute is filled with coal. The platform and the walls form a receptacle to receive the same. When the proper amount of coal is placed in the chute the weights will be overbalanced and the platform will descend. The movable weight will then slide toward the fulcrum of the beam, which will cause the platform to descend quickly until it reaches the stops 25 which will tilt the platform and discharge the coal. The weights will then cause the platform to rise and automatically bring the parts to their normal positions.

Having thus described my invention I claim and desire to secure by Letters Patent:

1. In a device of the character described, the combination of a pivoted beam, a platform suspended from one end of said beam, a stationary chute in which said platform is

suspended, a weight mounted upon the opposite end of said beam and adapted to move by gravity upon said beam, and a stop in said chute upon which one side of said platform is adapted to rest.

2. In a device of the character described, the combination of a pivoted beam, a platform suspended from one end of said beam, a stationary chute in which said platform is suspended, a weight mounted upon the opposite end of said beam and adapted to move by gravity upon said beam, a stop in said chute upon which said platform is adapted to rest and flexible members between said platform and said beam.

3. In a device of the character described, the combination of a pivoted beam, a platform suspended from one end of said beam, a stationary chute in which said platform is suspended, a weight mounted upon the opposite end of said beam and adapted to move by gravity upon said beam, a weight bolted upon the said beam to counter-balance said platform, a stop in said chute upon which said platform is adapted to rest and flexible members between said platform and said beam.

4. In a device of the character described, the combination of a pivoted beam, a platform suspended from one end of said beam, a weight bolted to the other end of said beam, a movable weight, rollers on which said latter weight is suspended, said rollers adapted to roll upon said beam, a stationary chute in which said platform is suspended,

and a stop in said chute upon which said platform is adapted to rest.

5. In a device of the character described, the combination of a pivoted beam, a platform suspended from one end of said beam, a weight mounted upon the other end of said beam and adapted to move by gravity, a wall forming a chute in which said platform is suspended, stops in said chute adapted to tilt said platform when the same is lowered in said chute, an inclined bottom in said chute and an opening formed in the wall of said chute located adjacent said inclined bottom.

6. In a device of the character described, the combination of an I beam, a fixed bearing in which the same is pivotally mounted, a weight bolted to said I beam, a yoke, rollers on said yoke adapted to roll on said I beam, a weight carried by said yoke, flexible members connected to said I beam at the opposite end of said beam from the said weights, a platform carried by said flexible members, a stationary chute in which said platform is suspended, a stop in said chute to engage said platform and tilt the same and a stop to limit the upward movement of said platform.

In testimony whereof I affix my signature in presence of two witnesses.

ALONZO C. MATHER.

Witnesses:

JAMES F. BOYLAN,
M. R. CLEELAND.