R. P. M. DAVIS.

ROCK MEASURING APPARATUS.

APPLICATION FILED JUNE 24, 1912.

1,038,305.

Patented Sept. 10, 1912.

2 SHEETS—SHEET 1.

FIG. 1

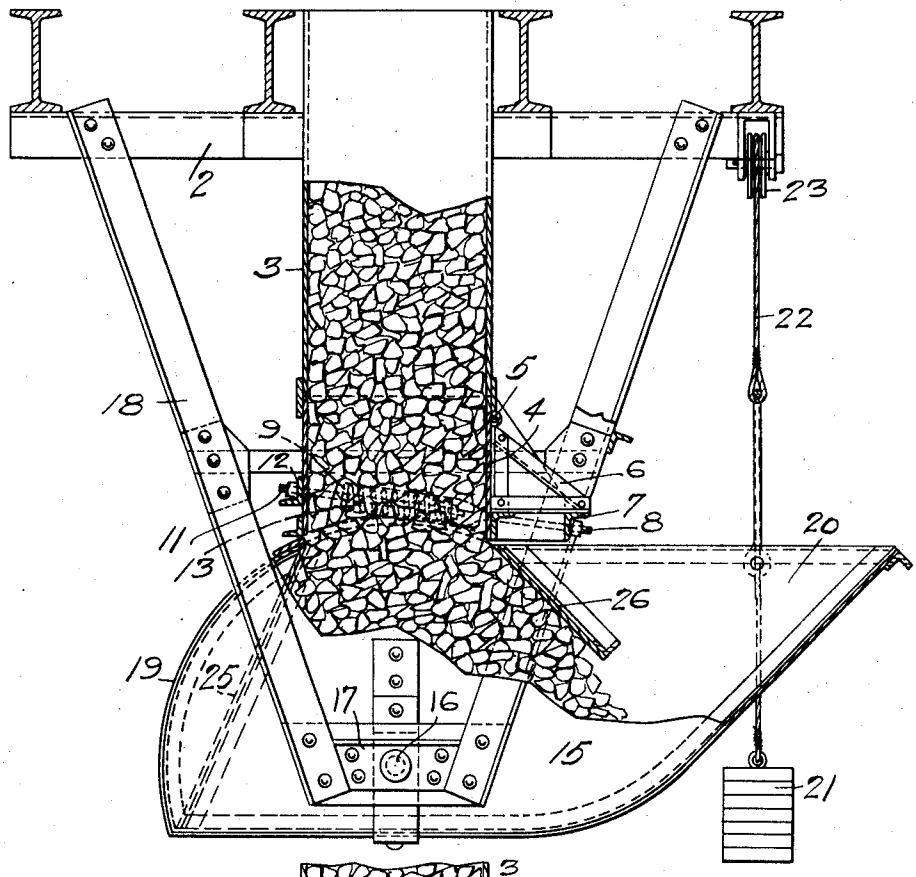
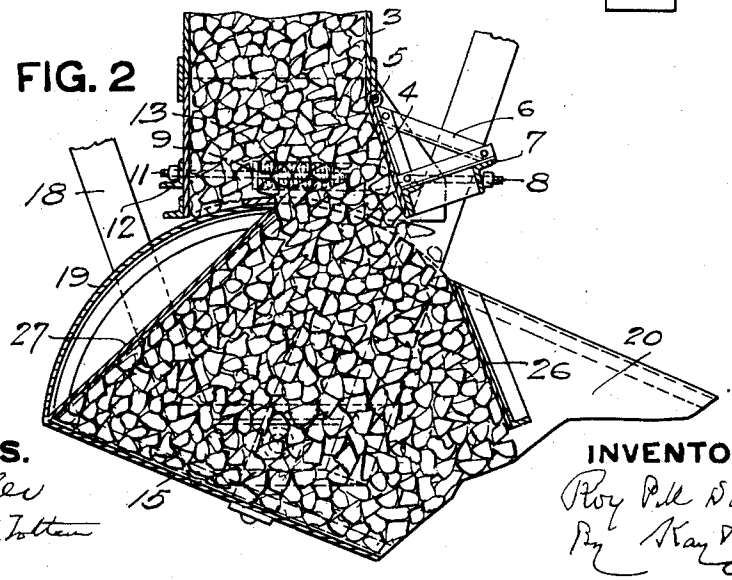


FIG. 2



WITNESSES.

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2 SHEETS—SHEET 2.

FIG. 3

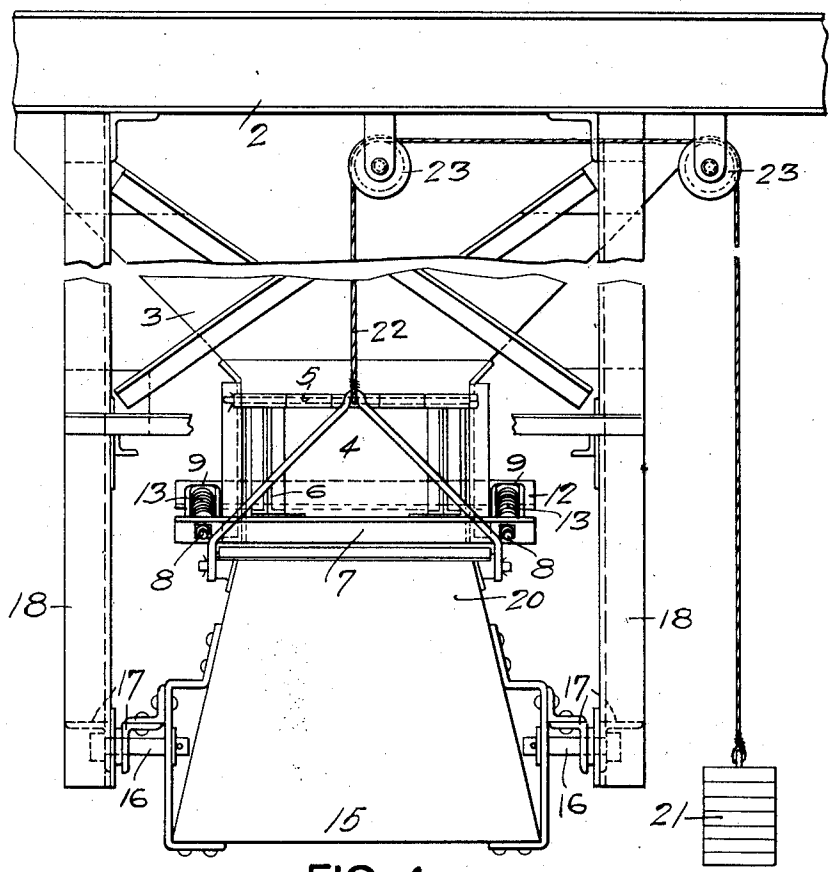
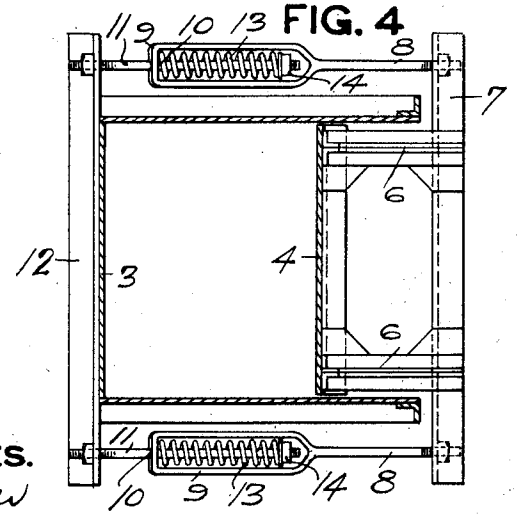


FIG. 4



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UNITED STATES PATENT OFFICE.

ROY P. M. DAVIS, OF LOCK HAVEN, PENNSYLVANIA.

ROCK-MEASURING APPARATUS.

1,038,305. Specification of Letters Patent. Patented Sept. 10, 1912.

Application filed June 24, 1912. Serial No. 705,605.

To all whom it may concern:

Be it known that I, ROY P. M. DAVIS, a citizen of the United States, and resident of Lock Haven, in the county of Clinton and State of Pennsylvania, have invented a new and useful Improvement in Rock-Measuring Apparatus; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to measuring apparatus and more particularly to apparatus of this character adapted for measuring quantities of crushed rock in connection with the manufacture of refractory brick.

The object of my invention is to provide a simple and efficient form of measuring apparatus by means of which the crushed rock is measured in uniform quantities to be delivered to the grinding pan, the device to work automatically in connection with a chute which is filled with the rock and by which a constant supply of rock is fed to the measuring basket.

To these ends my invention comprises the novel features hereinafter set forth and claimed.

In the accompanying drawing Figure 1 is a side elevation partly in section of my improved measuring device; Fig. 2 is a vertical sectional view, showing the basket in tilted position; Fig. 3 is an end view, and Fig. 4 is a detail of the yielding gate at the lower end of the chute.

The numeral 2 designates a suitable overhead frame which supports the chute 3. At the lower end of the chute 3 is the gate 4 which is supported on the hinged-rod 5 and on which said gate is adapted to swing back and forth. The angle bracing 6 is connected to the gate and the angle-bar 7 of said bracing extends out beyond the walls of the chute and rods 8 are connected to said angle-bar 7. The rods 8 are provided with the strap-loops 9 having the openings 10. Rods 11 are connected to the rear angle-bar 12 of the chute and springs 13 surround the rod 11, said springs being interposed between the nuts 14 on said rods and the loops 9 of the rods 8. The springs 13 tend to hold the gate 4 in its closed position.

Below the chute 3 is the basket 15, said basket having the trunnions 16 which rest in suitable bearings 17 in the frame 18. The basket 15 has the curved end-plate 19 and the lower end of the chute 3 is cut on the same radius. The basket 15 is provided with the open spout-like portion 20 by which the rock is discharged when the basket is tilted. The basket is counterweighted by the weight 21 attached to the cable 22 passing over the pulley 23, so that when the basket is filled it will tilt automatically, and when the material has been discharged therefrom it will be brought back to its normal position.

Within the basket 15 are the baffle-plates 25 and 26 which confine the rock, and fix definitely the amount which can be received in the basket at each charge.

When my improved measuring apparatus is in use the rock contained within the chute 3 and which is supplied from a suitable crusher, fills the said chute, and, where the basket is in the position shown in Fig. 1, this rock is delivered by the chute to said basket. When the basket has been filled in this way it will tilt of its own accord, and as it tilts the end plate 19 moving across the bottom of the chute will cut through or shear the segregated mass of rock, and the charge contained within the basket is dumped to a suitable pan below. As the pieces of rock are of fairly large size I have provided the gate 4 to relieve the pressure in the chute as the basket tilts. The gate 4 can yield as the end-plate 19 of the basket moves around to cut across the lower end of the chute, and any tendency of the rock to jam or retard the tilting of the basket is relieved by the action of the gate 4, which can move outwardly and permit a certain amount of the rock to slip past, and pieces forced through the gate can drop from the chute out over the baffle 26 into the basket. The springs connected to the gate permit of the yielding of the gate to the extent required, and said springs will return the gate to normal position when the basket has been tilted. In this way I relieve the strain on the parts and always insure the proper operation of the basket and prevent the jamming, as it will be readily understood that where large pieces of material are to be separated by shearing one mass of segregated material into two parts, there will be more or less tendency to strain and a stalling of the basket.

I have provided a simple and efficient form of measuring apparatus for use especially in connection with the measuring of rock for making refractory brick, and by the above arrangement I obtain very uni-

form quantities of rock in the basket, and can depend upon the proper quantity of rock being delivered to the pan into which the basket discharges.

What I claim is:

1. In measuring apparatus, the combination of a chute, a tilting basket, a closed portion on said basket adapted to move across the lower end of said chute, and a yielding gate at the lower end of said chute.

2. In measuring apparatus, the combination of a chute, a tilting basket, a closed portion on said basket adapted to move across the lower end of said chute, and a spring actuated yielding gate at the lower end of said chute.

In testimony whereof, I the said Roy P. M. Davis, have hereunto set my hand.

ROY P. M. DAVIS.

Witnesses:

F. D. Halstead,

George W. Morgan.