

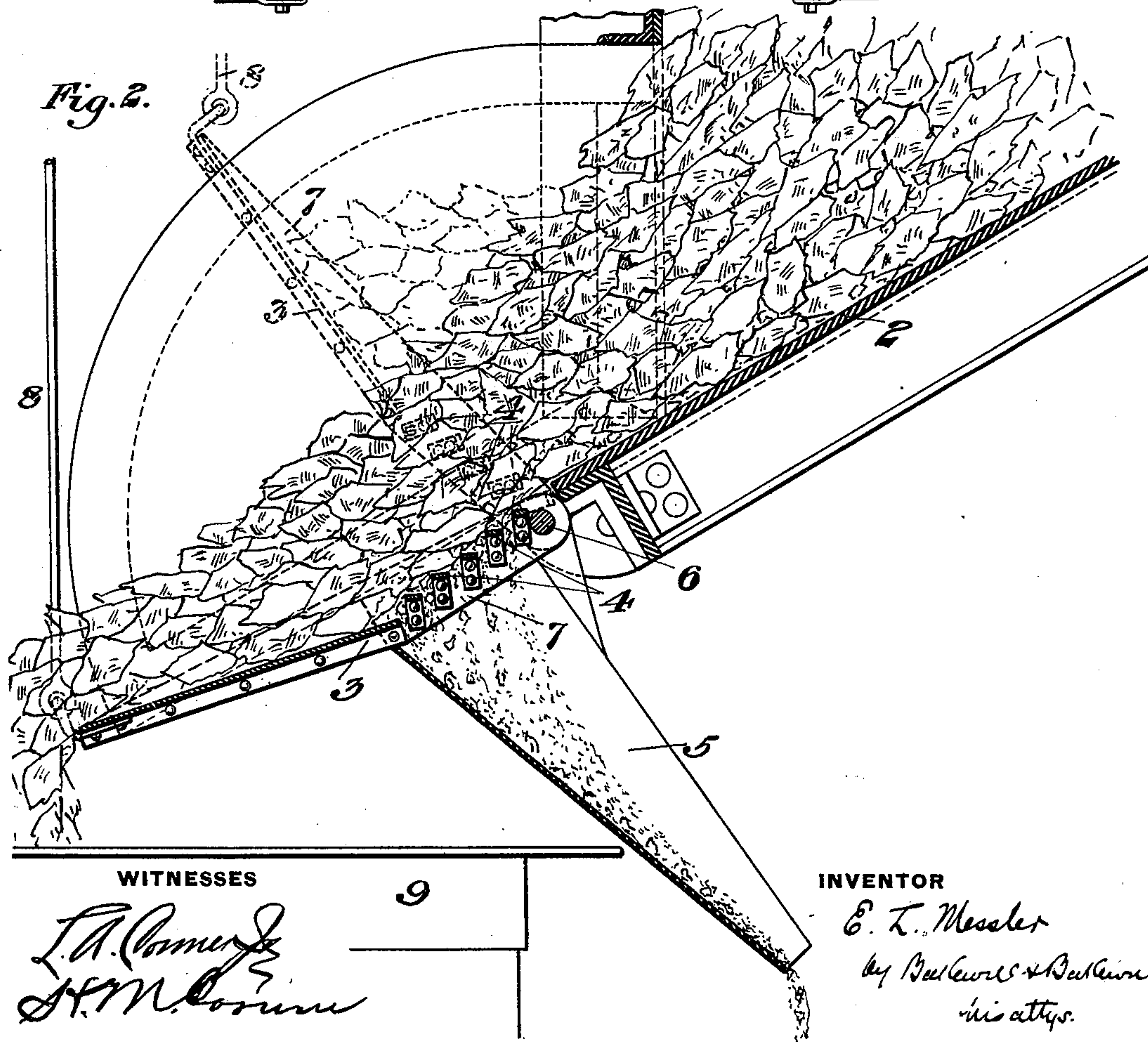
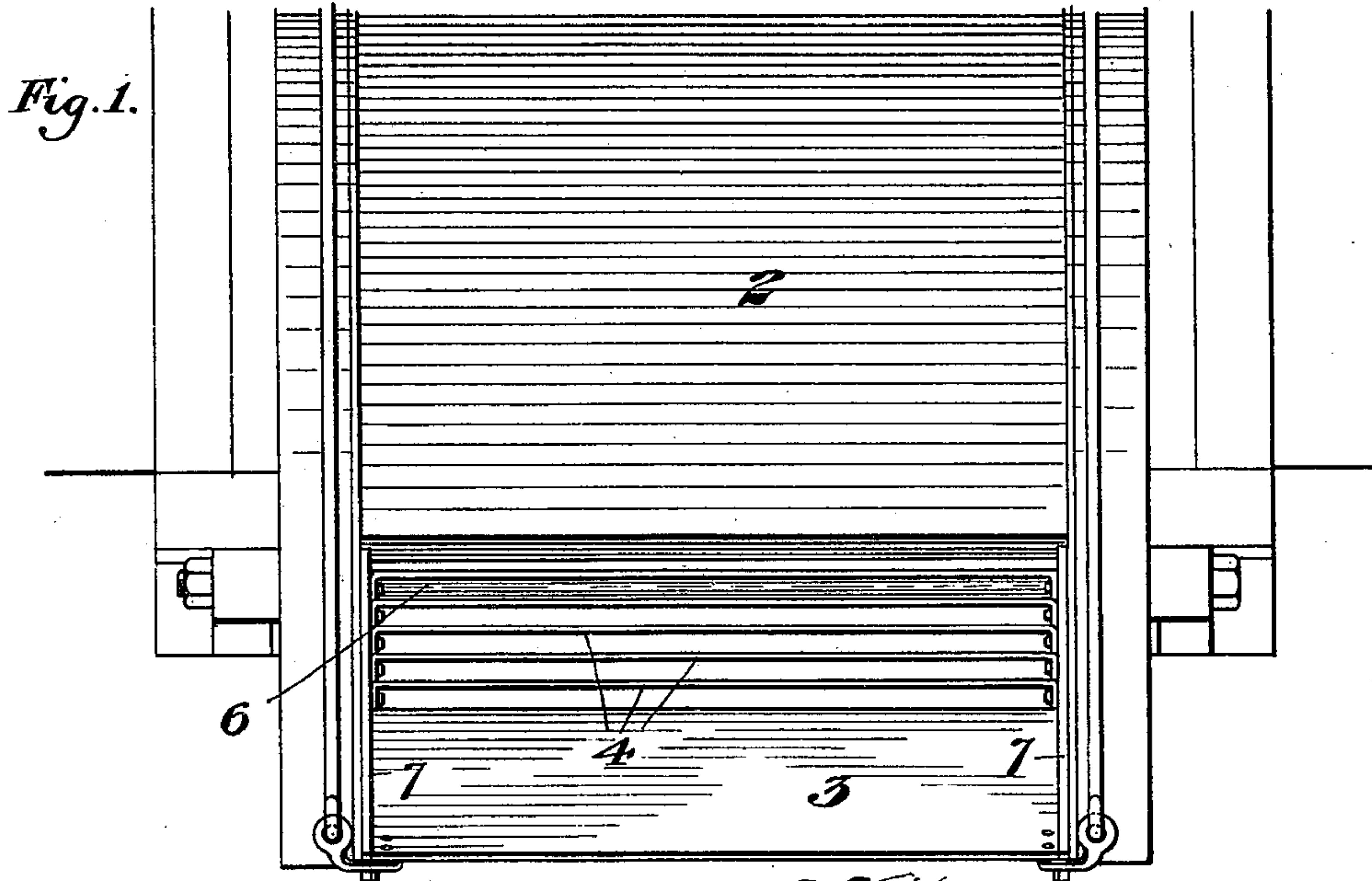
No. 630,623.

Patented Aug. 8, 1899.

E. L. MESSLER.
CHUTE.

(Application filed May 29, 1899.)

(No Model.)



WITNESSES

L. A. Comer
J. H. M. Corum

INVENTOR

E. L. Messler
by Beckwith & Beckwith
his attys.

UNITED STATES PATENT OFFICE.

EUGENE L. MESSLER, OF PITTSBURG, PENNSYLVANIA.

CHUTE.

SPECIFICATION forming part of Letters Patent No. 630,623, dated August 8, 1899.

Application filed May 29, 1899. Serial No. 718,683. (No model.)

To all whom it may concern:

Be it known that I, EUGENE L. MESSLER, of Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Chutes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which--

Figure 1 is a front elevation of my improved chute in open position. Fig. 2 is a vertical section of the same.

My invention relates to the chutes employed for directing lump material, such as coke, from a bin into any desired receptacle, and is designed to provide a chute which will separate the finely-powdered or granular portions from the lumps as they pass through the chute to the receptacle, and, further, to provide a swinging chute of this character which acts as a closing-door and which when swung up into closed position will automatically clean itself from any clogged granular material between the escape-openings therefor.

In the drawings, 2 represents the inclined bottom of a bin, having an opening, below which is pivotally supported the swinging chute and door 3. The front portion of this chute is of solid plate form, while the rear portion is formed of transverse bars 4, which are arranged in step-fashion relatively to each other, each bar being successively lower than the next bar nearer the outlet of the bin. The bars are spaced apart a suitable distance, such that when the chute is in lowered position the finer parts will fall through the vertical openings between them and may be received in a rearwardly-directed chute 5, which is pivoted to the same shaft 6 to which the chute proper is pivoted.

7 7 are the stationary vertical side plates of the chute, between which the chute may be swung by means of suitable connections for the link 8 engaging an eye at the outer end of the chute.

The operation is apparent. When it is desired to charge the lump material into the car or receptacle 9, the door or chute being lowered into position shown in full lines the lumps slide down by gravity and drop into the

receptacle, while the finer constituents fall through the openings between the bars and are directed rearwardly, so as not to enter the car. When the receptacle has been filled, the door or chute may be swung up into the position shown by dotted lines in Fig. 2, and as in this position the vertical opening between the bars is enlarged any clogged material between the bars will drop out and leave the spaces between them free.

The advantages of my invention result from the step formation of the bars, which in practice is found to give a thorough separation of the finer material. The device is simple and may be easily applied to existing constructions.

The supplemental chute need not be used unless the receptacle extends back under the main chute a sufficient distance so that the finer materials would drop into it, and many other changes may be made in the form and arrangement of the parts without departing from my invention.

I claim--

1. A chute having a series of separated bars arranged in step-fashion and adapted to separate the finer constituents from the lumps passing through the chute; substantially as described.

2. A swinging chute and closing-door having at its rear portion a series of separated bars arranged in step-fashion; substantially as described.

3. The combination with a bin having a lower opening, of stationary side plates, and a swinging chute and closing-door movable between the plates and having in its bottom a series of separated bars arranged in step-fashion; substantially as described.

4. The combination with a swinging chute having a series of separated bars arranged in step-fashion in its bottom, of a supplemental chute into which the finer materials fall between the bars; substantially as described.

In testimony whereof I have hereunto set my hand.

EUGENE L. MESSLER.

Witnesses:

GEORGE F. PITTS,
ADDA HICKEY.