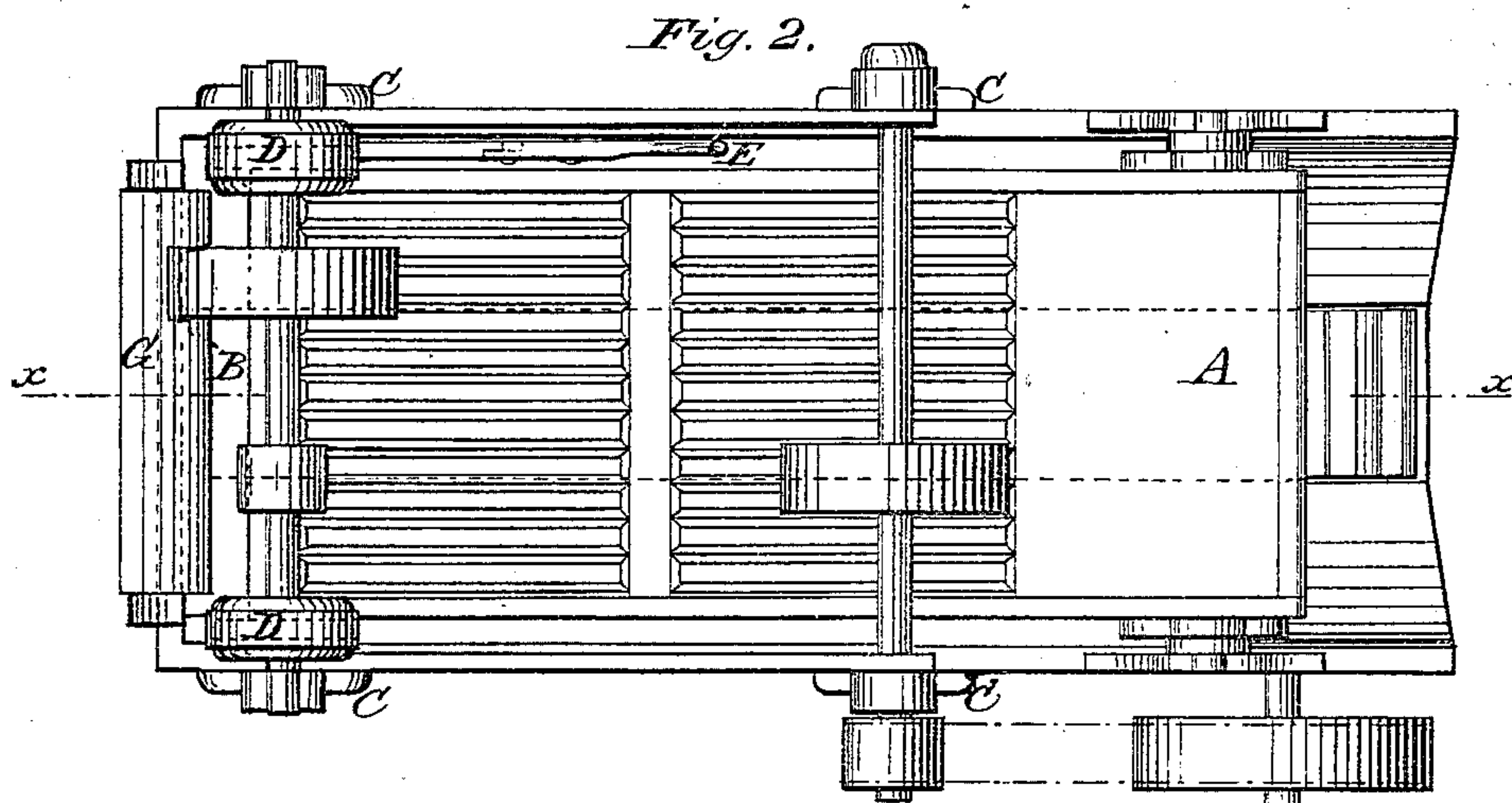
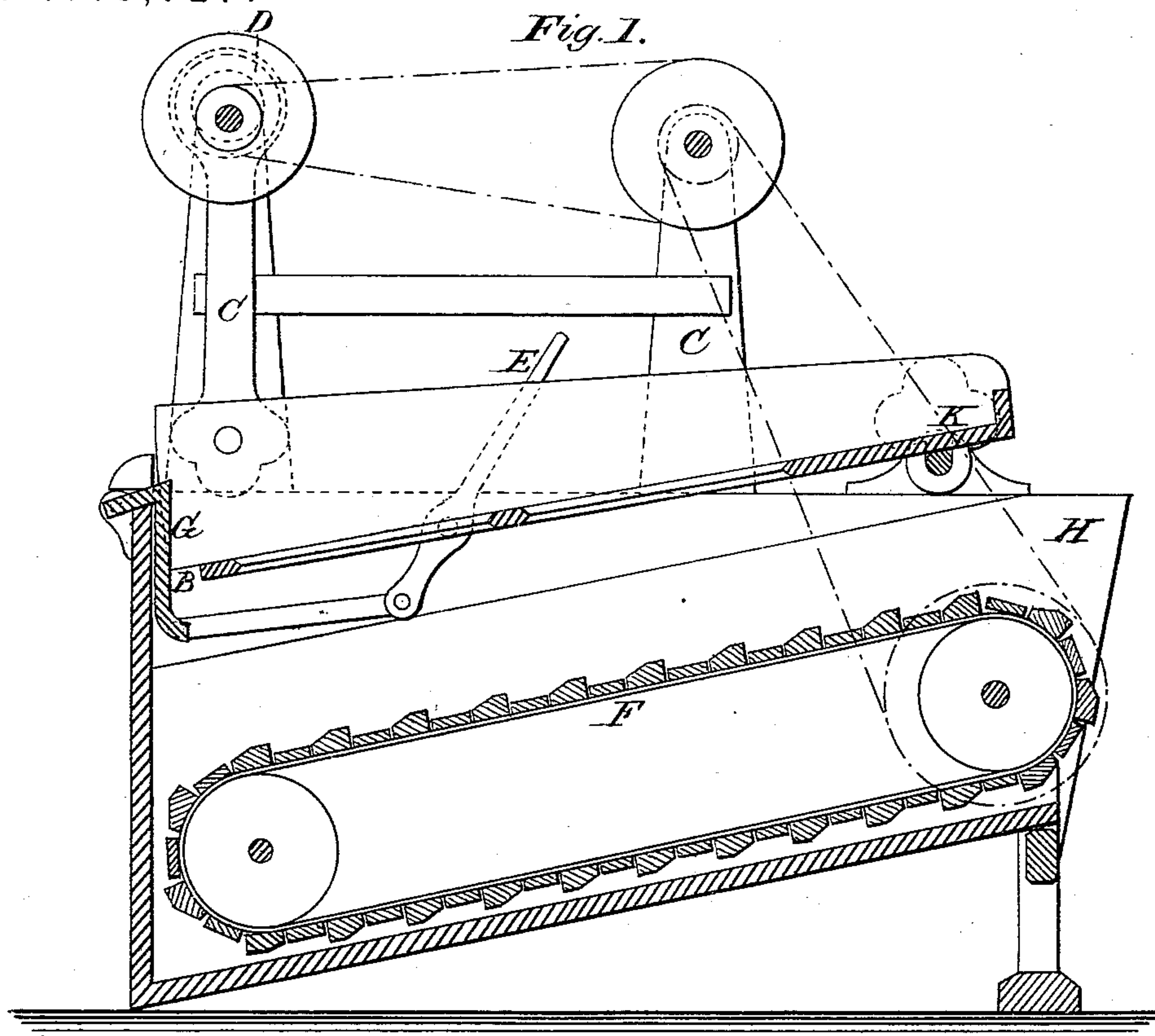


G. B. MARKLE.

Separators for Ore and Coal.

No. 148,727.

Patented March 17, 1874.



Witnesses:

C. C. Adams
C. H. Fitch

Inventor:

G. B. Markle.

per Wm P. Seville Att'y.

UNITED STATES PATENT OFFICE

GEORGE B. MARKLE, OF HAZLETON, PENNSYLVANIA.

IMPROVEMENT IN SEPARATORS FOR ORE AND COAL.

Specification forming part of Letters Patent No. **148,727**, dated March 17, 1874; application filed March 5, 1874.

To all whom it may concern:

Be it known that I, G. B. MARKLE, of Hazleton, in the county of Luzerne and State of Pennsylvania, have invented a new and Improved Coal and Ore Separator, of which the following is a specification:

The object of my invention is to rapidly separate coal from slate, but it may be used for separating substances of different specific gravities.

Figure 1 is a longitudinal vertical section on line *x x*. Fig. 2 is a plan view of the machine.

The invention consists in the construction of a machine that may be placed directly in the coal-chute, or in the same line with it, and in the peculiar mechanism of the several parts.

A is the box or chute. H is the tank. D D are the eccentrics, and C the connecting-rods. G is a gate or opening attached to the tank H. B is the opening at the end of the jig or chute. F is the endless belt or carrier. E is the lever-arm for regulating the opening B. K K are the trunnions for sustaining the stationary end of the box or chute A. The machine is operated by the gear-wheels and bands, as plainly shown in Fig. 1 of the drawing.

The operation of the machine is as follows: A vibrating motion is given to the box or chute A by the eccentrics D and connecting-rods C. The coal, slate, or other substances enter the chute A, pass over the bars through the water, and, by the effect of the swinging

motion, the coal or lighter substances are thrown out over the dam G into a chute or other receptacle, while the slate or heavier substances gravitate through the opening B, at the end of the box or chute A, and are then carried up and thrown out by the endless belt or carrier F. The opening B is regulated by the gate or dam G and lever-arm E.

It will be observed that the slotted bottom of the separator is sectional-shaped, and that the bars are longitudinal and oval.

Having described my invention, I claim—

1. The box or chute A, constructed in sections, with longitudinal and oval-shaped bars, one end resting in the trunnions K, suspended at the other to the arms C, and vibrated by the eccentrics D, all constructed as described, and for the purposes set forth.

2. The gate G, as attached to the tank H, and operated by the lever-arm E.

3. The endless belt or carrier F in the tank H, constructed as described, for the purposes set forth.

4. The combination of the chute A, constructed and operated as shown, the gate G, the endless belt, and tank H, arranged as represented and described, and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto subscribed my name in the presence of two witnesses.

Witnesses: G. B. MARKLE.

A. DONOP,
FRANK HAMMANN.