

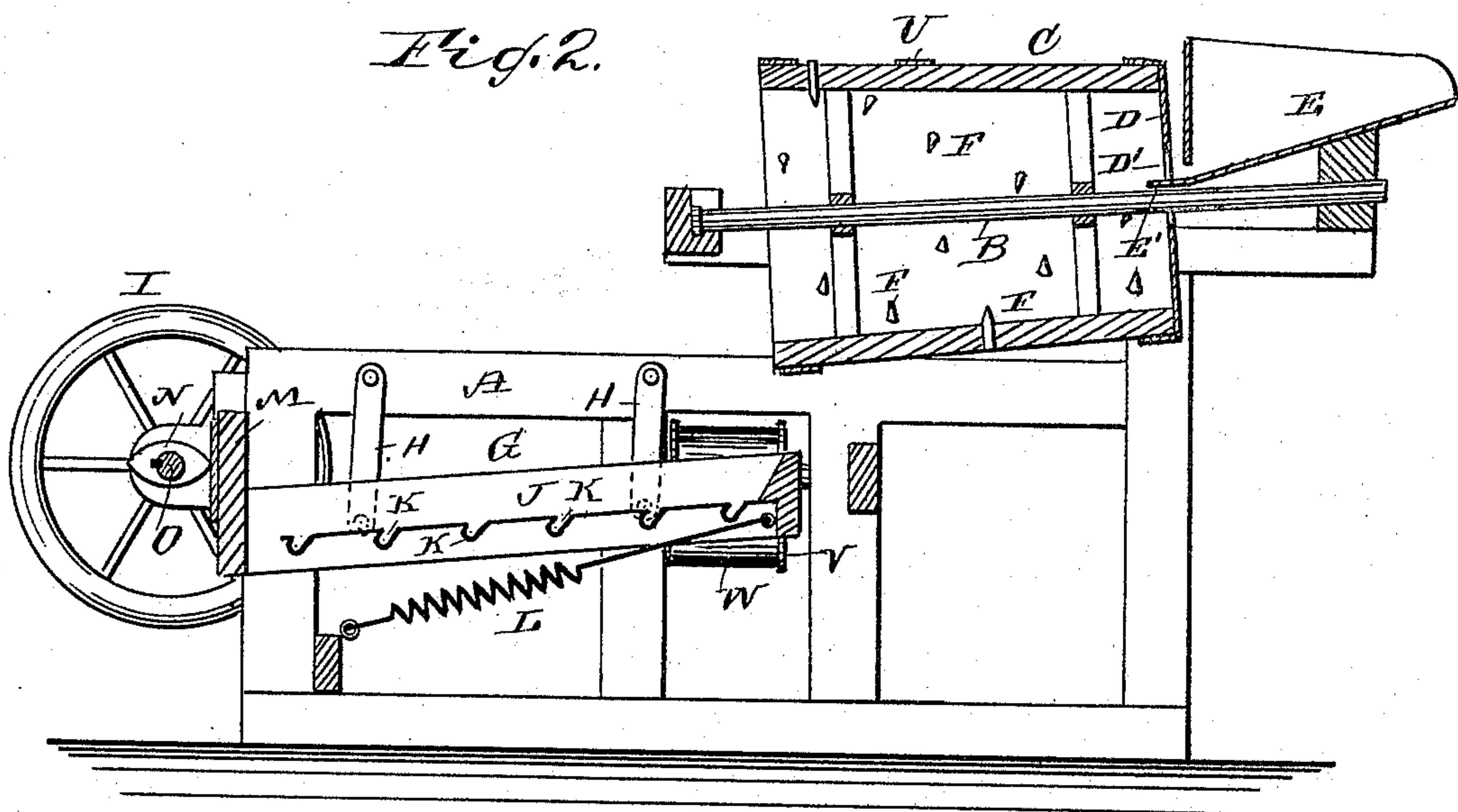
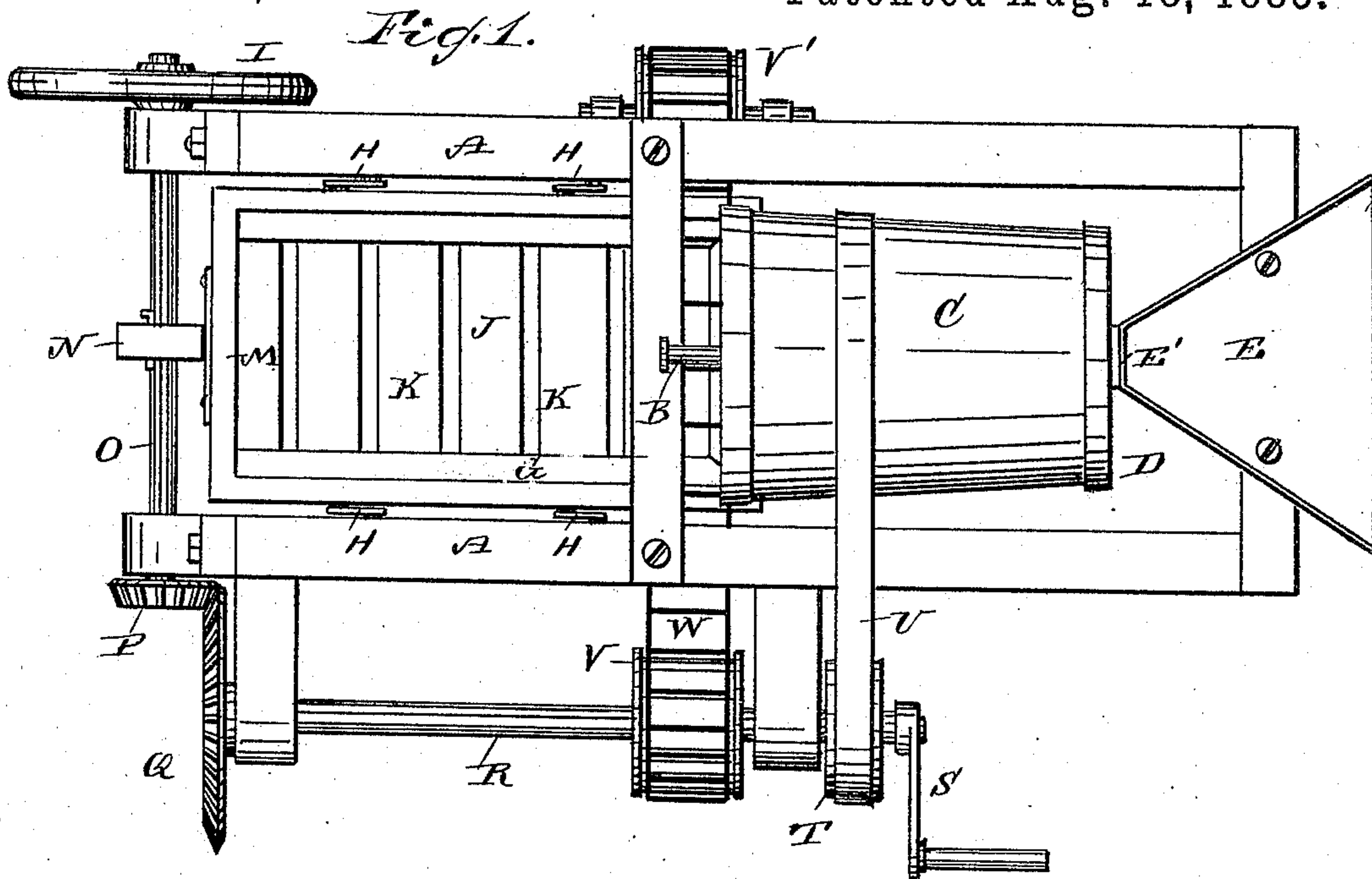
(No Model.)

H. S. & V. M. GIDEON.

ORE SEPARATING MACHINE.

No. 324,550.

Patented Aug. 18, 1885.



WITNESSES:

*Theo. G. Hester*  
*C. Sedgwick*

INVENTOR:

*H. S. Gideon*  
*V. M. Gideon*

BY

*Munn & Co*

ATTORNEYS.



# UNITED STATES PATENT OFFICE.

HENRY S. GIDEON AND VALENTINE M. GIDEON, OF CRESCENT CITY, IOWA.

## ORE-SEPARATING MACHINE.

SPECIFICATION forming part of Letters Patent No. 324,550, dated August 18, 1885.

Application filed May 20, 1885. (No model.)

*To all whom it may concern:*

Be it known that we, HENRY S. GIDEON and VALENTINE M. GIDEON, both of Crescent City, in the county of Pottawattamie and State of Iowa, have invented a new and Improved Ore-Separating Machine, of which the following is a full, clear, and exact description.

The object of our invention is to provide a new and improved machine for separating dry gold-dust from sand, dirt, gravel, &c., with which the said gold-dust is mixed.

The invention consists in the combination, with a rotating cylinder or drum having interior spikes, of an endless chain belt, and of a vibrating pan below and in rear of the drum, and between the upper and lower parts of the belt.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a plan view of our improved ore-separating machine. Fig. 2 is a longitudinal sectional elevation of the same.

In the supporting-frame A the shaft B is journaled at a slight inclination, and on the said shaft a drum, C, is mounted, which increases slightly in diameter from one end to the other. The drum has spokes or arms secured on the shaft. The larger lower end of the drum is open and the smaller upper end is closed by a head, D, having a central aperture, D'.

A hopper, E, is secured on the frame A, and is provided at its lower end with a spout, E', which projects through the central aperture, D', of the head D.

A series of spikes, F, project from the inner surface of the drum C in spiral lines for the purpose of agitating, breaking, and pulverizing the lumps of dirt, &c., passed through the said drum.

In rear of and below the drum C a fan, G, is suspended by links H from the top side pieces of the frame A in such a manner that the fan can rock in the direction of its length. That end of the fan nearest the drum C is higher than the opposite end.

The bottom J of the pan is provided with a series of transverse grooves or pockets K.

A spring, L, secured to the frame A and to

the pan G, pulls the latter in the direction toward the lower end of the same, and presses the end plate, M, of the pan against a cam, N, mounted on a shaft, O, journaled on the end of the frame, and provided at one end with a fly-wheel, I, and at the opposite end with a bevel cog-wheel, P, engaging with a cog-wheel, Q, on one end of a shaft, R, at right angles to the shaft O, and provided with a crank, S, or other device, such as a belt-pulley, gear-wheel, &c., for turning it.

On the shaft R a belt-pulley, T, is mounted, and over the same a belt, U, is passed, which is also passed around the drum C. On the shaft R is also mounted a pulley, V, over which and a pulley, V', on the other side of the machine an endless broad chain-belt or screen-belt, W, is passed, the said belt passing over and under the upper end of the pan G, directly below the lower larger end of the drum C, and consisting of side pivoted links, with intermediate connecting cross-bars of ordinary construction.

The operation is as follows: The sand, dirt, &c., containing the gold-dust is dumped into the hopper E, and passes into the drum C, which is revolved by the belt U. The lumps of dirt, &c., are mixed, broken, and agitated, and drop from the drum upon and through the belt W, upon the bottom of the pan, which is vibrated by the cam N and spring L. The large lumps of dirt, stones, &c., drop upon the chain-belt W, through which they cannot pass, and are carried to one side of the machine and deposited. The sand, &c., slides down the bottom of the pan and drops from the lower end of the same, and the gold-dust, &c., collects in the grooves or pockets K. The drum C, the chain-belt W, and the pan are all operated from the shaft R, which can be turned by hand by means of the crank or by power.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. An ore-separating machine made substantially as herein shown and described, consisting of the following elements: a rotary feeding-cylinder provided with interior spikes to agitate and pulverize the material, an endless chain moving under the mouth of the feeding-cylinder to carry off the coarse material,

and a vibrating inclined pan provided with ore-collecting grooves or pockets, all as set forth.

2. In an ore-separating machine, the combination, with the ore-feeding cylinder and the vibrating pan, of the endless chains, substantially as and for the purposes herein described.

3. The combination, with the longitudinal driving-shaft R, pulleys T V V', and gear-

wheels Q P, of the belt U, the feeding-cylinder C, the pan G, the endless chain W, and the cam-shaft O, with its cam N and its fly-wheel, all as set forth.

HENRY S. GIDEON.

VALENTINE M. GIDEON.

Witnesses:

O. O. ST. JOHN,  
ISOM HOSKINS.