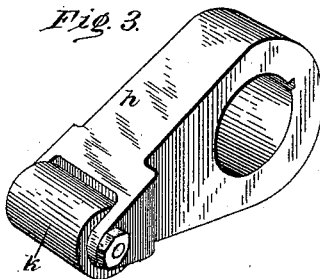
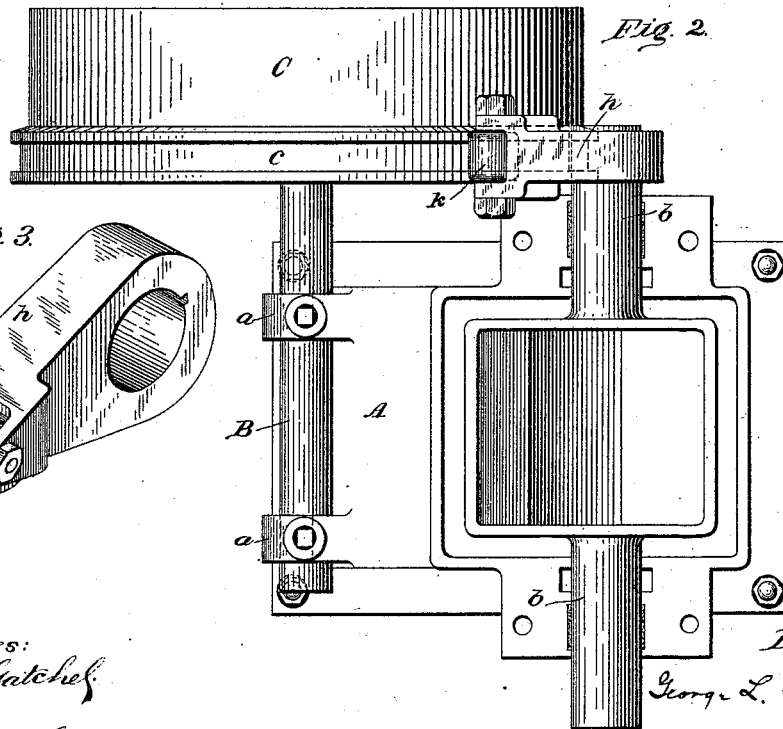
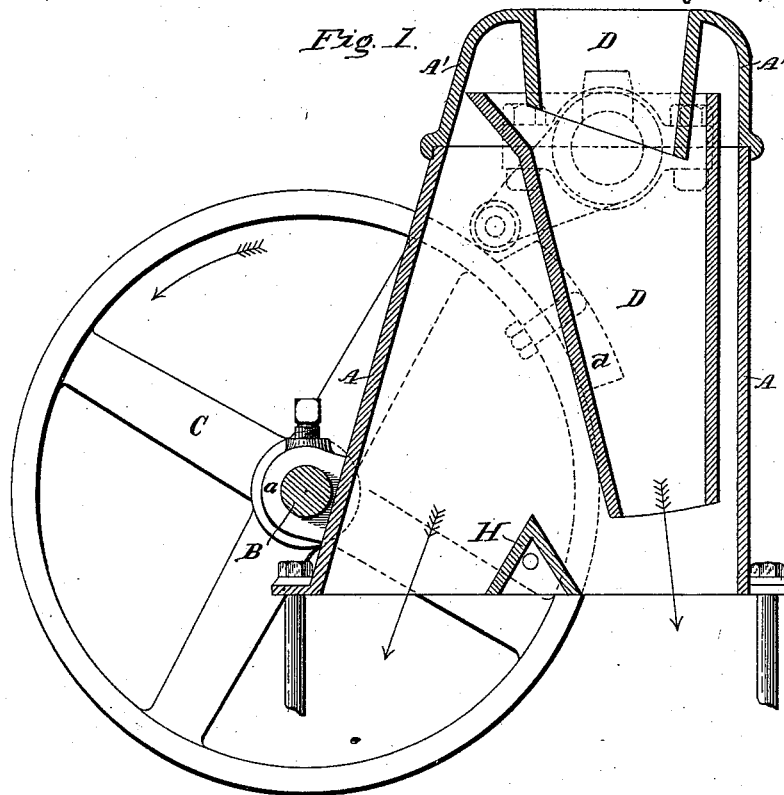


(No Model.)

G. L. HOOPER.  
ORE SAMPLER.

No. 523,664.

Patented July 31, 1894.



Witnesses:

Thos. F. Gatchell

Edwin L. Bradford

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Attorneys.

# UNITED STATES PATENT OFFICE.

GEORGE L. HOOPER, OF DENVER, COLORADO.

## ORE-SAMPLER.

SPECIFICATION forming part of Letters Patent No. 523,664, dated July 31, 1894.

Application filed December 11, 1893. Serial No. 493,296. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE L. HOOPER, a citizen of the United States, residing in the city of Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Ore-Samplers; and I do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in ore samplers, or to that class of machines which automatically take from a large body of ore small samples, the aggregate of which represents a fair average of the whole.

The invention consists in certain new combinations hereinafter described and claimed.

In the drawings, Figure 1 is a section showing the relation of the essential parts of my invention, and Fig. 2 is a top or plan view of the same, with the cap or cover removed.

A is a casing preferably of cast-iron mounted upon or secured to any suitable support. This casing is provided with lugs or brackets *a a* in which are formed bearings for a shaft B.

C is a pulley mounted on shaft B. The pulley is preferably provided with a grooved flange *c* for the convenient attachment of segmental cam blocks *d*.

D is a section of a spout made of hopper shape and suspended in the casing A, the upper end embracing the spout or hopper in the cover A'. The spout section is provided with trunnion-like projections *b b* which rest in bearings in the casing. On one of these trunnions is mounted a crank arm or lever *h* carrying at its free end an antifriction roller *k*.

H is a divider or partition to keep the main body of the ore and the sample separate.

In operation, ore is discharged in a continuous stream through the spout or hopper in the

cover A' through suspended hopper-shaped spout section D to suitable ore bin below. 45 Simultaneously with this operation, the pulley C is driven in the direction of the arrow and the cam-block *d* comes in range of the roller *k* on crank-arm *h* and swings the lower end of the suspended spout section D to the left of divider H and discharges a sample of the ore into the bin below. Any number of cam-blocks may be used so as to take a sample from the main stream one or more times during each revolution of the pulley. The blocks are attached to the pulley by bolts or other convenient means for ready attachment and removal, it being understood that the machine is adjustable to take large or small samples, as occasion may require. 50 55 60

Having now described my invention, what I claim is—

1. In a sampling machine, the combination of a vibrating pendent suspended spout section, a crank arm connected with said section and means for intermittently swinging the arm and the spout section to cause the latter to discharge a sample of its contents outside the main body, substantially as described. 65

2. In a sampler, the combination of a pendent spout section and a rotary crank arm connected with said section, a cam to engage the end of the crank arm and vibrate the spout section, substantially as described. 70

3. In a sampler, the combination of a suspended spout section, a crank-arm connected with said section, a pulley provided with grooved flange and cam blocks adjustably connected with the grooved flange, substantially as described. 75 80

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

GEO. L. HOOPER.

Witnesses:

GEORGE B. HOOKER,  
H. HANINGTON, Jr.