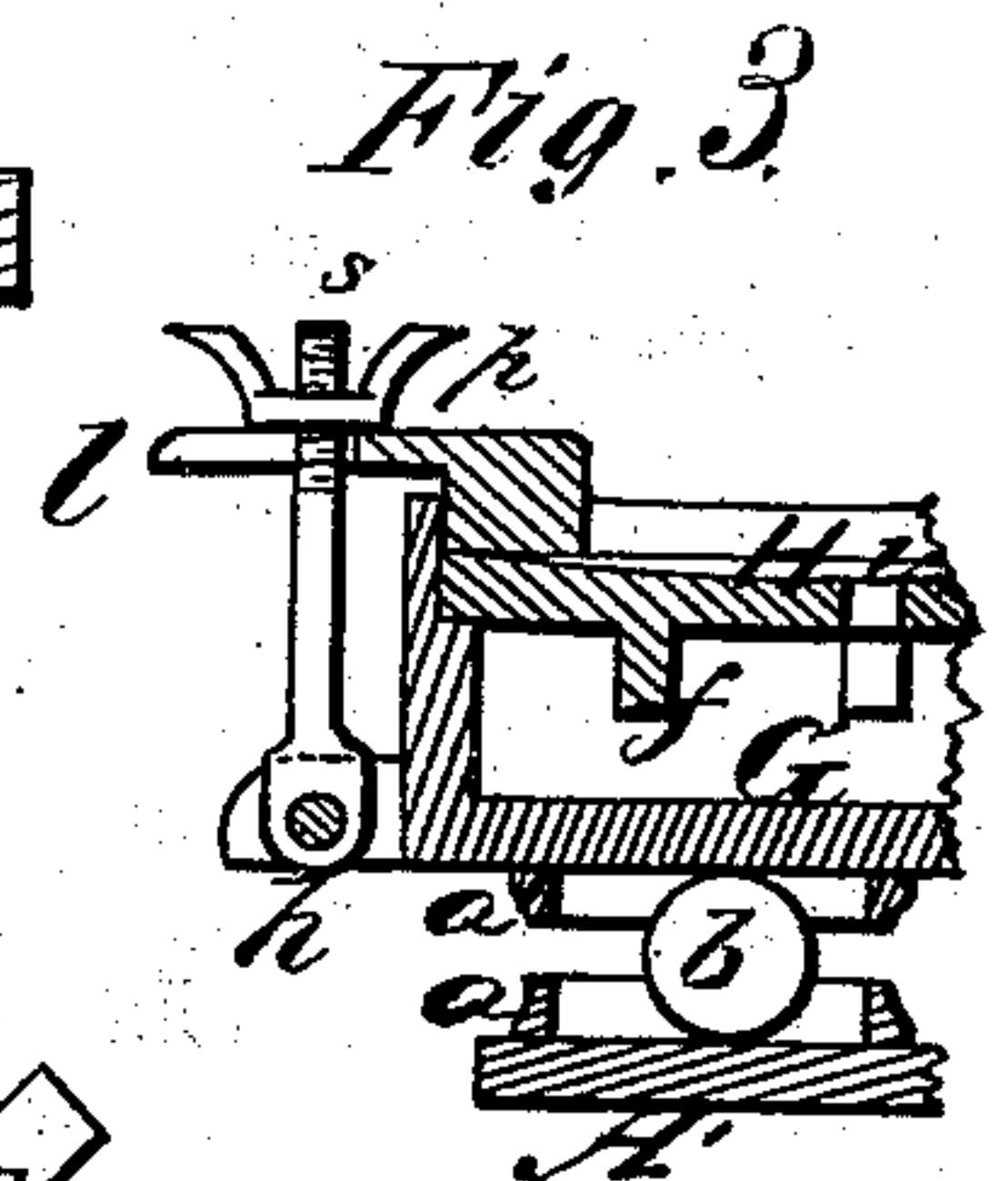
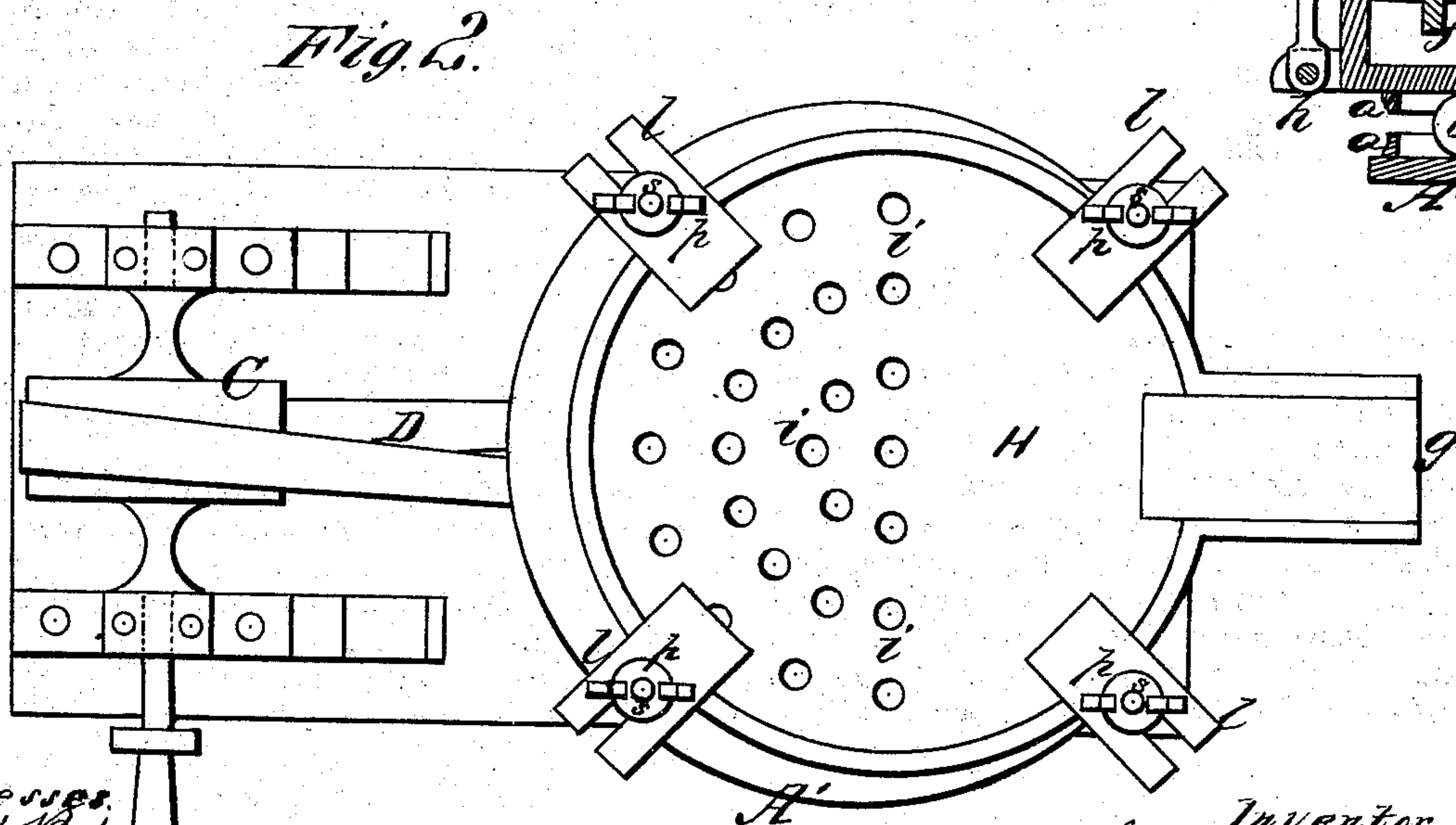
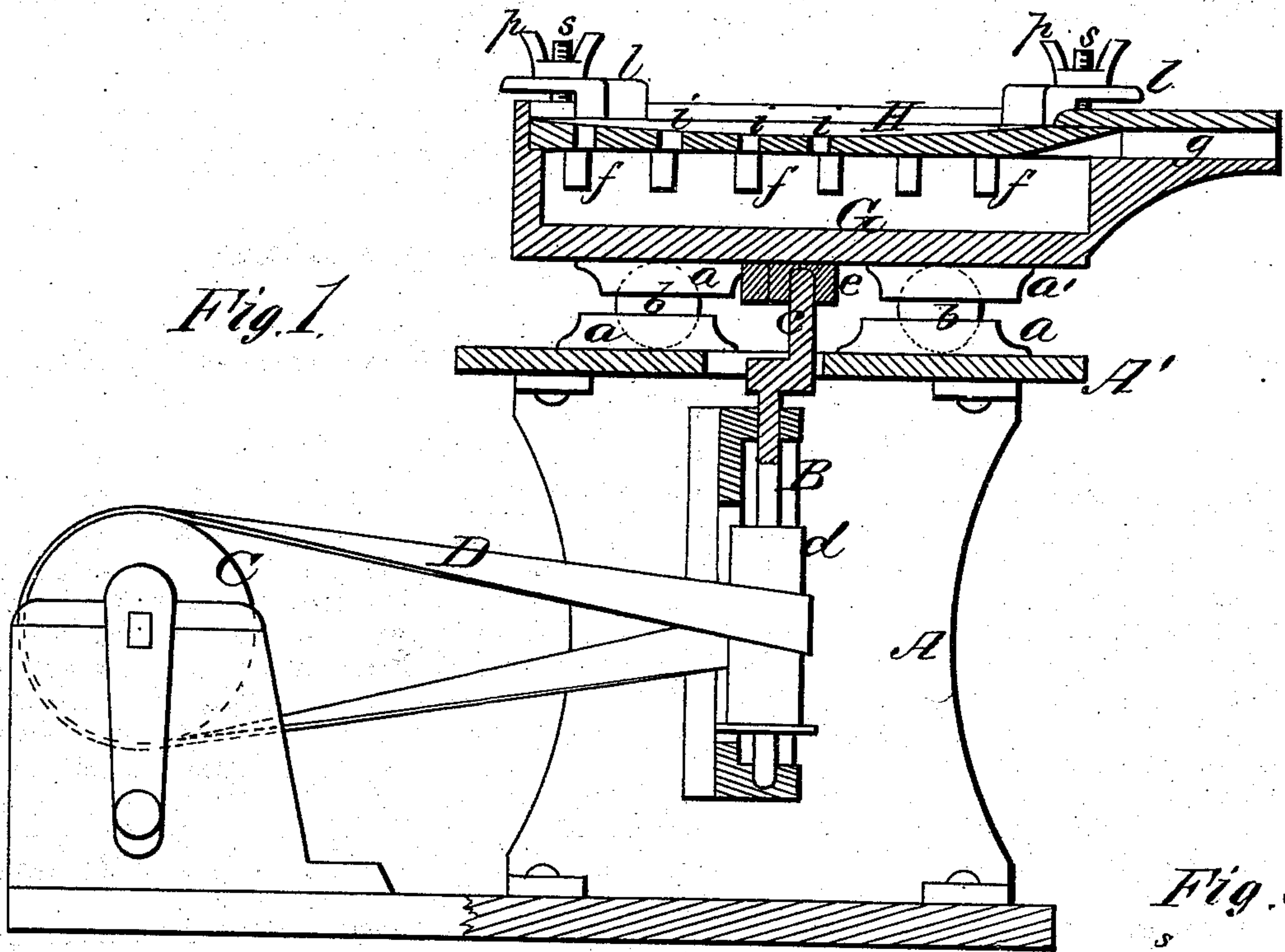


C. P. ROBBINS.
Ore-Washing Machines.

No. 154,619.

Patented Sept. 1, 1874.



Witnesses.
E. H. Bates
Robert Everett

Inventor.
Charles P. Robbins
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Attorneys

UNITED STATES PATENT OFFICE.

CHARLES P. ROBBINS, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN ORE-WASHING MACHINES.

Specification forming part of Letters Patent No. 154,619, dated September 1, 1874; application filed July 11, 1874.

To all whom it may concern:

Be it known that I, CHARLES P. ROBBINS, of San Francisco, in the county of San Francisco and State of California, have invented a new and valuable Improvement in Ore Washing Machine; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a sectional view of my ore washing and separating machine. Fig. 2 is a plan view of the same. Fig. 3 is a sectional detail view of the same.

This invention has relation to ore-washing machines; and it consists in a wash-tub having a horizontal perforated partition and a discharge-spout, and which is supported upon anti-friction balls, in combination with a wrist-pin applied eccentrically on the end of a driving-shaft, whereby a rapid circular motion can be imparted to the said tub, and the material therein violently agitated, as will be hereinafter more fully explained.

In the annexed drawings, A designates a suitable frame, on which is mounted a horizontal table, A'. On this table A' is supported, by means of anti-friction balls, a circular tub, G, in which the washing is done. The balls *b* have a limited play between cups *a* *a'*, fixed to the table A' and bottom of the tub G, consequently the latter is free to be moved. The tub is provided with a spout or sluiceway, *g*, and also with a horizontal par-

tion, H, which latter is perforated at *i* for the passage of the material to be washed through it. The partition H is held in place in the tub G by means of screws S, nuts *p*, and forked lugs *l*, and on the bottom of this partition studs or pins *f* are secured, which greatly aid in the agitation of the ore. B designates a vertical shaft, which receives rotation from a pulley, C, by means of a belt, D, which passes around a pulley, *d*, and which has a crank-pin, *c*, applied to its upper end and entering a journal-box, *e*, fixed centrally to the bottom of the tub G.

When the shaft B is rotated the tub G will receive a circular motion from the crank-pin *c*, and any material which is in the tub will be violently tossed about.

The ore to be washed is fed through the holes *i* into the tub with a stream of water, and as the separation takes place, the impurities are carried off with the water through the spout *g*, while the heavier material falls to the bottom of the tub and there remains.

What I claim as new, and desire to secure by Letters Patent, is—

The tub G, provided with a studded and perforated partition, H, and spout *g*, and mounted on anti-friction balls *b*, in combination with the crank-pin *c*, substantially as described.

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

CHARLES PETER ROBBINS.

Witnesses:

DANIEL SKERRETT,
JOHN TURNBULL.