A. ROWSE.

COAL AND ORE WASHER.

No. 183,215. Patented Oct. 10, 1876.

Fig: 1.

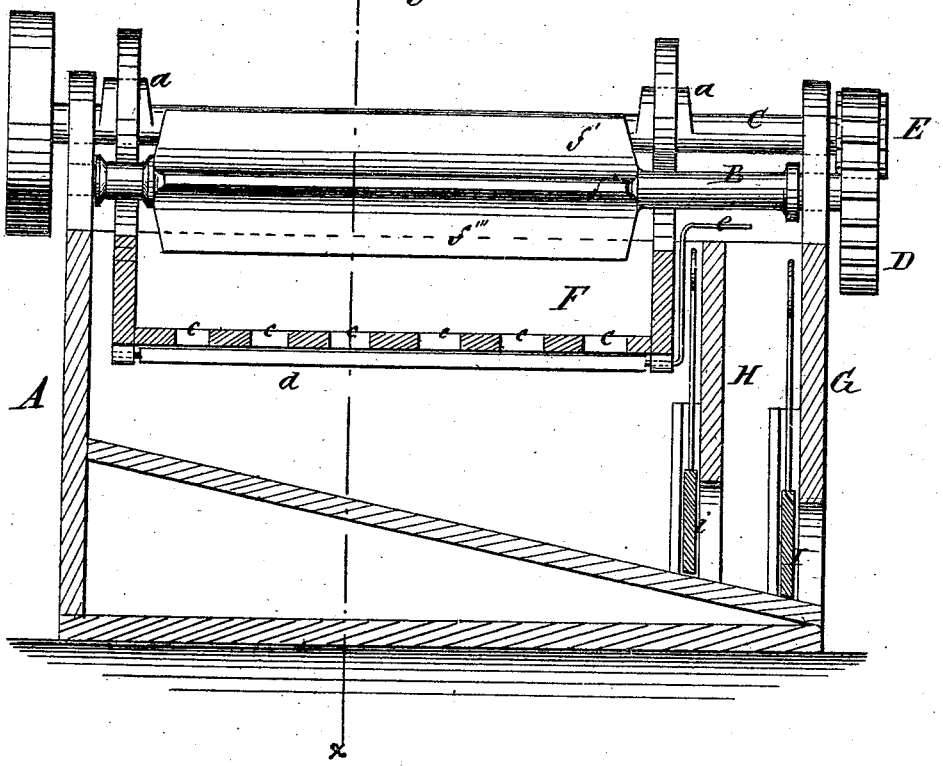
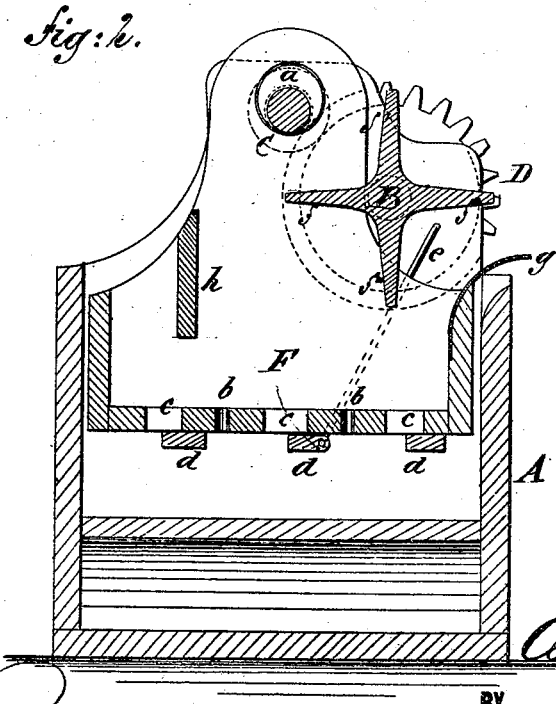


Fig: 2.



WITNESSES:

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ANTHONY ROWSE, OF NESQUEHONING, PENNSYLVANIA.

IMPROVEMENT IN COAL AND ORE WASHERS.

Specification forming part of Letters Patent No. **183,215**, dated October 10, 1876; application filed July 11, 1876.

To all whom it may concern:

Be it known that I, ANTHONY ROWSE, of Nesquehoning, in the county of Carbon and State of Pennsylvania, have invented a new and Improved Coal and Ore Washer, of which the following is a specification:

Figure 1 is a central longitudinal section. Fig. 2 is a transverse section of Fig. 1.

Similar letters of reference indicate corresponding parts.

My invention relates to apparatus for washing coal and ore for removing impurities; and it consists of a jig that receives the coal or ore and a volume of water, and is made to vibrate vertically by means of eccentrics, and four wings or paddles carried by a suitably-arranged shaft stir the water, and throw the coal over the side of the jig, while the impurities pass out through openings in the bottom of the jig, which are controlled by valves.

A is a box, supporting two horizontal shafts, B and C, which are geared together by the spur-wheel D on the shaft B and pinion E on the shaft C. The wheel and pinion are proportioned so that the shaft C makes two revolutions to one of the shaft B. In the box A a jig, F, is placed, the ends of which are prolonged upward, and fitted to the eccentric *a*. In the bottom of the jig are apertures *b b*, &c., for the continuous outflow of water, and also the apertures *c c*, &c., which may be partly closed by the valves *d*, the said valves being operated by a lever, *e*. *f f' f'' f'''* are wings or vanes attached to the shaft B at right angles to each other, and so placed in relation to the jig that they will dip in and stir the water in the jig. An apron, *g*, is attached to the side of the jig, and extends over the side of the box A. A plank, *h*, is placed across the side of the jig to deflect the inflowing current of water. The bottom of the box A is inclined downward toward the end G. H is a partition in the box A, which is provided with a sliding gate, *i*, covering a gateway in the partition. I is a sliding gate that closes a gateway in the end of the box A.

The operation of my improved coal-washer may be described as follows: Coal and water are introduced through a suitable sluice into the jig. Motion is imparted to one of the shafts B C, when, by virtue of their being geared together, both are revolved. The motion of the eccentric *a* imparts a vertically-reciprocating motion to the jig F, which constantly agitates its contents. The heavier impurities go out through the apertures *b* or *c*, while the coal is thrown over the apron *g* by every alternate wing *f' f''*, as the jig is raised twice at every revolution of the shaft B, bringing the apron *g* upward in time to nearly touch the alternate wings.

Anything that is of sufficient size to obstruct the apertures *b* and *c* may be let out by opening the valves *d*.

In working the machine, the gates I and *i* are opened in alternation to allow the refuse matter to pass out.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination of jig F, having apertures *b c*, valves *d*, and apron *g*, with the eccentric *a* and wings *f f' f'' f'''*, substantially as and for the purpose specified.

ANTHONY ROWSE.

Witnesses:
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