

F. PECKELSEN.

PUG MILL.

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1,016,644.

Patented Feb. 6, 1912.

Fig. 1.

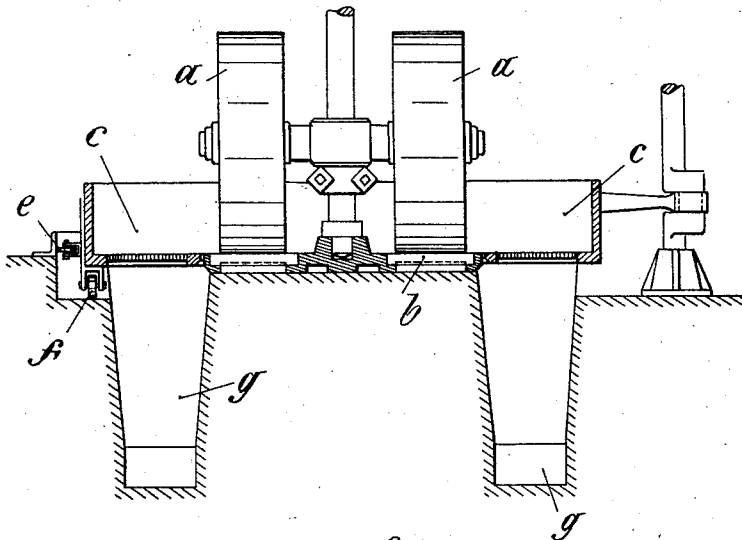
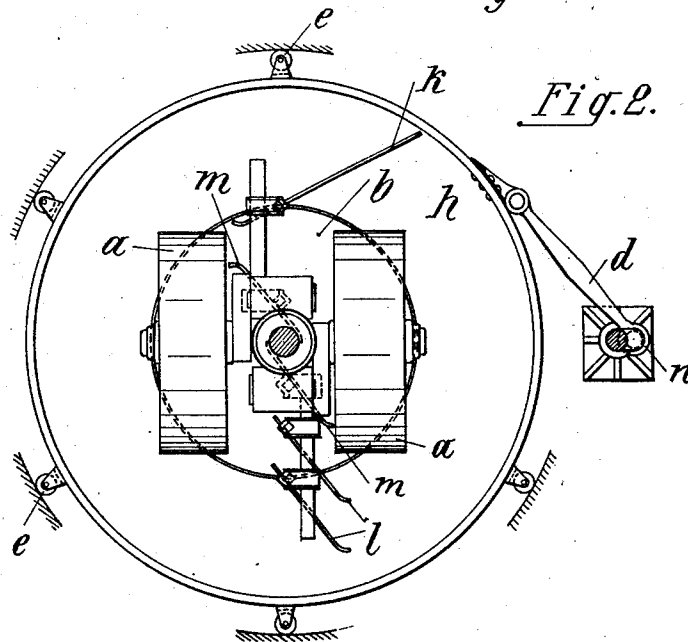


Fig. 2.



Witnesses.

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FRANZ PECKELSEN, OF DINSLAKEN, GERMANY.

PUG-MILL.

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To all whom it may concern:

Be it known that I, FRANZ PECKELSEN, works manager, a subject of the German Emperor, and residing at Dinslaken, Rhine-land, Kingdom of Prussia, Germany, have invented certain new and useful improvements in pug-mills for disintegrating slate-clay, chamotte, limestone, and the like, in which the non-perforated grinding-path is surrounded by a screening-path, of which the following is a specification.

The present invention relates to a dry pug-mill for working slaty clay, chamotte, cement, lime stone and the like with revolving runners and a stationary, non-perforated grinding path which is surrounded by a movable screening path.

Pug-mills are known, having a non-perforated grinding path surrounded by a stationary screening path; also the provision of a shaking screen outside of the continuous grinding path is known. Contrary to these known arrangements, the present invention consists in that the screening path surrounding the grinding path is given a shaking movement by means of eccentrics or similar means. In consequence of this shaking motion of the screening path the material which has been ground to a sufficient degree of fineness will pass through, while the coarser parts will be returned by suitably arranged scrapers beneath the runners, so as to be there further disintegrated, whereupon the scrapers will again move the material to the screening path, and the sufficiently fine particles can fall through.

The present invention is exemplified in a constructional form in the accompanying drawing.

Figure 1 is a vertical section through the pug-mill. Fig. 2 is a plan view.

The pug-mill consists of the revolving runners *a*, the stationary grinding path *b* and the movable, screening path *c* composed of a plurality of exchangeable screening plates, besides the mechanism *d* for operating the screening plates. This motion of the screening plates is obtained by means of an eccentric *n* or other suitable contrivances.

Beneath the screening path *c*, which is supported and guided by several rollers *e*

and *f*, disposed at the sides and beneath, is provided an annular pit *g*, into which the screened material will fall and from which it is removed by means of bucket elevators or the like conveyers. This material to be disintegrated is charged at *h* directly onto the screening path *c*. In consequence of the shaking motion the sufficiently fine parts of this material will be immediately screened. All coarser parts will be distributed over the screening path *c* by means of the scraper *k* rotating with the runners *a*, be gradually fed beneath the runners, where they will be disintegrated, and be returned by scrapers *l* fitted to and rotating with the king post to the screening path *c*. In consequence of the shaking motion the material will be here again quickly screened. The coarse material, which will not have passed through the screen will be returned by the scraper *k* back to the runner paths, where it will be completely disintegrated. The two scrapers *m* arranged close to the king post have the purpose of preventing the material from crowding around the king post.

I claim:

1. A pug mill comprising an annular grinding path, a plurality of revoluble rollers adapted to engage the same, a casing provided with a perforated portion surrounding said grinding path, and an arm pivoted to said casing, said arm being adapted to be reciprocated whereby the casing and perforated portion may receive a reciprocating motion.

2. A pug mill comprising a grinding path, a plurality of revoluble rollers adapted to travel upon the same in an annular direction, a movable casing provided with screening plates surrounding said grinding path and an arm pivoted at one end to said casing and at its other end to an eccentric upon a driving shaft, whereby the casing is reciprocated.

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

FRANZ PECKELSEN.

Witnesses:

WILLY BAUMGARTEN,
LOUIS VANDORN.