(No Model.)

W. W. WALLACE.

CLAY CRUSHER.

No. 288,895. Patented Nov. 20, 1883.

Fig. 1.

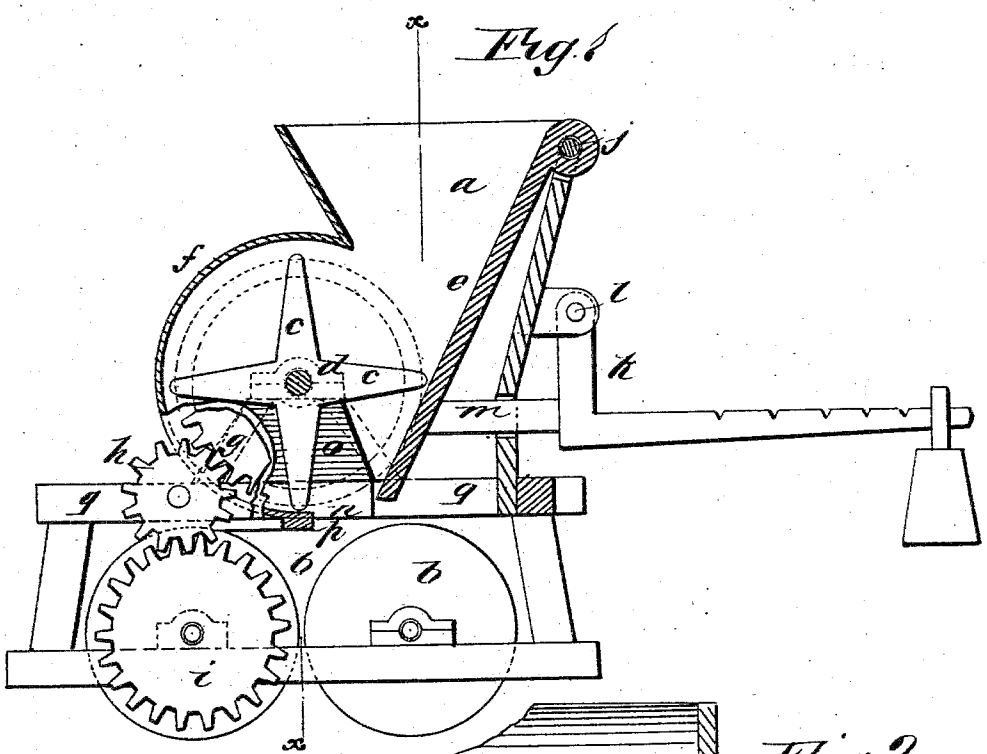
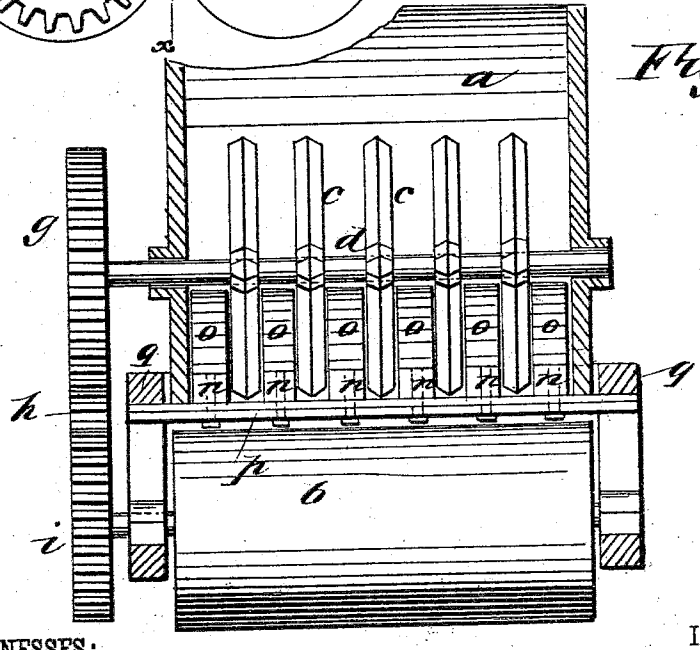


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM W. WALLACE, OF FRANKFORT, INDIANA.

CLAY-CRUSHER.

SPECIFICATION forming part of Letters Patent No. 288,895, dated November 20, 1883.

Application filed September 6, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. WALLACE, of Frankfort, county of Clinton, Indiana, have invented a new and Improved Clay-Crusher, of which the following is a full, clear, and exact description.

My invention consists of a rotary clod-breaker placed in the hopper over a pair of crushing-rollers, to break the hard clods and cause the clay to feed into the rolls better; and said clod-breaker is combined with a weighted relief-gate that is arranged to be forced open for the escape of stones or clods too hard to be broken by the breaker; and said gate is also arranged to shift inward as the ends of the clod-breakers wear short, to maintain the same relations with the clod-breakers, whatever their length may be, all as hereinafter fully described.

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 figures.

Figure 1 is partly a sectional elevation and partly a side elevation of my improved clay-crusher, the section being taken transversely to the crushing-rollers; and Fig. 2 is a sectional elevation on the line *x x*, Fig. 1, and parallel to the crushing-rollers.

In the lower part of one side of the hopper *a*, in which the clay is placed to be fed to the crushing-rollers *b*, I arrange a series of rotary beating-arms, *c*, on a strong shaft, *d*, to beat and break the clods against the strong breast-plate *e*, said beaters being covered by a suitable curved extension, *f*, of the side of the hopper, and the shaft of the beaters being geared by a toothed wheel, *g*, on it, and an idler, *h*, with the wheel *i* on one of the roller-shafts for turning the breakers downward against the breast *e*, to crush the clods as they pass down to the rollers. The breast *e* is arranged on a pivot, *j*, at the top of the hopper, to be crowded back for affording relief for the escape of any stones too hard for the beaters to break, said breast being held up to the work by the weighted lever *k*, pivoted to the hopper at *l*, and bearing against the stud *m*, projecting backward through the hopper from the breastplate. The weight is adjustable along the lever to set it for more or less resistance to the breakers. The breast *e* will rest against the clay being forced down by the crushers *c* when at work, and will be pressed back more or less by the clay being crowded down to the rollers *b;* but when the machine is empty said breast will rest against the ends of the crushers, or against shoulders *n* of clearing-teeth *o*, which I arrange between the crushers *c*, back of and partly in the passages from the hopper to the rollers for the clay, to prevent the clay from being carried around and cause it to descend to the rollers, said teeth being bolted to the bar *p*, extending across the machine under the hopper and attached to the frame-beams *q*.

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

1. The combination of a hinged breast, *e*, with the breaking-arms *c* and hopper of a clay-crusher, said breast being adapted to be closed up to the breakers as they wear short, substantially as described.

2. The combination of the clearing-teeth *o*, with the crushers *c*, yielding breast *e*, and the crushing-rollers *b*, substantially as described.

3. The combination of the hinged breast *e* and the weighted lever *k*, bearing against said breast, with the rotary breakers *c*, arranged in the hopper of a clay-crusher, substantially as described.

WILLIAM W. WALLACE.

Witnesses:
S. C. BOOKER,
WILLIAM POSSIE.