(No Model.)

C. FRANTZ.

THRASHING CYLINDER.

No. 449,438. Patented Mar. 31, 1891.

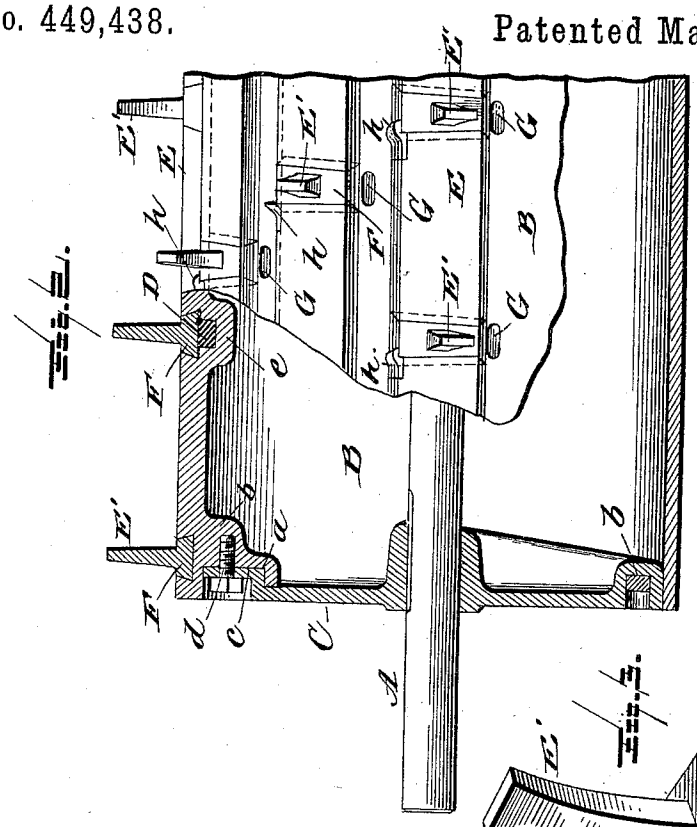


Fig. 2.

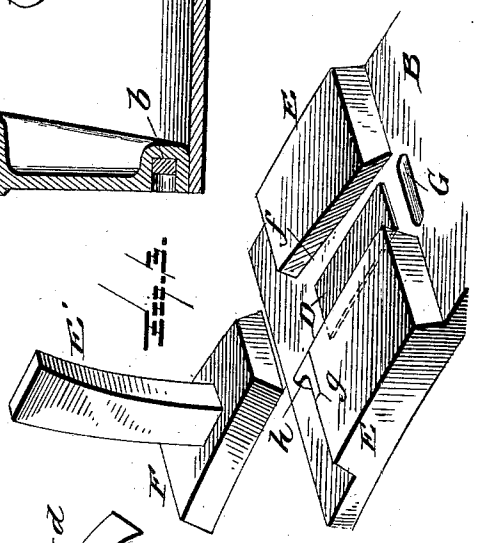


Fig. 3.

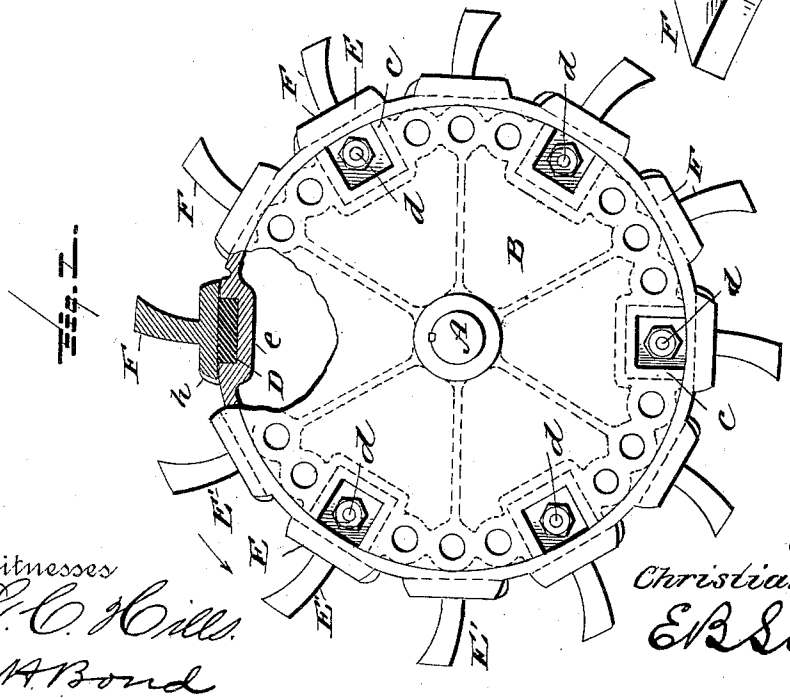


Fig. 1.

Witnesses
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CHRISTIAN FRANTZ, OF WAYNESBOROUGH, PENNSYLVANIA.

THRASHING-CYLINDER.

SPECIFICATION forming part of Letters Patent No. 449,438, dated March 31, 1891.

Application filed September 29, 1890. Serial No. 366,472. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN FRANTZ, a citizen of the United States, residing at Waynesborough, in the county of Franklin, State of Pennsylvania, have invented certain new and useful Improvements in Thrashing-Cylinders, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in thrashing-cylinders and teeth for the same, more particularly to the means of securing the teeth to the cylinder. It has for its objects, among others, to provide a strong, compact, closed cylinder, in which the teeth will be held fast, the contact of the straw or grain with the key which fastens the teeth in place serving to force the said key into the keyway, and thereby causing it to be self-tightening.

Another object is to provide for the ready clinching of the key in place. I employ a lug of soft metal in such a position that after the key is in place a slight blow upon the said lug will cause it to be bent over the end of the keyway, and thus prevent displacement of the key. Beneath each key I form a pocket, into which I place a block, the outer face of which should be slightly beyond the bottom of the keyway and against which the key impinges. These blocks serve as balance-weights. I form pockets in the cylinder to receive the cups of the head to make a rigid connection between these parts.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

The invention is illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is an end view of a thrashing-cylinder constructed in accordance with my invention with a portion broken away and a part in section. Fig. 2 is a longitudinal sectional detail with parts in elevation and portions broken away. Fig. 3 is a perspective detail on a larger scale.

Like letters of reference indicate the same parts in all the views.

Referring now to the details of the drawings by letter, A designates the shaft, to which the cylinder is keyed in any suitable manner. The cylinder B is formed with pockets or recesses *a* in interior enlargements *b*, as seen in Fig. 2, into which the cups *c* on the head C fit, and to which they are secured by bolts *d* or other analogous means. This forms a rigid connection and prevents lateral movement of the heads. The cylinder is formed around its periphery with interior enlargements *e* or pockets for the reception of blocks D, as seen clearly in Fig. 2. These blocks are arranged in these pockets, one beneath each tooth, and are of such thickness that when in place their outer faces are slightly above the outer periphery of the cylinder. These blocks, preferably of wood, are arranged with the grain thereof at an angle to the position of the key, as seen in Fig. 3. The outer periphery of the cylinder is provided with ribs E, extending in the direction of the length thereof, and in which at suitable intervals are formed with dovetailed keyways *f*, as seen most clearly in Fig. 3. These keyways are formed over the pockets, in which the blocks are arranged as shown.

E′ are the teeth, each provided with a base-piece F, which is of a shape conforming to that of the keyway, as seen, and each key is inserted in the keyways so that its wider end is forward, or in the direction of movement of the cylinder in operation, so that when in operation the contact of the grain or straw will serve to more firmly wedge the teeth or keys in place, as will be readily understood. The blocks serve as props for the keys, forming a sort of cushion and binding the keys more securely in their ways.

The ribs E are provided at one corner of the keyway with a notch or recess *g*, into which I affix in any suitable manner a lug or piece of soft metal *h* with its edge normally flush with the side of the keyway. After the key is in place in the keyway this piece of soft metal is to be struck with a hammer or other suitable implement, and bent over the end of the key so as to clinch the same in the keyway in a manner which will be readily understood. The key thus held is shown in Fig. 2.

G is a depression in the outer face of the cylinder at a point near the small end of the

keyway, as shown in Figs. 2 and 3, to receive an instrument to aid in the removal of the key when necessary.

What I claim as new is—

1. A thrashing-cylinder provided with a dovetail keyway, a tooth having a correspondingly-shaped base to engage the keyway, and a block arranged in a depression or pocket beneath the said base, as set forth.

2. A thrashing-cylinder provided with a dovetail keyway, a block in a pocket within the keyway, a tooth having a dovetail base to fit the keyway, and a clinching-lug arranged and operating substantially as specified.

3. A thrashing-cylinder provided with ribs having dovetail keyways, pockets, and depressions, blocks in the pockets with their outer faces projecting beyond the face of the keyway, teeth with dovetail bases, and a soft-metal lug for each keyway, adapted to be bent against the base after the latter is placed in the keyway, substantially as and for the purpose specified.

4. A thrashing-cylinder provided with interior enlargements with pockets, a head having cups fitted in said pockets, and securing-bolts screwed into said enlargements with their heads seated in recesses in the head, as set forth.

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

CHRISTIAN FRANTZ.

Witnesses:
D. H. McGINLEY,
GEO. H. RUSSELL.