

(No Model.)

M. T. REEVES.
CONCAVE FOR CLOVER HULLING MACHINES.

No. 499,591.

Patented June 13, 1893.

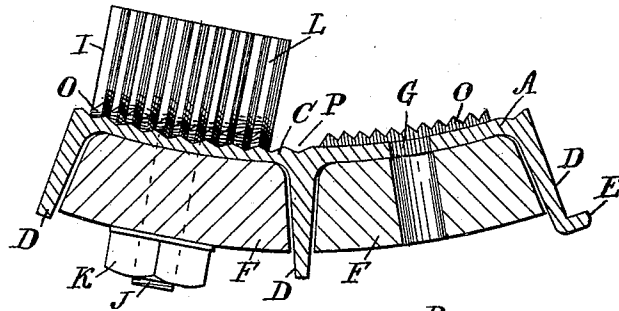


Fig. 2.

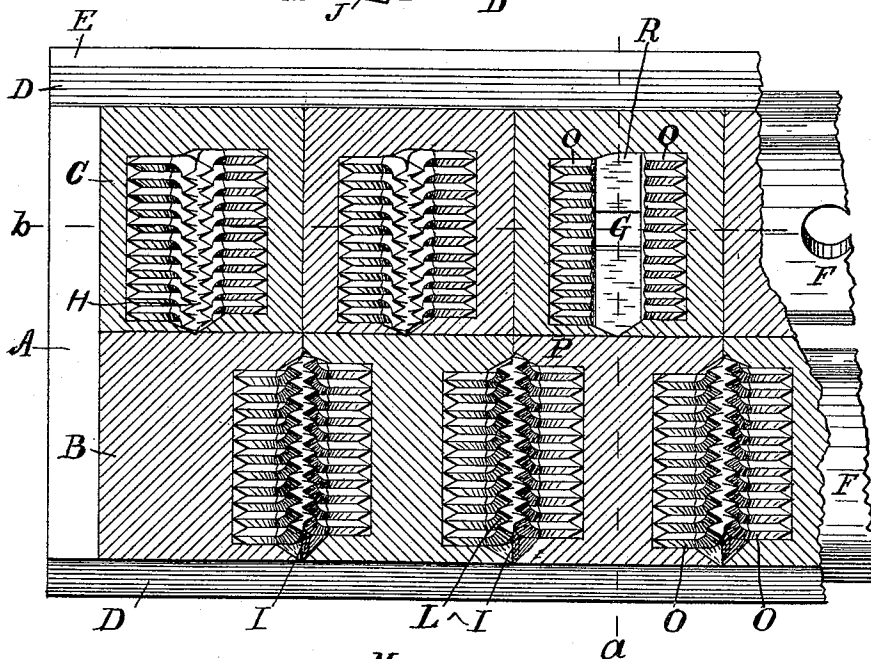


Fig. 1.

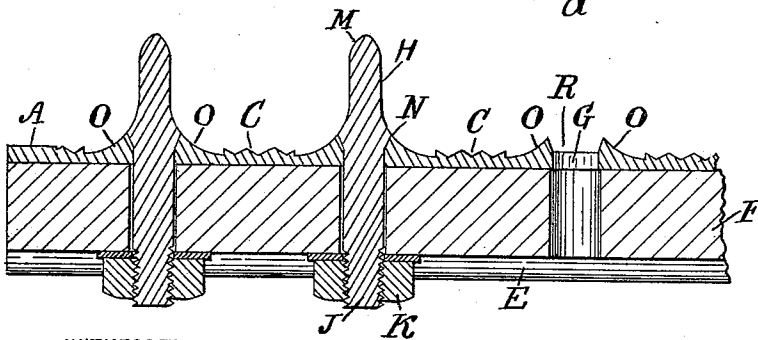


Fig. 3.

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CONCAVE FOR CLOVER-HULLING MACHINES.

SPECIFICATION forming part of Letters Patent No. 499,591, dated June 13, 1893.

Application filed January 23, 1893. Serial No. 459,409. (No model.)

To all whom it may concern:

Be it known that I, MARSHAL T. REEVES, a citizen of the United States, residing at Columbus, in the county of Bartholomew and State of Indiana, have invented a new and useful Concave for Clover-Hulling Machines, of which the following is a specification.

My invention relates to an improved manner of constructing the working surface of the hulling concave of a clover-hulling machine.

The object of my improvement is to form, on each side of the base of each of the hulling-teeth, a roughened surface which shall project above the general working surface of the concave, forming a continuation of the outline of the tooth and also supports for the sides of the tooth which shall prevent the tooth from turning in the concave, and also breaking up the continuity of the working surface, so that, as the clover head passes from one series of teeth to another in the concave, it is partially relieved from pressure, thus permitting it to shift position and present a new surface to the rubbing action of the teeth of the concave, all as hereinafter fully set forth.

The accompanying drawings fully illustrate my invention.

Figure 1 represents a plan of a portion of one of the staves from which the hulling-cylinder is formed. Fig. 2 represents a transverse section of the same at *a*— Fig. 1. Fig. 3 represents a longitudinal section at *b*— Fig. 1.

The general construction of my concave is of the usual well known form, consisting of a series of segmental staves secured together at the ends to form a hollow cylinder in which the hulling-cylinder revolves, and having inwardly projecting rubbing-teeth secured in each stave or section.

In the drawings, A, indicates the segmental stave, which is formed preferably of malleable cast-iron and is provided on its inner or concave surface with several series of oppositely inclined roughened surfaces, B, and C.

Stave A is provided on its outer or convex surface with a series of radial longitudinal ribs, D, one of which is provided with a lip, E, so as to overlap the joint formed by two

contiguous staves. The spaces between said ribs form channels to receive wooden bars, F, F, which are secured in position by means of the shanks of the hulling-teeth, as herein-
after explained, and which form a strong and slightly elastic backing for the casting.

Stave A is pierced at intervals with two series of rectangular perforations, as at G, and the wooden strips F are also correspondingly perforated. Two series of hulling-teeth, H, and, I, are mounted in each stave, each tooth being provided with a screw-threaded shank, J, which passes through the opening G and through the wooden bar F and is secured therein by a nut, K. The sides of each tooth are provided with a series of corrugations, L, and the top edge of the tooth is rounded as at M. The base of the tooth is made slightly thicker than the main portion, and the outline of the thicker portion is that of a circle concentric with but of larger radius than the outline of the upper edge of the tooth. The edges of the base of the tooth are tapered inward as at N. Arranged on each side of the opening in the stave through which the shank of the tooth passes, is a pair of ribs, O, O, formed integral with the stave, raised above the general surface of the concave, and having an open space, R, between them corresponding in width and shape to the base of the tooth. The upper surfaces of said ribs are of a curved outline corresponding to and forming a continuation of the upper curved surface of the base of the tooth. Said upper surfaces of the ribs are also corrugated, the corrugations registering with and forming continuations of the corrugations L in the teeth. These ribs thus form, practically, a part of the rubbing tooth, but, being formed integral with the surface of the concave and projecting above it on each side of the base of the tooth, form a long narrow seat for the tooth which prevents it from turning in the concave.

In the operation of hulling, the teeth of the hulling-cylinder being of the same outline as the teeth in the concave, and there being a narrow space between the teeth of the cylinder and the teeth of the concave, the clover heads are rubbed between the sides of the opposed teeth of the cylinder and the con-

cave and also between the ends of the cylinder-teeth and the surfaces of the ribs O. The ribs O being raised above the general surface of the concave and there being an open space, 5 P, between the ends of the two series of ribs in the concave, the clover head is partially relieved from pressure while passing said space, and, being engaged by the diagonal corrugations of the general surface of the 10 concave, is turned so as to present a new surface to the next series of hulling-teeth.

I claim as my invention—

1. In a clover-huller-concave, the combination with a hulling-tooth having a shank 15 which extends through the body of the concave, of a pair of ribs formed integral with the body of the concave, projecting above its general surface, and having a space between them adapted to receive the base of the tooth, 20 said ribs forming a continuation of the outline of the sides of the tooth substantially as set forth.

2. In a clover-huller-concave, the combination with a hulling-tooth having corrugated 25 sides and a shank extending through the body of the concave, of a pair of ribs formed integral with the body of the concave, projecting above its general surface, and having a space between them adapted to receive the 30 base of the tooth, said ribs forming a continuation of the outline of the sides of the tooth substantially as set forth and having corrugations which register with and form

continuations of the corrugations in the sides of the tooth. 35

3. The above described stave for clover-hulling-machine concaves, consisting of the segmental casting having on its concave surface a series of oppositely arranged diagonal corrugations forming its general surface, a 40 series of corrugated hulling-teeth secured in said segmental casting, and a series of ribs formed integral with said casting on its concave surface, projecting above said surface, and arranged in pairs thereon having spaces 45 between them adapted to receive the bases of the teeth, said ribs being provided with parallel corrugations registering with and forming continuations of the corrugations in the teeth, all substantially as set forth. 50

4. A stave for forming hulling-concaves for clover-hulling-machines, consisting of a light metallic segmental casting having on its concave surface a series of oppositely arranged diagonal corrugations, and a series of raised 55 ribs arranged in pairs and adapted to receive and support a hulling tooth between them, and having upon its convex surface a series of radial longitudinal ribs forming longitudinal channels, and wooden strips secured in 60 said channels and forming an elastic backing for said casting as set forth.

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Witnesses:

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