(No Model.)

W. G. ADAMS.

OAT CLIPPING MACHINE.

No. 458,138. Patented Aug. 18, 1891.

Fig. 1.

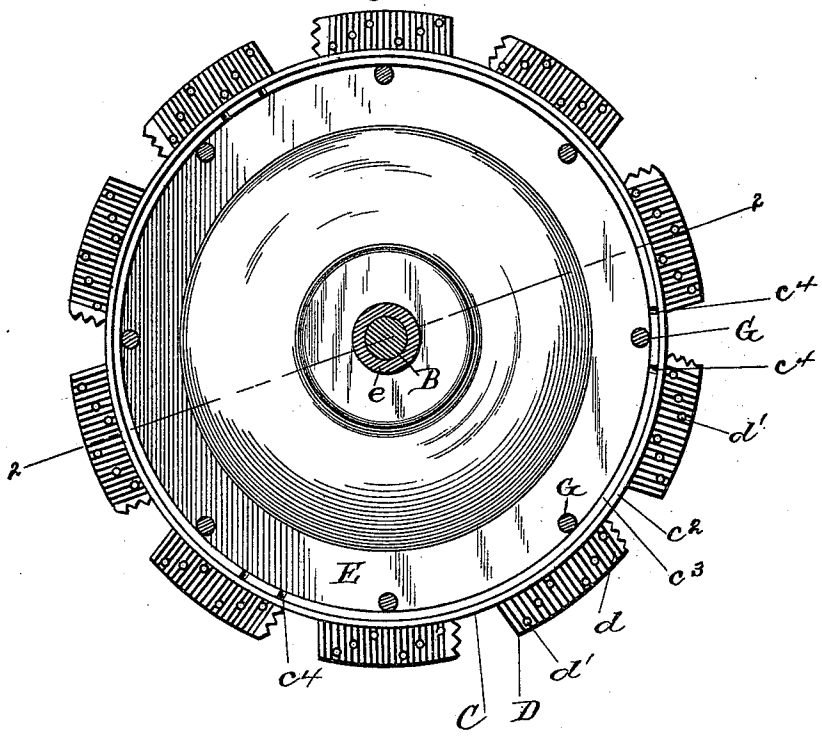
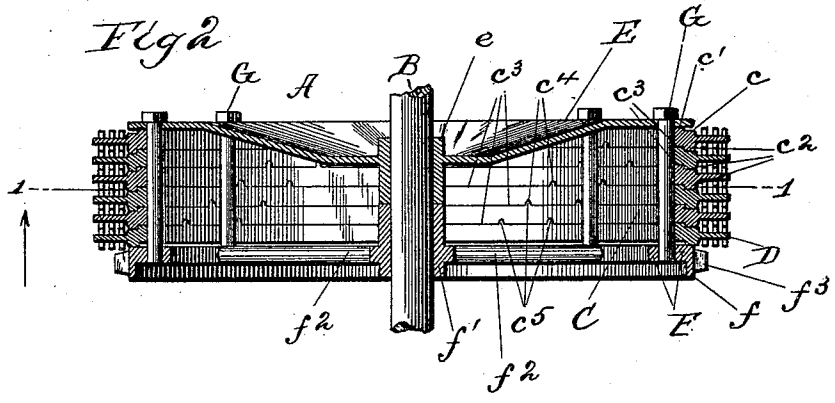


Fig 2.



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UNITED STATES PATENT OFFICE.

WALTER G. ADAMS, OF RACINE, WISCONSIN.

OAT-CLIPPING MACHINE.

SPECIFICATION forming part of Letters Patent No. 458,138, dated August 18, 1891.

Application filed April 18, 1890. Serial No. 348,469. (No model.)

To all whom it may concern:

Be it known that I, WALTER G. ADAMS, a citizen of the United States, residing at Racine, in the county of Racine and State of Wisconsin, have invented certain new and useful Improvements in Oat-Clipping Machines, which are fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a plan section of a clipping-cylinder of an oat-clipping machine embodying my invention, taken on the line 1 1 of Fig. 2 inverted; and Fig. 2, a vertical section of the same, taken on the line 2 2 of Fig. 1.

My invention relates to machines for polishing grain or clipping oats, such, for instance, as that shown in Letters Patent of W. W. Ingraham, No. 416,335.

The invention relates to the construction of the clipping-cylinder, and is an improvement upon the cylinder shown in the said Letters Patent.

I will proceed to describe in detail the construction of the cylinder according to my invention, and will then point out definitely in claims the improvements which I believe to be new and wish to protect by Letters Patent.

In the said Patent No. 416,335 the clipping or scouring cylinder is constructed of wood, and the wallowers, which are of metal, are made separate from the cylinder-drum, but are fastened upon the circumference of the latter in any suitable way. In my improvement the entire cylinder is of metal, and is composed of a series of cast-metal rings provided with wallowers cast in one piece therewith, and which rings are arranged one upon the other to build up the cylinder to be used either for polishing grain or clipping oats.

In the drawings, A represents the clipping-cylinder for one of these oat-clipping machines, and B the shaft to which the cylinder is secured, so as to be rotated thereby. The main body of this cylinder is composed of a series of rings C, which are cast of any suitable metal, iron being preferred, and are provided with the wallowers D on their circumference, the said wallowers being cast in one piece with their respective rings. Both the upper and under surfaces of these wallowers are provided with serrations *d* and short perpendicular pins *d'*. The rings themselves are constructed so as to be fitted one upon another by a kind of lap-joint. This is effected by making the upper surface of each ring with a step, the outer portion of the face being cut down to form a kind of seat *c*, while the remaining portion, which is about one-half the width of the ring, forms a kind of step *c'* in a plane a little higher than that of *c*. The under surface of each ring is similarly stepped, but inversely, the outer portion c^2 of this surface being lower than the inner portion c^3, as shown in Fig. 2 of the drawings. This construction adapts the rings to be nicely fitted together with their surfaces interlocking as they are laid one upon another to build up a cylinder, as seen in Fig. 2 of the drawings, and of course operates to bring the rings all into the same position perpendicularly, as is required in forming the cylinder. It is obvious that the rings cannot slip laterally upon each other. It is also necessary to prevent the rings from turning upon each other, for, as in the patent referred to above, the wallowers must be arranged in vertical series on the cylinder, but with a kind of spiral adjustment. Now in order to prevent the rings turning upon each other, shallow notches c^4 are made in the under side of the inner portion c^3 of each ring, and on the corresponding upper face *c'* of the next ring below short pins or projections c^5 are provided, which are adapted to fit into the notches in the ring above. These notches and pins being mathematically arranged on the rings, so that when the latter are built up to make the cylinder and the pins and notches are brought into engagement, the position of the rings will be such as to secure the desired arrangement of the wallowers on the outside of the cylinder.

In order to fasten the rings all together I provide a cap E, which is preferably of disk form, of sufficient diameter to extend out completely over the body of the upper ring. This disk is provided with a central hub *e*, which is fastened to the shaft B, and the center of the disk is depressed or concaved, as seen in Fig. 2 of the drawings. On the under side of the cylinder is a heavy ring F, considerably wider than the cylinder-rings, but of the same diameter and provided with a depending

outer flange *f*. This ring is also provided with a central hub *f'*, to which it is connected by radial spokes f^2, and the hub is extended inward to meet the hub of the cap E, the central depression of the latter facilitating this arrangement. The rings C are built up upon this supporting-ring F, then covered by the cap, and fastened together by a series of bolts G, which pass down through the cap inside of the rings C and through the wide web of the ring F, to which they are riveted, thus securely fastening together all the independent parts mentioned above. The supporting-ring F is also provided upon its circumference with short projections or lugs f^3, arranged at suitable distances around the ring, which act as cleaners to clear the passage around the bottom of the cylinder.

Changes may be made in some of the details of construction as herein shown and described. For instance, a different form may be given to the cross-section of the rings for the purpose of matching them together, and different devices may be adopted to prevent the rotary movement of one ring upon another, and the rings may be all fastened together to make the cylinder by devices differing from those described. Hence I do not wish to be understood as limiting myself to all the specific details of construction herein shown and described.

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

1. In oat-clipping cylinders, the combination of independent metal rings C, having stepped surfaces and provided with alternating notches and projections, the cap E, surmounting said rings, a bottom or base F, and bolts G, arranged to secure said parts together and form one rigid body, substantially as and for the purposes specified.

2. In oat-clipping cylinders, the cast-metal rings C, provided with wallowers D, cast therewith and having pins projecting from each face of the respective wallowers, substantially as and for the purposes specified.

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Witnesses:
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