T. O. KILBURN.
Bolting-Reel.

No. 206,459. Patented July 30, 1878.

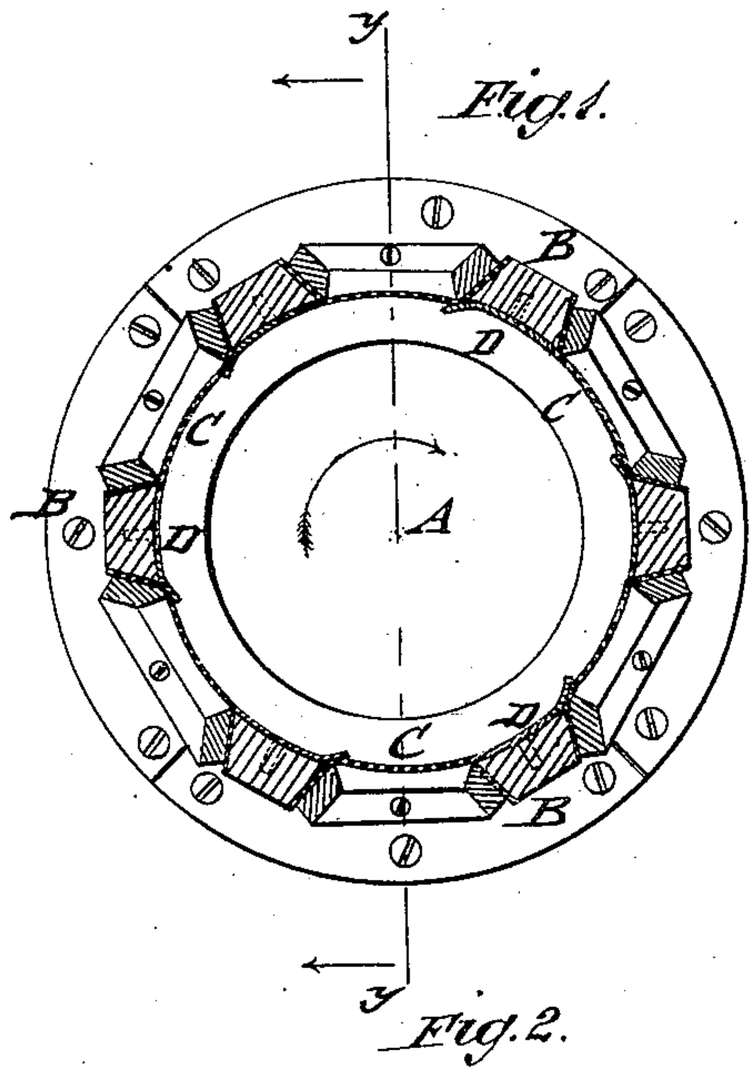
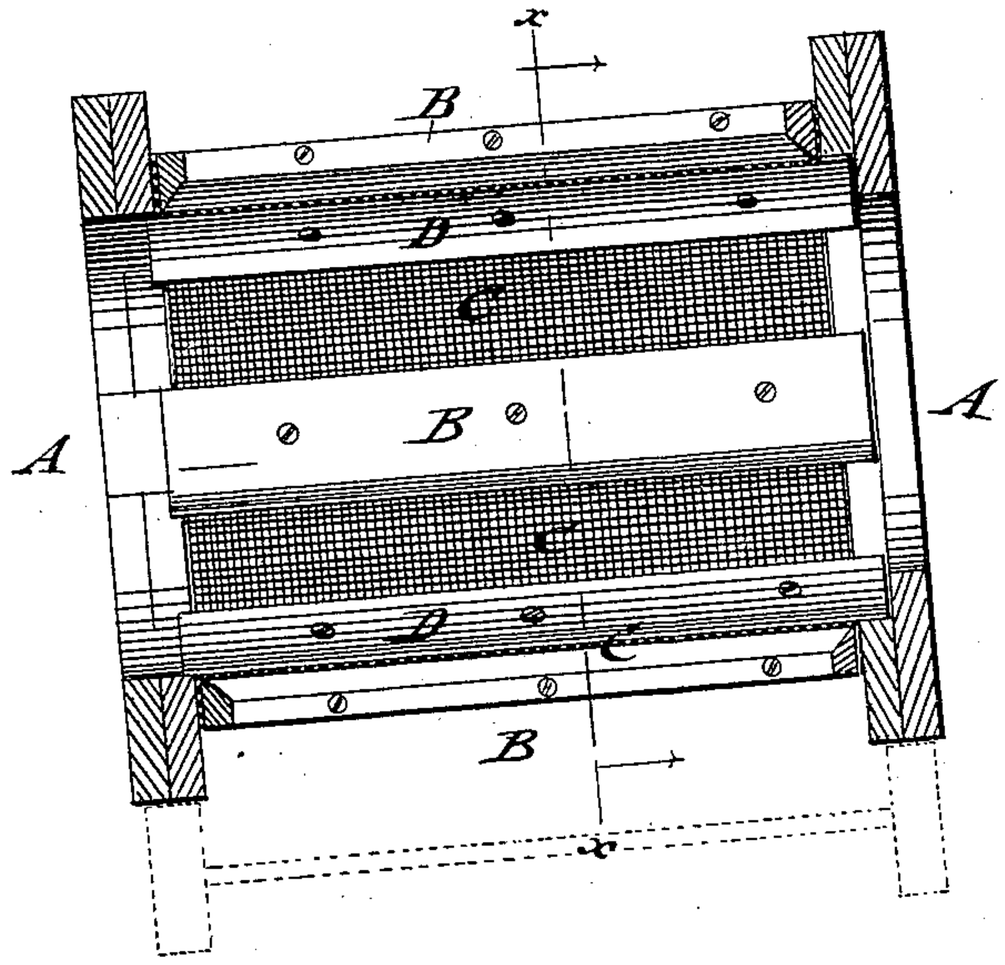


Fig. 1.

Fig. 2.



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UNITED STATES PATENT OFFICE.

THADDEUS O. KILBURN, OF WASHINGTON, MINNESOTA.

IMPROVEMENT IN BOLTING-REELS.

Specification forming part of Letters Patent No. **206,459,** dated July 30, 1878; application filed November 20, 1877.

To all whom it may concern:

Be it known that I, THADDEUS O. KILBURN, of Washington, in the county of Fillmore and State of Minnesota, have invented a new and Improved Bolting-Reel, of which the following is a specification:

In the accompanying drawing, Figures 1 and 2 represent vertical transverse and longitudinal sections of my improved bolting-reel, taken, respectively, on the lines *x x*, Fig. 2, and *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved bolting-reel that is more especially designed for the cleaning and dusting of middlings, but that will also work with great efficiency for other bolting, as by the reel the sliding of the meal is facilitated and a superior bolting obtained.

In my reel the spaces between the longitudinal ribs are each covered with a piece or section of fine bolting-cloth, and sheets of tin are attached to the inner sides of the ribs in such manner that the rear edges of the tin facings lap over the forward edges of the bolting-cloth pieces or sections, for a purpose hereinafter specified.

Referring to the annexed drawing, A A are the heads of my improved bolting-reel, which are connected by longitudinal ribs B, that are about equal in width with the intermediate spaces covered by the bolting-cloth C, and slightly concaved at the inside, so as to form arcs of the interior circle of the reel. These concaved or hollowed-out ribs B are faced with tin or other smooth covering D from end to end. One edge of the bolting-cloth is fastened below the overlapping edge of the tin facings, while the other edge is secured slightly above the tin facings of the next rib, and so on, as shown in Fig. 1.

The arrow represents the direction in which the reel is revolved, so that the meal slides in proper manner from the overlapping facings of the cloth-sections, and then again on the tin, and so on.

The heads A are provided with flanges of larger outer diameter than the reel proper, so as to form a rim on each head, which rests and travels on rollers that are revolved in suitable manner by belt or gear, so as to impart by the friction with the rims revolving motion to the reel.

As the ribs are firmly secured to the heads, and, on account of their width, strong enough to support the weight of the meal, and as the reel is revolved by exterior means, the interior shaft and radial arms are dispensed with, and thereby an easier motion of the reel obtained, as the meal is not retarded and broken up in its motion by the arms and shaft.

The faced ribs facilitate the sliding of the meal from the ribs to the cloth-sections and prevent the catching and hanging onto the cloth and ribs, as in the common reel. The smooth rib-facings cause the meal, as it strikes thereon, to slip more readily, and thereby gain momentum, so as to carry it over the next cloth-section in a smooth and even manner, and leave it in the best position for bolting clear and well. Every inch of cloth is used in this reel, which is not the case in the reels heretofore used, in which a certain portion of the cloth next to the ribs is never reached by the meal. These reels have also a tendency to make the meal-bolt specky, as it is dropped a short distance at every rib so as to roll and tumble, whereas in my reel the meal slides continuously without any rolling whatever, thereby keeping the specks and bran and all light stuff on top and giving the flour and middlings a chance to bolt through freely. The meal as it leaves the tin-covered rib passes onto the cloth in perfectly smooth and even manner, as the cloth is only the thickness of the tin below the same, and bolts thereby clearer and better. This sliding motion of the meal does not retard the motion of the bolt, as in ordinary reels, in which the meal hangs onto the ribs and cloth, and has to be carried upon the side of the reel before it will slide off.

The reel may be made of any length and diameter by increasing the number of ribs and cloth-spaces. It will work for cleaning middlings and do all kind of bolting, taking out all specks and impurities without requiring an air-blast, suction, or purifier.

I do not claim, broadly, a bolting-reel having different pieces or sections of bolting-cloth

applied thereto; and I am also aware that sheets of tin have been applied to shaking-bolts to break the fall of middlings upon the bolting-cloth.

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

The improved circular revolving bolting-reel, having pieces C of bolting-cloth and tin sheets or facings D, arranged in alternating succession and with the rear edges of said facings overlapping the forward edges of the bolting-cloth sections, as shown and described, for the purpose specified.

THADDEUS ONIAS KILBURN.

Witnesses:

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