

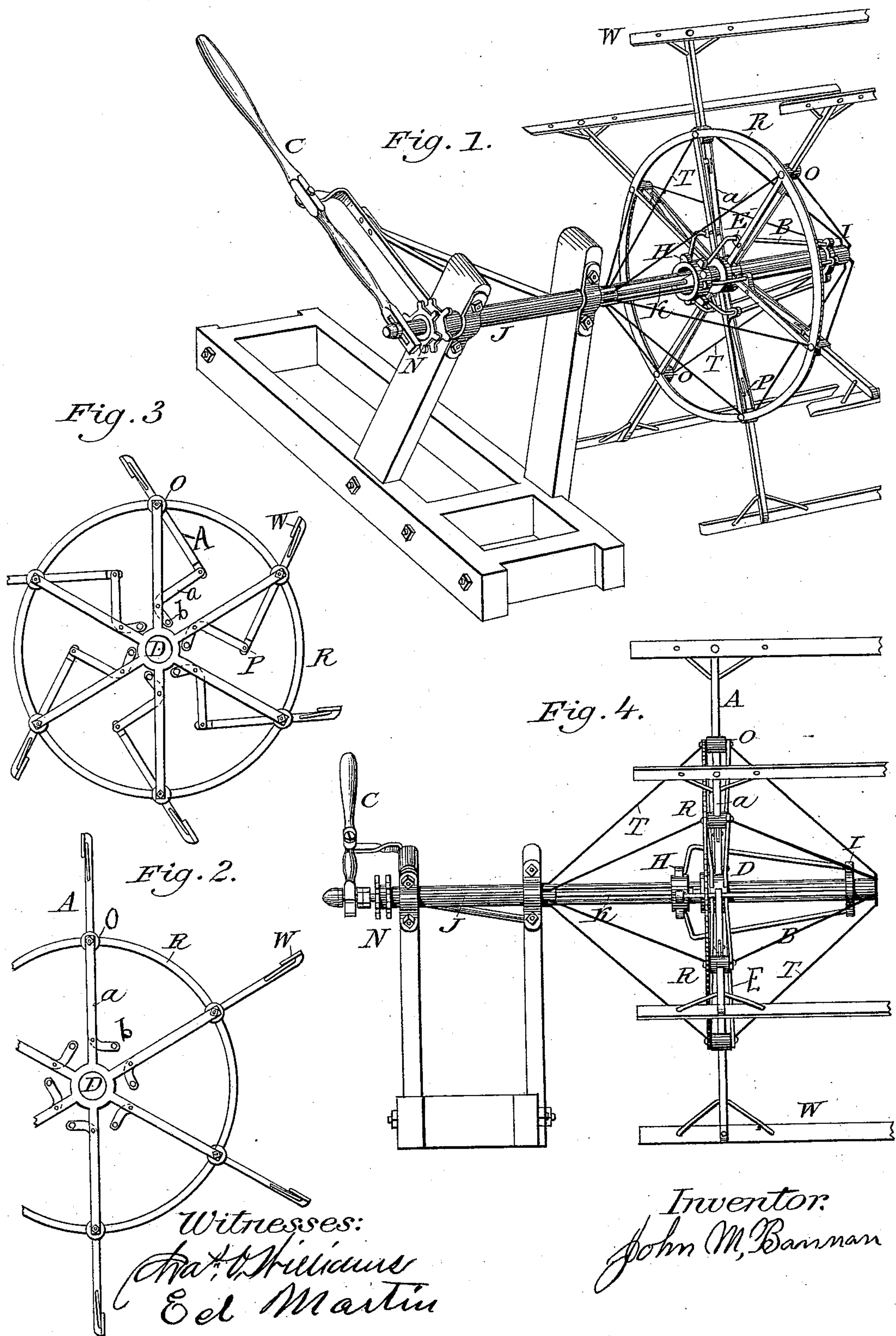
(Model.)

J. M. BANNAN.

REEL.

No. 336,885.

Patented Mar. 2, 1886.





# UNITED STATES PATENT OFFICE.

JOHN M. BANNAN, OF CHETOPA, KANSAS.

## REEL.

SPECIFICATION forming part of Letters Patent No. 336,885, dated March 2, 1886.

Application filed December 13, 1884. Serial No. 150,323. (Model.)

*To all whom it may concern:*

Be it known that I, JOHN M. BANNAN, of Chetopa, in the county of Labette and State of Kansas, have invented a new and useful improvement in reels used on machines known as "harvesting and reaping machines," for harvesting wheat, rye, oats, &c., which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

The object of my invention is to enlarge or diminish the circumference of the reel, which will elevate or lower the bat as it strikes the grain, so that instanding or fallen, tall or short grain, the bat can always be shifted by the use of a lever to the exact position required. This I accomplish by the use of jointed arms A *a*, made to move by inclined rods B by action of a common lever, C, as shown in perspective view, Figure 1 of the accompanying drawings.

The machine is illustrated more in detail in the plan views, Figs. 2 and 3, and in the rear elevation, Fig. 4

The jointed arms are secured to a metal hub or band, D, securely attached to reel-shaft J, and provided with short double spokes or standards E, which may be extended to a sufficient distance to support the guides O, and having a bolt in each, forming a pivot for what I term the "heel" of the lower section of arm *a*. The inclined rod B, passing through the hole *b*, made for the purpose in the toe or lug of the same section *a*, moves the lug to or from the center of shaft J, as shown in Figs. 2 and 3. These rods B are more clearly shown in Fig. 4, and are secured to a collar, H, having lugs, and to a similar collar, I, at the other end, in such a way as to admit of a slight oscillating movement in order that they may adjust their movement to the circular motion of the lug of the arm *a*. The bar K, passing through the center of the reel-shaft J lengthwise, is attached to the collar H by a bar connecting the two opposite sides of the collar H, which moves in a slot made in the reel-shaft

J of a sufficient length and size required. The other end of the bar K is attached to the lever C by a metal box moving in slot in said lever, and having cheeks each end of box for the lever to work against in moving either way, the bar K revolving in the box as the shaft J revolves. The rods B, passing through the perforated lugs of the arms *a*, will by the movement of the lever C force the lug down toward the shaft, as shown in Fig. 3, and the arms A *a*, being jointed, as shown at P, draw the exterior sections of the arms A through guides O at the end of spokes of the fixed hub D at the ring R, thereby contracting the circumference of the reel and lifting the bats W to the required height or distance from the sickle-bar. If the reel needs expanding, so as to drop the bats W nearer to the sickle-bar, the reverse movement of the lever C will give desired result, as shown in Fig. 2. The ring R is simply to add support to the spokes of hub D, and can be circular in form or on a straight line from spoke to spoke. If a side support is required, brace rods T can be used for the purpose of holding in a steady position the guides O, which form the necessary supports to hold the arms A *a* in their proper position. The guides O are pivoted to turn with the movement of section A of the arms A *a*, as shown in Fig. 3.

The sprocket-wheel N represents the usual mode of applying the power to turn the reel.

I claim as my invention—

In a reel for harvesters, the combination of the jointed arms provided with the perforated lugs, the inclined rods B, passing through said perforations and attached at each end to collars sliding upon the reel-shaft, whereby the arms can be straightened or bent and the reel expanded or contracted, substantially as described.

JOHN M. BANNAN.

Witnesses:

C. O. WILLIAMS,  
WM. ROBBINS.