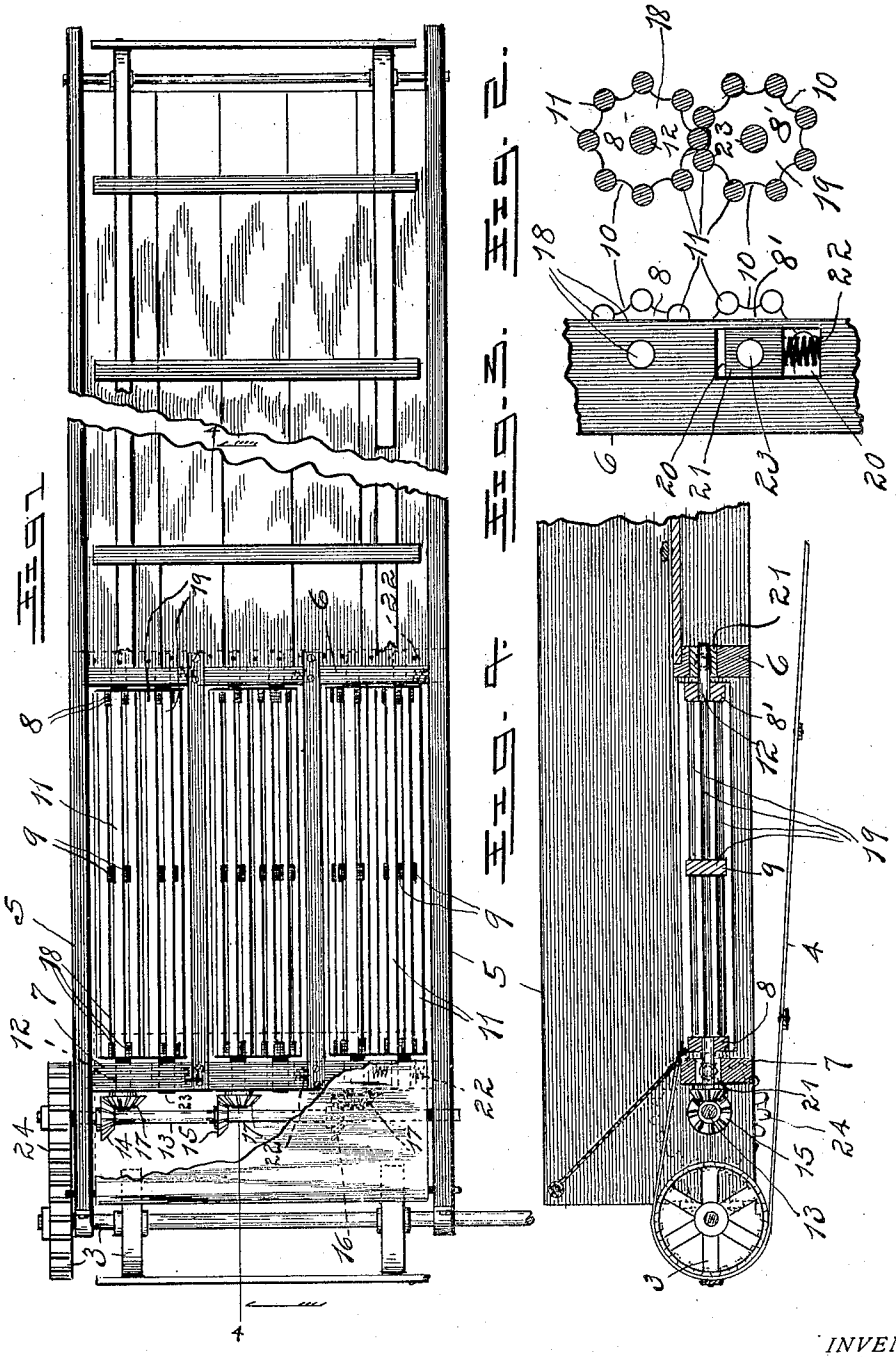
O. ADAMS.

CORN HUSKING CYLINDER.

APPLICATION FILED JUNE 17, 1918.

1,346,931. Patented July 20, 1920.



INVENTOR,

BY Otis Adams,

H. M. Richards,

ATTORNEY

UNITED STATES PATENT OFFICE.

OTIS ADAMS, OF NEAR RIO, ILLINOIS, ASSIGNOR OF ONE-HALF TO FRED COOPER, OF NEAR RIO, ILLINOIS.

CORN-HUSKING CYLINDER.

1,346,931. Specification of Letters Patent. Patented July 20, 1920.

Application filed June 17, 1918. Serial No. 240,358.

To all whom it may concern:

Be it known that I, OTIS ADAMS, a citizen of the United States, residing near Rio, in the county of Knox and State of Illinois, have invented a new and useful Corn-Husking Cylinder, of which the following is a specification.

My invention relates more particularly to the construction of a cylinder that is used in corn husking machines.

It has for its object the construction of a cylinder that in coöperating with a similar cylinder gives a rolling wedging action whereby the husks and corn silk are effectively removed from the ears of corn.

In the accompanying drawings:

Figure 1 is a top plan of my improvements as embodied in and with a common type of farm elevator;

Fig. 2, an enlarged transverse section seen through a pair of coacting cylinders;

Fig. 3, an enlarged detail, seen at the upper end of the cylinder-box or hopper and looking downward; and

Fig. 4, a longitudinal section, taken in the plane of the line 4—4 in Fig. 1.

It will be noted in the drawing that but three sets of cylinders are shown; while this is sufficient for a full disclosure of my improvements, it will be found better in practice to use about five.

2 designates an ordinary farm elevator, chute, the hopper portion of which has been removed for placement of my improvements, and 3 designates the usual carrier-belt-driving mechanism. 4 is the carrier-belt.

My improvements are so placed in the chute, it is to be noted, that they constitute the hopper into which the loads of corn are dumped as they come from the field, 5, 5 being the hopper-sides. 6 and 7 designate respectively the upper and lower ends or cross pieces of the hopper. These sides and ends constitute the hopper box, the floor of which is formed by a plurality of my improved cylinders. Each cylinder comprises preferably substantially annular ends 8, 8′ and a central rib 9, provided with registering grooves 10 in their peripheries. In each registering set of grooves is fixed an elongated tooth or cog 11, preferably circular in cross section in order that it may not shell or loosen the grains of corn from the ears. The ends 8, 8′ and rib 9 are fixed in alinement upon a rotatably mounted shaft 12. It should be particularly noted that the rods of one cylinder fit fairly close between the rods of the other cylinder, and roll on concave surfaces of said disks between adjacent rods. When a rod of one cylinder enters the space between adjacent rods of another cylinder, there will be produced a wedging action between the curved surfaces. These circular rods are far more effective for feeding the husks between the rolls than the angular rods previously used, and more effective for tearing the husks from the ears of corn since the rods have a rolling action on one another and remain in coöperative relation for a longer and more effective period than angular rods.

13 indicates a drive shaft, shown as receiving motion from the mechanism 3. On it are secured bevel gear wheels 14, 15, 16. The wheel 14 meshes with and drives a bevel gear wheel 17 fixed upon the lower end of the shaft 12, which at this end has a bearing in the hopper-end 7, its upper end having a bearing in the hopper-end 6.

Each driving cylinder 18 above described drives a cylinder 19 the construction of which is identical. The ends of the hopper-box are cut away to form ways 20 in each of which a block 21 is seated. In corresponding pairs of these blocks are rotatably mounted the ends 23 of the shaft of a cylinder 19. In each way 20 is a spring 22 bearing against the adjacent block 21, thus yieldingly pressing the coacting cylinder 19 into contact with that cylinder which is driving it.

In operation, the load of freshly gathered corn will be dumped gradually into the hopper, of which my improvements constitute the floor. The mechanism 3 being assumed to be in operation, it will transmit power to the wheel 24 and thus to the shaft 13, wheel 14, wheel 17, shaft 12 and cylinder 18. It will be evident that the cogs or teeth of the latter and those of the coacting cylinder 19 are in mesh, each cylinder 18 driving a cylinder 19. It may be noted at this point that each cylinder 19 is free to yield at either or both of its ends, independently of the cylinder which drives it.

The teeth of each cylinder and of each pair of coacting cylinders are so spaced apart that they freely permit all loose grains of corn to fall down between them; notwithstanding this the teeth of each pair roll in

contact and gather the silk and husks from the ears, thus allowing only clean ears and no shelled corn to enter the crib.

The operation of the carrier belt in conveying the corn from the hopper through the chute and into the bin is too well known to require description herein.

Having thus described my invention, I claim as new the following, to-wit:

A corn husking apparatus comprising a driving shaft, a rotary cylinder geared to said driving shaft, said cylinder comprising a plurality of circular disks, a plurality of circular rods symmetrically arranged and spaced approximately the diameter of the rods, secured to the peripheries of said disks, the portions of the disk intermediate the rods being concave, and a similar cylinder yieldingly mounted in meshing engagement with said first mentioned cylinder and driven thereby, the rods of each cylinder having a rolling action on the rods of the other cylinder.

In witness whereof I hereunto subscribe my name this 8th day of June, 1918, at Rio, Knox county, Illinois.

OTIS ADAMS.