No. 864,667. PATENTED AUG. 27, 1907.

O. C. MOORE.

SELF FEEDER FOR CORN HUSKERS.

APPLICATION FILED JUNE 28, 1906.

3 SHEETS—SHEET 1.

FIG. 1

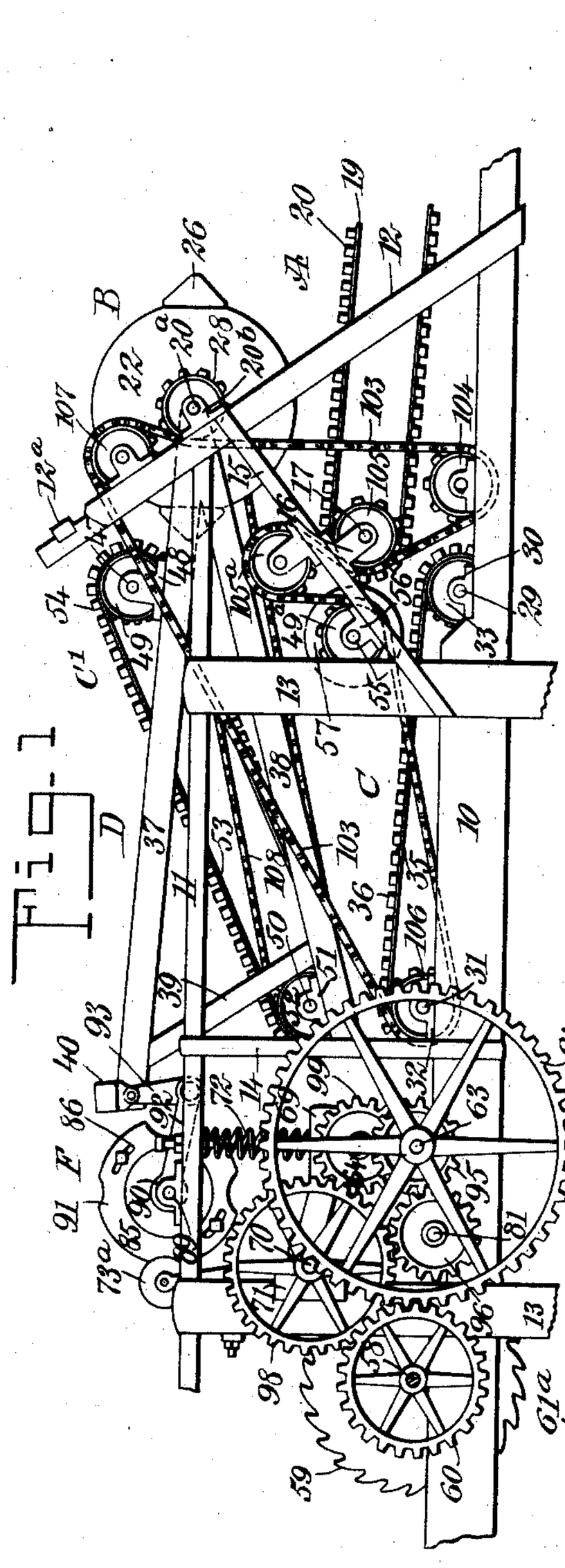
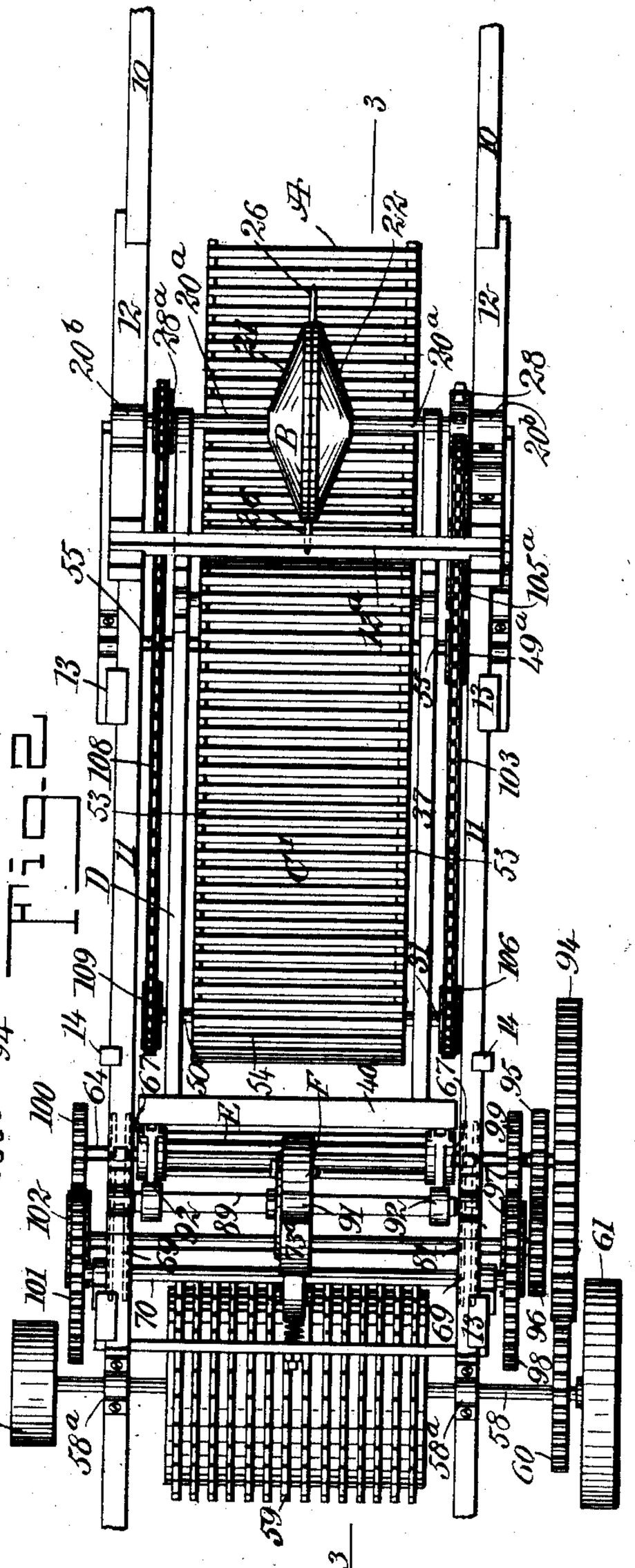


FIG. 2



WITNESSES

J. A. Brooply

J. Fred Acker.

INVENTOR

Orlando C. Moore

BY Munn & Co

ATTORNEYS

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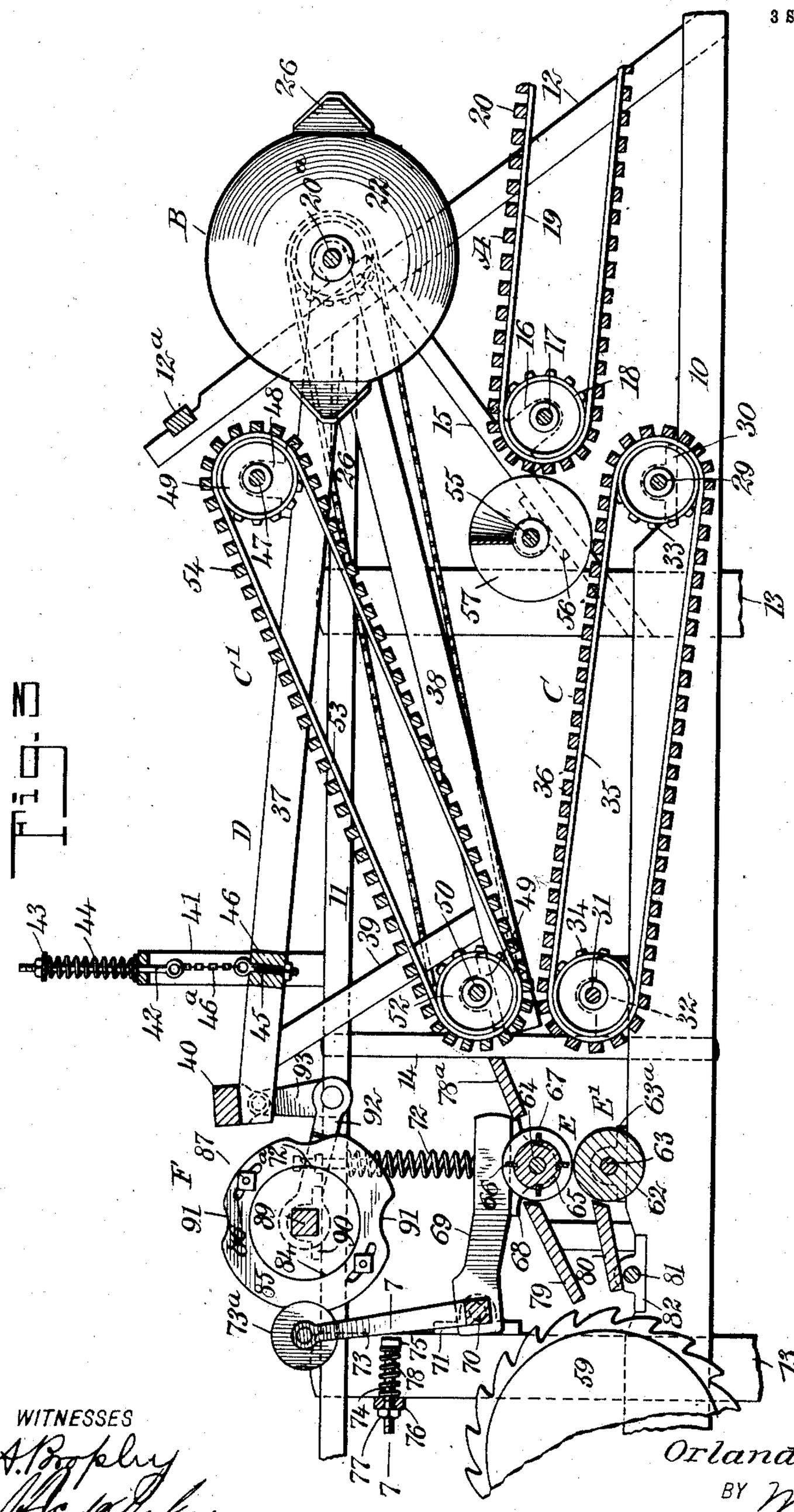
3 SHEETS—SHEET 2.

FIG. 2.



WITNESSES

J. A. Bagley

J. Ed. Ickes

INVENTOR

Orlando C. Moore

BY Munn & Co

ATTORNEYS

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3 SHEETS—SHEET 3.

Fig. 4

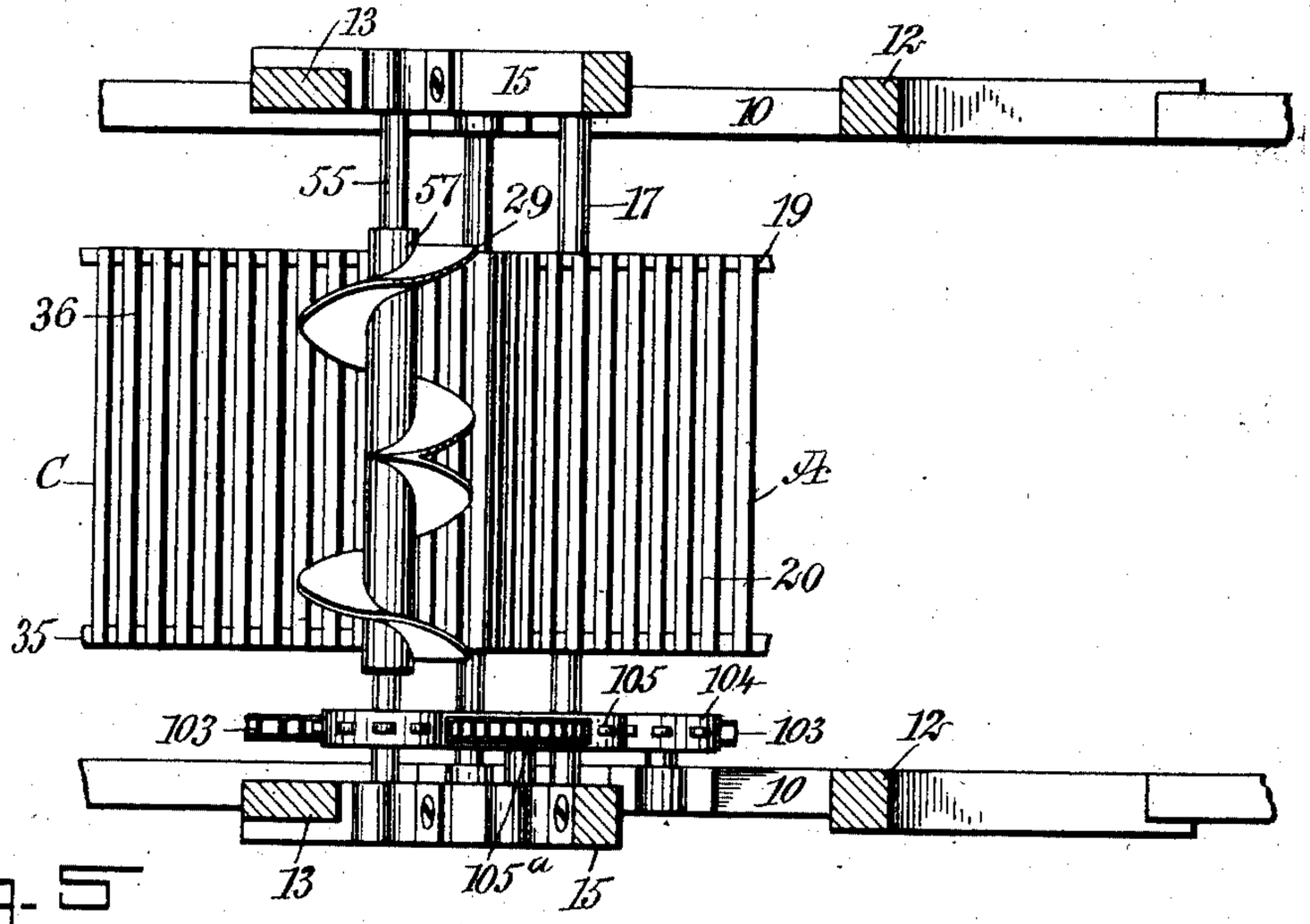


Fig. 5

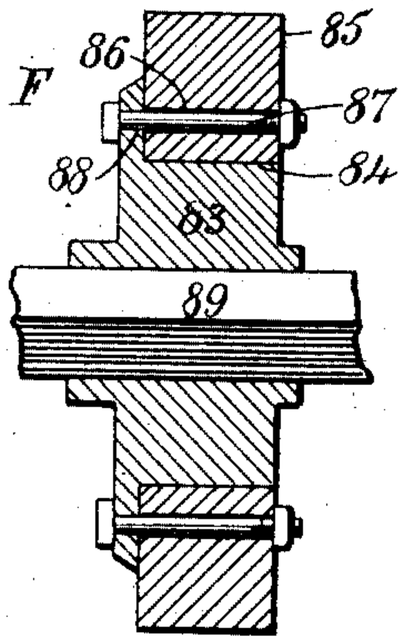


Fig. 7

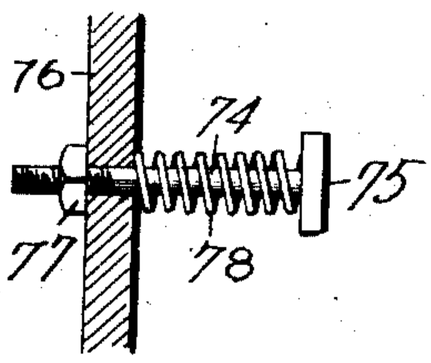
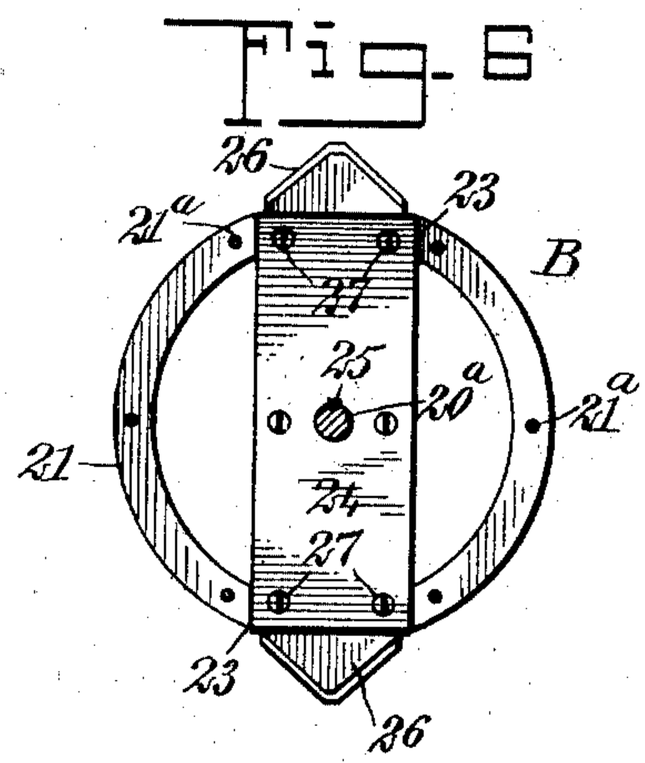


Fig. 6



WITNESSES

J. A. Bopley

J. Fred Acker

INVENTOR

Orlando C. Moore

BY Munn & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

ORLANDO C. MOORE, OF MORROW, OHIO.

SELF-FEEDER FOR CORN-HUSKERS.

No. 864,667. Specification of Letters Patent. Patented Aug. 27, 1907.

Application filed June 28, 1906. Serial No. 323,782.

To all whom it may concern:

Be it known that I, ORLANDO C. MOORE, a citizen of the United States, and a resident of Morrow, in the county of Warren and State of Ohio, have invented a new and Improved Self-Feeder for Corn-Huskers, of which the following is a full, clear, and exact description.

The purpose of the invention is to improve upon the device for which Letters Patent were granted to me October 17th 1905, No. 802,227, to such an extent as to simplify the same and provide a construction wherein a band cutter is associated with the bundle-carrier, said band cutter being so constructed as not only to effectually cut the wrappings of the bundles and likewise cut loose material fed on to the bundle-carrier, but which band cutter will separate the material, dividing it to the right and to the left; and to provide an improved form of spreader, used in connection with the lower feed which receives material from the bundle carrier, which spreader serves to distribute and thin out the material from the center toward the sides of the lower feed carrier.

A further purpose of the invention is to provide an upper adjustable snapping roller, which may be set to act upon large or upon small stalks, and which will be automatically adjusted upwardly to increase the space between it and the lower snapping roller, thus creating a maximum gripping angle for instantly seizing the butts of the stalks when presented to them by the feed belts or carriers. The upward lift of the upper snapping roll is automatically accomplished, and the vertical travel of the roller is controlled by adjustments independent of the amount of feed that may pass through the feeder, a small bunch accomplishing the full necessary lift; and wherein also it is possible for the two snapping rollers to be automatically brought into free yet actively close engagement for the purpose of self-cleaning when all the material has been passed from the feed carriers.

Another purpose of the invention is to provide rigid supporting arms for the boxes of the upper snapping roller, which arms are a portion of the adjusting mechanism for such snapping roller, which rigid or non-flexible arms serve to enable idle gears to be constantly in mesh with gears on the upper snapping roller during all adjustments of the latter, and wherein at such time the teeth of the meshing gears will not be injured to the slightest extent.

Another purpose of the invention is to so construct the adjustable support for the upper snapping roller that it will be constantly under spring tension regardless of what section of the snappers the material is fed through to the husking machine.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improved machine, certain parts being omitted; Fig. 2 is a plan view thereof; Fig. 3 is a longitudinal vertical section taken practically on the line 3—3 of Fig. 2, and showing the parts omitted from Fig. 1; Fig. 4 is a horizontal section through a portion of the frame of the machine, showing the spreader in plan view, and the opposing end portions of the bundle carrier and the lower feed carrier; Fig. 5 is an enlarged vertical section taken through the spacing disk for the upper snapping roller; Fig. 6 is a section through the shaft on which the band cutter is secured, and an inner face view of one section of the band cutter; and Fig. 7 is a detail horizontal section taken substantially on the line 7—7 of Fig. 3.

The frame of the machine may be of any desired construction, but as illustrated it consists of lower side sills 10, and upper parallel side sills 11, which do not extend as far forward as the bottom sills 10. The upper sills 11 are connected with the lower sills 10 at their forward ends by means of upwardly and rearwardly inclined tie bars 12, which preferably extend some distance beyond the upper faces of the upper side sills 11, and are connected at their upper ends by a cross bar 12^a. The side bars mentioned may be connected by suitable cross bars at periods in their length, and are supported by uprights 13 suitably located. In the preferred construction vertical tie bars 14 are located near the rear or delivery end of the frame. Furthermore, diagonal brace bars 15 are preferably made to extend from the forward or intermediate standards 13 to the forward end portions of the upper sills 11.

A bundle carrier A is located at the forward portion of the frame, extending any desired distance outward therefrom, so that the bundles of material can be dumped thereon from a wagon, or thrown thereon manually as desired. The rear shaft 17 of the bundle carrier A is mounted to turn in bearings 16 secured to the under faces of the diagonal brace bars 15 as particularly shown in Fig. 3; and on this shaft two sprocket wheels 18 are secured. The apron of the bundle carrier A preferably consists of chain belts 19, passing over the sprocket wheels 18, and cross slats 20 connecting said belts. The forward end of the bundle carrier A is supported and is operated in a similar manner to the rear end portion just described, and said bundle carrier A is usually given an upward and rearward inclination, more or less slight.

A shaft 20^a is journaled in suitable bearings 20^b, preferably secured to the forward diagonal tie bars 12 at or near where they meet the upper side beams 11, as is shown in Fig. 1. At the central portion of this shaft 20^a a band cutter B is secured. This band cutter, as

shown best in Figs. 1 and 6, is made in two opposing conical sections 21 and 22, whose inner or flat faces are brought together and at their rim portions are connected by bolts 21ª or their equivalents. At the inner face of each section 21 and 22 of the band cutter B, as is shown best in Fig. 6, opposing recesses 23 are produced, and said recesses receive the outer ends of overlying connected plates 24. The said plates and the sections of the band cutter are held on the axle 20ª by means of keys 25 or their equivalents.

A triangular blade or knife 26 is received between the end portions of the overlying plates 24, being held in position by suitable screws 27 or like means, so that when the sections of the band cutter are separated these knives can be readily removed and sharpened. It will be observed that no springs or other means are employed in connection with the band cutter to permit it to give or permit it to rise on the top of the fodder. The band cutter shaft turns in fixed bearings, and the band cutter B goes straight through the bundle, cutting the tangled or crooked stalks; and during the cutting operation the band cutter rolls the halves to one side, thus distributing the separated bundles, or the cut stalks, more or less equally transversely of the bundle carrier A. The band cutter shaft 20ª at the left-hand side of the machine is provided with a sprocket wheel 28, as is shown in Figs. 1 and 2.

A lower feed carrier C operates in conjunction with the bundle carrier A. This lower feed carrier C is given a slightly upward and rearward inclination as is shown in Fig. 3, and its forward end lies just below the rear end of the bundle carrier while its rear end is brought approximately close to the upright stay bars as is shown in both Figs. 1 and 3. The forward shaft 29 of the lower feed carrier C is journaled in suitable bearings 30, secured to the lower side sills 10; and the rear shaft 31 is mounted to turn in bearings 32 likewise secured to the bottom side sills 10, but to a thicker portion of said sills. The forward shaft 29 is provided with sprocket wheels 33 and the rear shaft 31 with corresponding sprocket wheels 34. The apron is practically the same in construction as that of the bundle carrier, consisting of belts 35 adapted to pass over the sprocket wheels 33 and 34, and transverse slats 36 connecting the belts.

An upper controlling and guide feed carrier C′ is mounted in a swinging frame D. This frame consists of upper parallel side bars 37, located inside the sills of the frame and normally occupying a position above the upper sills 11; and the forward ends of these upper side bars 37 of the said swinging frame D are pivoted upon the band cutter shaft 20ª. The upper side bars 37 of the swinging frame D are intersected at their forward or pivotal ends by lower side bars 38, which have a downward and rearward inclination as is clearly shown in Fig. 3. These upper and lower side bars 37 and 38 are connected at their rear ends preferably by diagonal brace bars 39. The upper side bars 37 of the said swinging frame D are connected near their rear ends by a cross bar 40 which extends beyond the said upper side bars 37 as shown in Fig. 2; and an arch 41 is secured to the upper sills 11 of the main frame adjacent to the rear end of the swinging frame D for the purpose of normally holding the forward lower end of the upper controlling feed carrier C′ a normal distance from the rear or delivery end of the lower feed carrier C. This is accomplished by passing an I-bolt 42 loosely through the upper portion of the arch 41 and providing said bolt at the top with a nut and washer 43, while a spring 44 is coiled around the outer portion of the I-bolt, bearing against the upper washer and against the upper surface of the arch 41, as is shown in Fig. 3. A second I-bolt 45 is secured in a cross bar 46 connecting the upper side bars 37 of said swinging frame D; and a flexible connection 46ª, a chain for example, is made to connect the two I-bolts.

The arch 41, and its accompanying parts, are placed to suspend the free end of the frame D, and all parts carried by said frame, the object being to take all unnecessary weight off of the ears of corn as said ears pass between the two carriers C and C′. The lifting of the upper snapping roller E against the pressure of a spring 72 to be hereinafter particularly referred to is quite severe, and it has been found desirable to carry the weight of the frame D and the carrier C′ on said spring, for the tension of the spring is just enough to cause the upper carrier C′ to ride clear of the lower one C and no more. It is just as essential that the upper snapping roll or roller be lifted and the gripping angle formed for a small bunch as it is for a large bunch.

The forward or upper shaft 47 of the upper carrier C′ is mounted to turn in bearings 48 which are secured upon the forward portions of the upper side bars 37 of the swinging frame D, and this shaft carries sprocket wheels 49. The lower shaft 50 of the said upper carrier C′ is journaled in bearings 51 secured upon the upper face of the rear ends of the lower side bars 38 of the swinging or pivoted frame D as is shown in Fig. 3; and this rear shaft 50 is provided with sprocket wheels 52, corresponding to the sprocket wheels 49 on the upper or forward shaft 47. The apron as in the other carriers mentioned consists of belts 53, passing over the sprocket wheels 49 and 52, and slats 54 connecting the belts.

Just above the forward end portion of the lower feed carrier C and at the rear of the bundle carrier A a spreader shaft 55, is mounted to turn in suitable bearings 56 secured to the upper faces of the forward diagonal brace bars 15, and on this shaft 55 a right and left-hand spreading worm or screw 57 is secured, which spreading worm or screw 57, as is shown in Fig. 4, is of a length practically corresponding to the width of the lower feed carrier C. The two pitches of this worm spreader 57 connect at their centers, so that in the action of the spreader the material delivered on to the lower carrier C is spread over the same and is distributed equally to the right and to the left.

At the rear portion of the main frame a shaft 58 is journaled in bearings 58ª, and on this shaft the customary shredder head 59 is secured. This shaft at its left-hand end is provided with a balance wheel 61 and a gear 60, and at its opposite end with a pulley 61ª. Between the shredder head 59 and the rear ends of the upper and lower feed carriers C′ and C, upper and lower snapping rolls E and E′ are located one above the other. The lower snapping roll E′ consists of a plain body 62 of suitable diameter, which is secured upon a shaft 63 journaled in bearings 63ª, secured upon the upper edge of the lower side sills 10, as is best shown in Fig. 3. The upper snapping roller E consists of a shaft 64, on

which a body 65 is secured, of the same diameter as the body of the lower snapping roller E′; but in the body 65 of the upper snapping roller E longitudinal grooves are produced, and in these grooves knives or blades 66 are made to enter, held in place by ring flanges 67 located at their ends and which are sprung over the body, said ring flanges having recesses in their inner faces to permit them to pass over and fit snugly to the blades as shown in Fig. 3. The blades when the flange rings are in position thereon extend nearly to the peripheral surfaces of said rings. Thus it will be observed that when the blades 66 become dull or blunt to any extent, they may be removed and replaced by others, thus avoiding the necessity of substituting an entirely new roller. The shaft 64 of the upper snapping roller E is mounted to turn in bearings 68, and these bearings are secured to the under faces of horizontal forwardly-extending controlling arms 69, the attachment of the bearings being made to the forward ends of the arms, the rear ends of said controlling arms 69 being firmly secured upon the polygonal body portion of a shaft 70, whose ends are made circular to rock in bearings 71 secured preferably to the forward face of the rear standards 13, as is also best shown in Fig. 3.

A spring 72 has bearing upon the upper forward portion of each controlling arm 69, tending to force said arm downward so as to hold the upper snapping roll in proper yet yielding relation to the lower snapping roll E′, and said springs likewise serve to return the upper snapping roll E to normal position relative to the lower snapping roll E′ when the cause has been removed that forced the said snapping roll out of normal position. These springs 72 have bearing against the under face of the upper side sills 11 and are preferably held in such position at their upper ends by adjustable pins 72ª, which extend down through the said upper sills into the coils of said springs.

A rocker arm 73 is secured to the central portion of the rock shaft 70, and this rocker arm extends upward and at its upper end is provided with a roller 73ª. This rocker arm is permitted to have free movement to a certain extent, but its movement when beyond normal is controlled by a regulating stop shown in detail in Fig. 7, being likewise shown in Fig. 3. This regulating stop consists of a horizontal bolt 74, loosely passed through a cross bar 76 extending from one rear standard 13 to the other at the rear sides of the said standards. The bolt 74 is provided at its forward end with a head 75, adapted for engagement, when necessary, with the aforesaid rocker arm 73. A nut 77 is screwed upon the rear end of said bolt to an engagement with the cross bar 76, regulating the extent to which the said bolt shall extend forwardly. A spring 78 is coiled around the bolt, having bearing against the head 75 and the cross bar 76.

When the rocker arm has been pushed rearward more than usual by the unusual lifting of the upper snapping roll, due to the unusual excess of material passing between the snapping rolls, the rocking arm 73 will be brought against the head 75 of the spring-controlled bolt 74, compressing its spring. After the unusual volume of material has passed, the said spring-controlled regulating bolt 74 will tend to restore the rocker arm 73 to normal position.

A deflecting board 79 extends downward and rearward from the upper portion of the upper snapping roll E to the shredding head 59; and a lower deflecting board 80 is correspondingly located relatively to the lower snapping roll E′ and said shredding head, while a third deflecting board 78ª extends from a point immediately to the rear of the upper feed carrier C′ to a point over the upper snapping roll E, as shown in Fig. 3. These deflecting boards 78ª, 79 and 80 are suitably supported.

When the material has been exhausted from the lower feed carrier C, as the last of said material passes through the snapping rolls, the springs 72 will force the said upper snapping roll down until its flange rings 67 engage with the lower snapping roll, and thus the two rolls are brought into such close relation that they free each other from material which would otherwise adhere thereto.

Below the lowest deflecting board 80 an idle shaft 81 is mounted in bearings 82 which are secured to the upper edges of the lower side sills 10. In connection with the pivoted or swinging frame D and the upper feed carrier C′ and the roller 73ª of the rocker arm 73, a spacing disk F is employed. This spacing disk consists of a body portion 83 as shown in Fig. 5, provided with an angular peripheral recess 84, in which recess a rim 85 is fitted and mounted to turn. This rim is provided at diametrically opposite points with curved slots 86, through which slots bolts 87 are passed, and through apertures 88 in what may be termed the flange portion of the periphery of the body portion 83 as is particularly shown in Fig. 5. Each bolt is provided with a head at one end and with a nut at the opposite end, so that the rim of the disk is adjustable upon the body, and may be held readily in adjusted position.

The spacing disk F is secured upon the central portion of the polygonal shaft 89, which shaft is mounted to turn in bearings 90, shown in Figs. 1 and 3, which bearings are secured upon the upper face of the upper side sills 11 adjacent to the normal position of the rocker arm roller 73ª. The rim 85 of the spacing disk F is provided with a series of recesses 91 in its periphery, usually four in number, although I do not restrict myself to any prescribed number of such recesses. The recesses 91 are curved, and the extent of the curvature of the various recesses differs, one being quite shallow and the others gradually deepened.

The recesses 91 in the spacing disk F are equally distant from the center of the shaft 89. When the roller 73ª is seated in any one of the said recesses, the upper snapping roller will be in more or less close relation to lower roller E′. The lifting is accomplished by the roller 73ª traveling out on the concentric or plain surface of the disk. This plain surface is elevated for some of the recesses more than for others, and the variations in the throw of the rocker arm 73 are thus obtained. The smallest throw of the arm 73 and resultant lift on the upper snapping roller E, are obtained by placing that recess 91 under the roller 73ª whose concentric or plain surface is least raised or elevated and whose plain surface measures the least from the center of the shaft 89. In order to obtain a greater lift a recess would be selected with the adjacent plain surface, on which the roller 73ª would travel, but slightly raised.

Connection is made between the shaft 89 on which the spacing disk F is secured and the pivoted or swinging frame D, by securing arms 92 to the end portions of the shaft 89, and pivotally connecting the arms 92,

which extend forwardly, by means of links 93 with the rear end portions of the upper side bars 37 of said pivoted frame D. Thus it will be observed that when any material passes between the delivery ends of the upper and lower feed carriers C′ and C the bulk of material will force the delivery end of the upper feed carrier C′ upward, carrying with it the frame D; and said frame in its turn, by its connection with the shaft 89, will cause the disk F to revolve and bring the roller 73ª out from the recess of the series 91 in which it was fitted, and on to the plain exterior of the disk, thus rocking the shaft 70 and carrying upward the forward ends of the controlling arms 69, thereby also lifting the upper snapping roller E and admitting of the instant reception of the material between the two said snapping rollers E and E′. As soon as all the material passes from under the upper carrier C, that member at once seeks its initial position, bringing the recesses 91 in the spacing disk F in position to receive the roller 73ª. At this instant all feeder influences on the upper snapping roller E are in abeyance, and the said roller E is under its full spring pressure and is held open only by the material yet passing between it and its mating roller E′. Thus a perfect condition for snapping out ears and cleaning up ahead of the next feed is obtained. This rest for the frame D and the upper carrier C′ is obtained by spacing the bundles while passing them through the feeder. The band cutter B being conical, retards the travel of the bundles when passing under it. The preceding bundle released from the band cutter and spreading worm is seized by the two carriers C and C′, and passing on very rapidly gains the time necessary to allow of the full operation of reversing the feeding influence on the upper snapping roller E.

The operation is very brief. As the bulk of fodder passes under the carrier C′, the spacing disk F is turned, the roller 73ª passes out on the raised surface adjacent to the recess in which it was located, the rocker arm 73 is forced back and the arms 69 are raised, carrying the upper roller E bodily with them, thus producing the proper gripping angle just as the feed of fodder is presented to the snapping rollers E and E′, and the fodder is therefore promptly received and acted upon by said rollers. The feed passing from under the upper carrier C′ permits that member and its direct connections to seek their initial positions, and the rocker arm 73 and the arms 69 are then under their full spring pressure, and the snapping rollers E and E′ are forced together, pinching off ears and cleaning up for the next feed.

The driving mechanism for the snapping rolls or rollers and associated parts is as follows: A large gear 94 is secured upon the left-hand end of the shaft 63 of the lower snapping roller body 62, which gear meshes with the driving gear 60 on the shaft carrying the shredder head. The shaft 63 likewise carries a pinion 95, and this pinion 95 meshes with a pinion 96 on the left-hand end of the idle shaft 81. On said idle shaft a second pinion 97 of the same size as the pinion 96 is secured, and the pinion 97 meshes with a gear 98, which is loosely mounted on the left-hand end of the rock shaft 70. This gear 98 in its turn meshes with a pinion 99 on the left-hand end of the upper snapping roller shaft 64. Thus it will be observed, by having the rigid rocking arms 69 the upper snapping roller may be raised and lowered and still remain in easy mesh with the idle driving gear 98. In order that the movement of the upper snapping roller shall be perfectly uniform throughout its length, a pinion 100 is secured to its shaft 64 at the right-hand side of the machine; and this pinion 100 meshes with a pinion 102 located at the right-hand end of the idle shaft 81, and said pinion 102 meshes with a gear 101 loosely mounted on the right-hand end of the rock shaft 70, the gears 100, 102 and 101 being respectively duplicates of the gears 99, 97 and 98 at the left-hand side of the machine.

With reference to a driving mechanism for the band cutter shaft and for the bundle carrier and the lower feed carrier, it consists of a belt 103, which belt is passed to an engagement with the sprocket wheel 28 at the left-hand end of the shaft 20ª on which the band cutter is mounted, the said belt being carried down to an engagement with a drive sprocket 104, located on the lower portion of the left-hand side sill 10, and which may be driven from the engine. The belt is then carried up to an engagement with a sprocket wheel 105 at the left-hand end of the shaft 17 of the bundle carrier A. Furthermore, said belt is carried up over an idle sprocket wheel 105ª mounted upon the upper edge of the left-hand diagonal brace 15. The belt is then carried down to an engagement with the sprocket wheel 49ª at the left-hand end of the spreader shaft 55, and then the belt 103 is carried to an engagement with a sprocket wheel 106, located at the left-hand end of the shaft 31 for the lower feed carrier C, as shown in Fig. 1. Finally, the belt 103 is carried up over an idle sprocket wheel 107 mounted upon the left-hand diagonal rear tie bar 12 at a point above the bearing for the band cutter shaft 20ª. This belt 103 is driven from the bundle carrier A, which in its turn is driven from any suitable source of power at its forward end portion.

With reference to the drive for the upper feed carrier C′, it consists of a belt 108, which is passed over a sprocket wheel 109 secured to the right hand end of the rear shaft 50 for said upper carrier. The belt 108 is then passed over the sprocket wheel 28ª at the right-hand side of the band cutter shaft 20ª.

In the general operation of passing fodder through the self-feeder, it is unloaded upon the bundle carrier A usually direct from the wagon, which is all the hand labor required. The fodder is then carried rearward under the band cutter B and over the spreader 57, and passing on it is seized by the two force feed carriers C and C′. The upper carrier C′ being vertically yielding, permits the fodder to pass beneath it, and at this time the entire mechanism of the feeder comes into action, including coöperative action of the upper snapping roller E. In yielding vertically to the bulk of fodder passing under it, the upper force feed carrier C′ will move upward and thus act upon the shaft 89 carrying the spacing disk F and will turn said disk, so as to operate the rocking arm 73 to carry the controlling arms 69 upward, thus increasing the distance between the two snapping rollers without in the slightest manner interfering with the action of the springs 72, which will assert themselves to force the controlling arms downward the moment that the necessity for the space between the snapping rollers ceases to exist. It will be observed that in this manner a regular automatic feed from the bundle carrier A to the shredder head 59 is provided for under all conditions of service.

I desire it to be expressly understood that the upper carrier C′ is positioned at its delivery end so as to normally just clear the under carrier C, and that it is just as necessary to accomplish the full lift upon the upper snapping roller E for a small bunch of material as it is for a large bunch, the lift being for the sole purpose of facilitating the starting of the stalks between the two rollers E and E′. Should the stalks, two or a dozen or more, when brought up against the snapping rollers E and E′ fail to enter instantly, they will bunch and will have to be taken out since they would cause the next feed to bunch also. Therefore, a small bunch should control the snapping rollers E and E′ as effectively as a large one, and the construction shown and described admits of such action.

The spring or cushion construction at the back of the rocker arm 73 is especially adapted to meeting the conditions of an excessive feed by protecting the two springs 72 bearing on the arms 69. A large bunch would cause an undue strain to be brought on the springs 72 by forcing the snapping rollers E and E′ wide open, and might consequently sometimes break the springs 72. The spring 78 meets these conditions, and also assists to accomplish a better snapping operation.

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

1. In a feed attachment for husking machines, compensating snapping rollers, compensating carriers leading to the snapping rollers, means for lifting one of the carriers and the corresponding snapping roller by the feed of the material passing between them, spring-controlled devices for the snapping rollers, a tensioned controlled device for the compensating carriers, means for rocking the controlling device for the snapping rollers, which means act in conjunction with the controlling device for the compensating carriers whereby to insure a uniform action of the carriers and snapping rollers respectively to the depth of the material passing between them, the said controlling means forcing one snapping roller in direction of the other in proportion to the increasing or decreasing thickness of the material lying between them.

2. In a feed attachment for husking machines, a frame adapted for attachment to a husking machine, upper and lower force feed carriers, the lower force feed carrier being mounted to revolve in the main frame, an upper pivotally supported auxiliary frame in which the upper force feed carrier is mounted to revolve, a spring support for the free end portion of the auxiliary frame, a shaft mounted to revolve on the main frame, crank connections between the shaft and the free end of the auxiliary frame, a spacing disk secured on the said shaft, a rocker arm the upper end whereof engages with the periphery of the spacing disk, a rock shaft to which the said rocker arm is attached, rigid controlling arms extending from the rock shaft, springs exerting downward tension on said controlling arms, an upper snapping roller having its bearings attached to the controlling arms, and a lower snapping roller having its bearings mounted upon the main frame of the attachment.

3. In a feed attachment for husking machines, the combination with a frame, a lower force feed carrier mounted to revolve in bearings carried by the main frame, an auxiliary frame having a spring support at one end and being pivotally mounted on the main frame at its opposite end, and an upper force feed carrier mounted to revolve in said auxiliary frame, of a shaft mounted on the main frame opposite the free end portion of the auxiliary frame, crank arms extending from the said shaft, link connections between the crank arms and the free ends of the auxiliary frame, a spacing disk mounted on the said shaft, having an adjustable recessed peripheral section, a rock shaft mounted in the main frame below the disk, a rocker arm secured to said rock shaft and provided with a friction roller for engagement with the peripheral portion of the said spacing disk, rigid controlling arms extending from the rock shaft, an upper snapping roller mounted upon the controlling arms, a lower snapping roller mounted on the main frame, and springs exerting downward tension on the controlling arms.

4. In a feed attachment for husking machines, the combination with a frame, a lower force feed carrier mounted to revolve in bearings carried by the main frame, an auxiliary frame having a spring support at one end and being pivotally mounted on the main frame at its opposite end, and an upper force feed carrier mounted to revolve in said auxiliary frame, of a shaft mounted on the main frame opposite the free end portion of the auxiliary frame, crank arms extending from said shaft, link connections between the crank arms and the free ends of the auxiliary frame, spacing disk mounted on said shaft, having an adjustable recessed peripheral section, a rock shaft mounted in the main frame below the disk, a rocker arm secured to said rock shaft and provided with a friction roller for engagement with the peripheral portion of said spacing disk, rigid controlling arms extending from the rock shaft, an upper snapping roller mounted upon the controlling arms, a lower snapping roller mounted on the main frame, springs exerting downward tension on the controlling arms, and a spring-controlled regulating stop for the rocker arm, the lower snapping roller being plain and the upper snapping roller provided with longitudinal removable blades and flange rings holding the said blades in place.

5. In a feed attachment for husking machines, the combination with a frame, a lower force feed carrier mounted to revolve in bearings carried by the main frame, an auxiliary frame having a spring support at one end and being pivotally mounted on the main frame at its opposite end, and an upper force feed carrier mounted to revolve in said auxiliary frame, of a shaft mounted on the main frame opposite the free end portion of the auxiliary frame, crank arms extending from the said shaft, link connections between the crank arms and the free ends of the auxiliary frame, a spacing disk mounted on the said shaft, having an adjustable recessed peripheral section, a rock shaft mounted in the main frame below the disk, a rocker arm secured to the said rock shaft and provided with a friction roller for engagement with the peripheral portion of said spacing disk, rigid controlling arms extending from the rock shaft, an upper snapping roller mounted upon the controlling arms, a lower snapping roller mounted on the main frame, springs exerting downward tension on the controlling arms, and a spring-controlled regulating stop for the rocker arm, the lower roller having three small V-shaped grooves running the full length and diagonally and spirally over the rollers' periphery, each groove making one turn on the rollers' periphery.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses this 22″ day of June A. D. 1906.

ORLANDO C. MOORE.

Witnesses:
M. L. Brown,
Jacob Uhl.