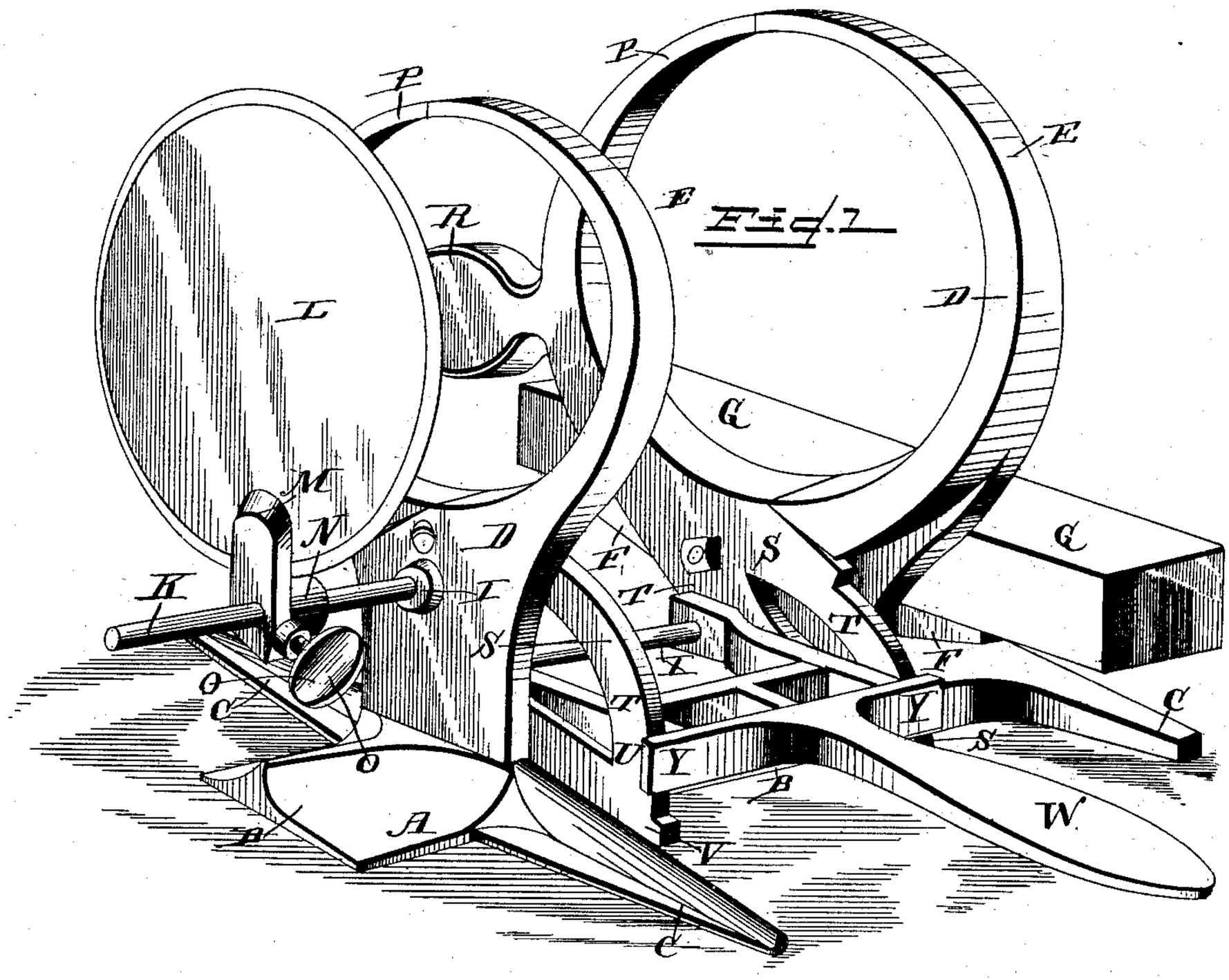
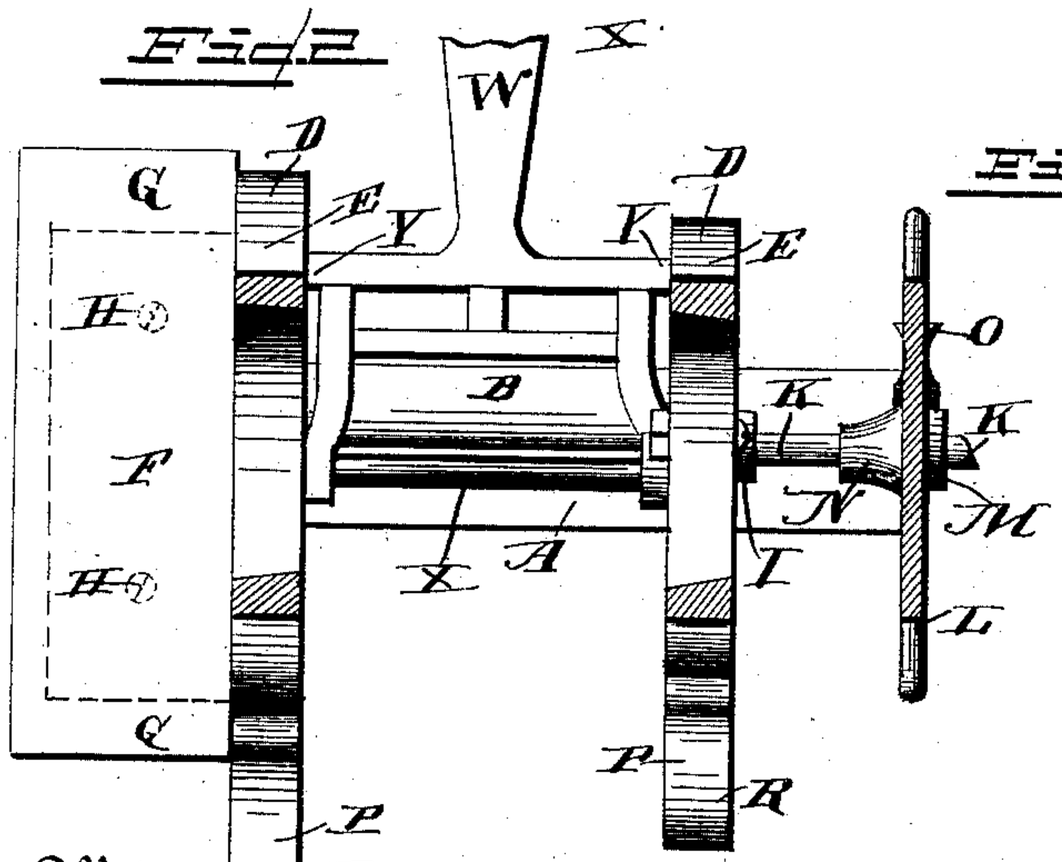
(No Model.)

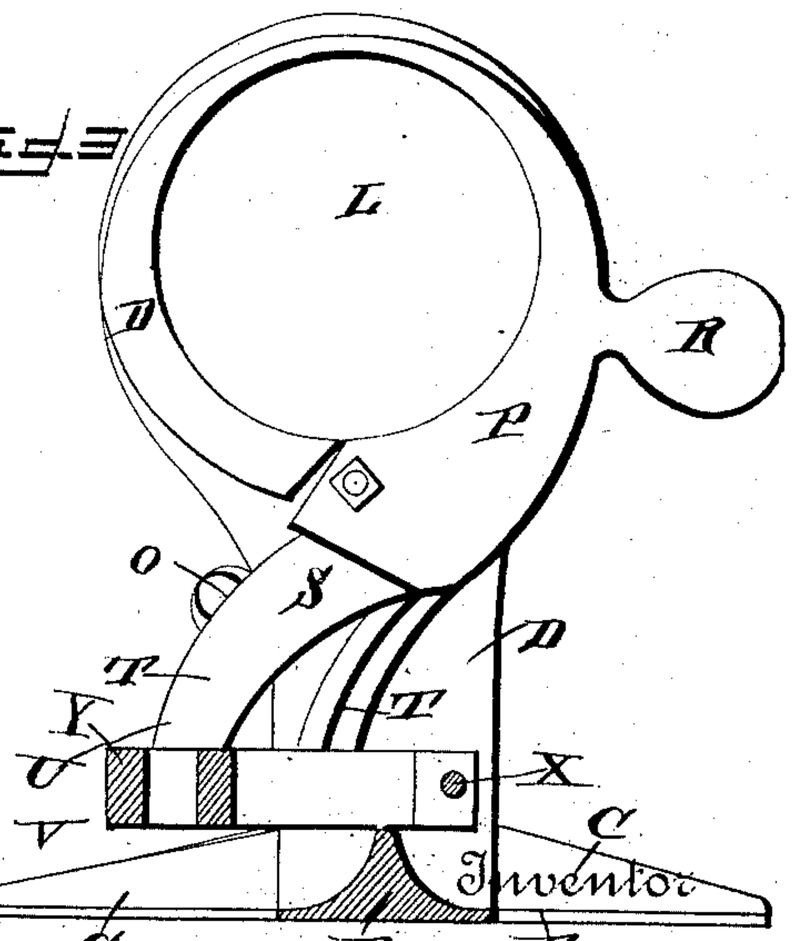
E. WATTS.

ASPARAGUS BUNCHER.

No. 374,383. Patented Dec. 6, 1887.







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UNITED STATES PATENT OFFICE.

ELIAS WATTS, OF KEYPORT, NEW JERSEY.

ASPARAGUS-BUNCHER.

SPECIFICATION forming part of Letters Patent No. 374,383, dated December 6, 1887.

Application filed August 27, 1887. Serial No. 247,066. (No model.)

To all whom it may concern:

Be it known that I, ELIAS WATTS, a citizen of the United States, residing at Keyport, in the county of Monmouth and State of New Jersey, have invented a new and useful Improvement in Asparagus-Bunchers, of which the following is a specification.

My invention relates to an improvement in asparagus-bunchers; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective view of an asparagus-buncher embodying my improvements. Fig. 2 is a longitudinal horizontal sectional view of the same. Fig. 3 is a vertical transverse sectional view of the same, taken on the line *x x* of Fig. 1.

A represents the base or support of an asparagus-buncher, which comprises the longitudinal central bar, B, and the transverse supporting-feet C, which project from opposite sides of the said bar, near the ends thereof. The said supporting-base is preferably made of cast metal, and formed integrally with the same, near the ends thereof, are vertical standards D. Formed with the upper ends of the said standards are semicircular rigid jaws E. On the outer sides of one of the standards is a laterally-extending horizontal ledge-plate, F. On the said plate is supported a transverse block of wood, G, which is secured in position by means of screws H, that pass through countersunk openings made in the ledge-plate and enter the block. The outer side of the opposite standard D is provided with a boss or offset, I. In the center of the said boss is a horizontal threaded opening, in which is secured the inner threaded end of the horizontal outwardly-extending gage-rod K.

L represents a circular gage plate or disk, which is provided at its lower edge with a projecting ear, M, having a sleeve, N, provided with a longitudinal central opening adapted to receive the gage-rod K, and thereby permit the gage-plate to be adjusted longitudinally upon the said rod.

O represents a thumb-screw which extends through an opening made in one side of the sleeve N, and is adapted to clamp the said sleeve to the gage-rod at any desired point, and thereby secure the gage-plate at any desired adjustment.

To the inner side of each standard D, at the upper end thereof, is pivoted a semicircular clamping-arm, P, and the said arms are provided on their outer sides with weights R and with cam-arms S, which project from their pivoted lower ends. The said cam-arms are curved gradually on their outer edges through nearly their entire length, as at T, and are then curved more abruptly from the curves T through their outer ends, as at U. The extreme outer ends of the cam-arms are provided with projecting stops V. It will be observed by reference to Fig. 2 that the pair of arms E and P which are adjacent to the block G form a circle of greater radius than the pair of arms nearest the gage-plate, thereby adapting the clamping-arms to the conical shape of the asparagus-bunch, which results from the fact that the asparagus-stalks taper.

In order to prevent the edges of the clamping-jaws E and P from cutting or abrading the stalks which form the outer sides of the bunches, I bevel the inner edges of the said clamping-arms, as shown in Fig. 2, and thereby adapt them to the conical form of the bunches.

W represents an operating-lever which is fulcrumed on a pivotal bolt-rod, X, that connects the standards D. The inner end of the said lever is widened so as to fit the space between the said standards, and at a suitable distance from the inner end of the lever, on the outer sides thereof, project engaging arms or studs Y, which extend over the curved edges of the cam-arms S.

The operation of my invention is as follows: The lever W is first moved upward, so as to cause its engaging-arms to move upward on the inclined outer sides of the cam-arms, and thereby permit the weights R to open the pivoted arms P from the rigid arms E. A suitable quantity of asparagus-stalks is then placed endwise between the clamping-arms to form a bunch, and the said asparagus-stalks are moved longitudinally until their heads strike against the inner sides of the gage-plate, the latter being previously adjusted to suit the length of the stalks. When a sufficient number of the stalks have been arranged between

the clamping-jaws, the lever W is depressed, thereby causing the studs or arms Y to move downward over the curved edges of the cam-arms S and exert sufficient leverage thereon to cause the pivoted jaws to move toward the rigid jaws, and thereby clamp the asparagus-stalks between them. By the time that the studs Y reach the lower ends of the curves T the pivoted jaws have been moved toward the rigid jaws to such an extent that the resistance offered by the asparagus-stalks which are being compressed between the said jaws becomes considerable. As the arms Y leave the curves T they pass onto the abrupt curves U, and thereby increase the leverage on the cam-arm, so as to enable the lever W to be readily forced to the lower limit of its movement and cause the pivoted jaws to complete their movement until their upper ends come in contact with the upper ends of the rigid jaws, and thereby complete the operation of bunching the asparagus. The asparagus is then tied and the butts of the stalks are cut by means of a knife. The block G rests under the butts of the asparagus-stalks and supports the same while being cut. Having completed the operation of forming a bunch, the lever W is raised, so as to open the pivoted jaws, as hereinbefore described, and the bunch of asparagus is then removed.

Having thus described my invention, I claim—

1. The combination, in an asparagus-buncher, of the vertical standards D, having rigid jaws E, the jaws P, pivoted to said standards and having the extending cam-arms S, and the operating-lever W, having the arms or studs bearing on the said cam-arms and adapted to close the pivoted jaws against the rigid jaws, for the purpose set forth, substantially as described.

2. The combination, in an asparagus-buncher, of the standards D, having rigid jaws E, the jaws P, pivoted to said standards and having the projecting cam-arms S, provided with the outer curved sides, T, and the abrupt curves U at the lower ends of the said curves T, and the lever having the studs or arms bearing upon the curved sides of the cam-arms, for the purpose set forth, substantially as described.

3. The combination, in an asparagus-buncher, of the standards D, having rigid jaws E, the jaws P, pivoted to said standards and provided with the weights R to normally open the pivoted jaws, and the operating-lever adapted to close the pivoted jaws against the rigid jaws, for the purpose set forth, substantially as described.

4. In an asparagus-buncher, the combination of the supporting-base having the vertical standards D, the rigid curved jaws E, extending from the upper edge of the said standards, the jaws P, pivoted to the said standards and having the cam-arms S, provided with the outer curved sides, T, and the abrupt curves U at the lower ends of said curves T, the operating-lever adapted to bear upon the curved sides of the cam arms, and thereby close the pivoted jaws against the rigid jaws, for the purpose set forth, the gage-rod projecting outward from one of the standards D, the gage-plate secured to the said rods and adjustable longitudinally thereon, and the ledge-plate projecting from the outer side of the opposite standard and supporting the block G, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

ELIAS WATTS.

Witnesses:

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GARRETT JONES.