

(No Model.)

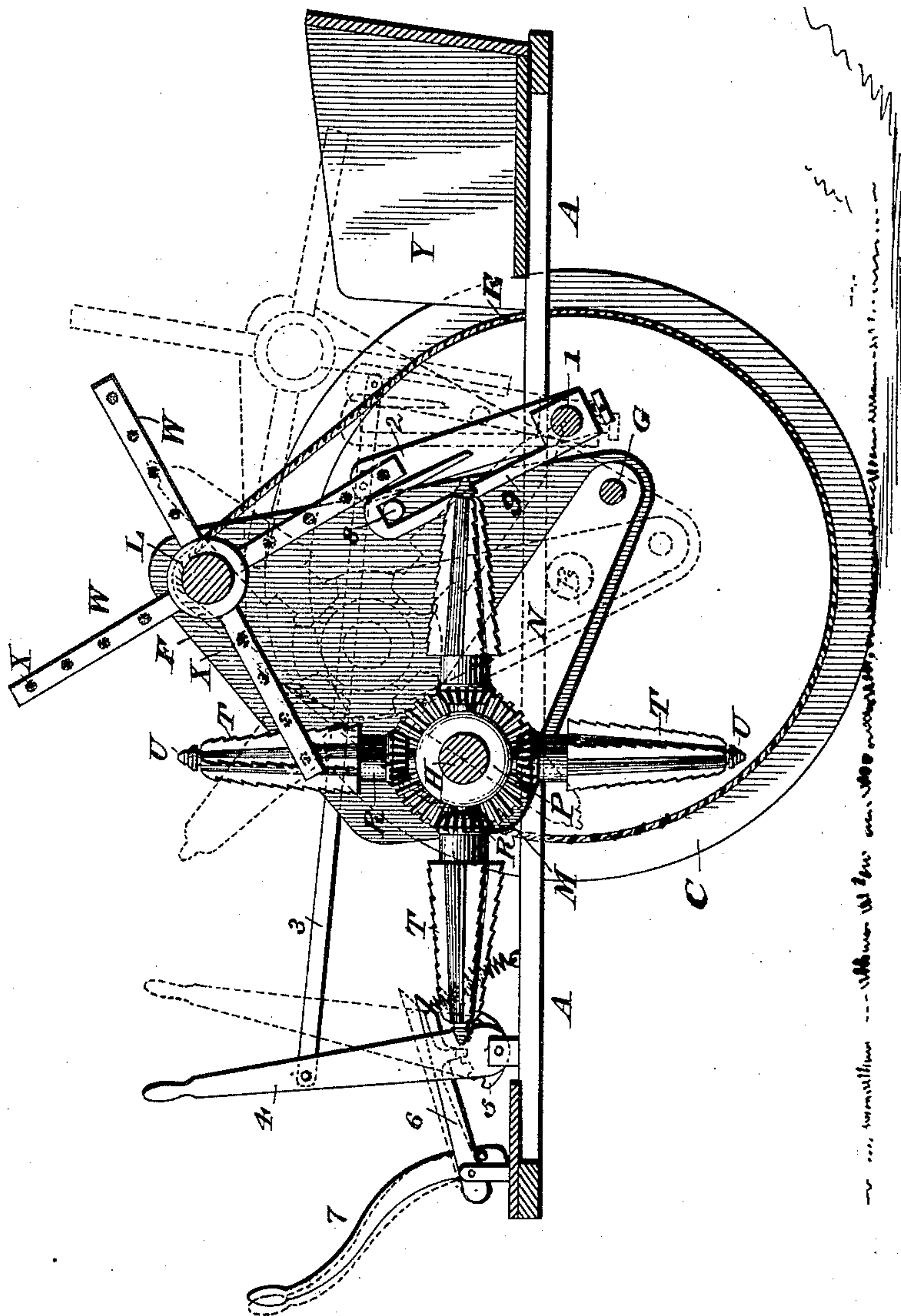
2 Sheets—Sheet 1.

J. W. THORN.
COTTON PICKER.

No. 442,405.

Patented Dec. 9, 1890.

Fig. 1.



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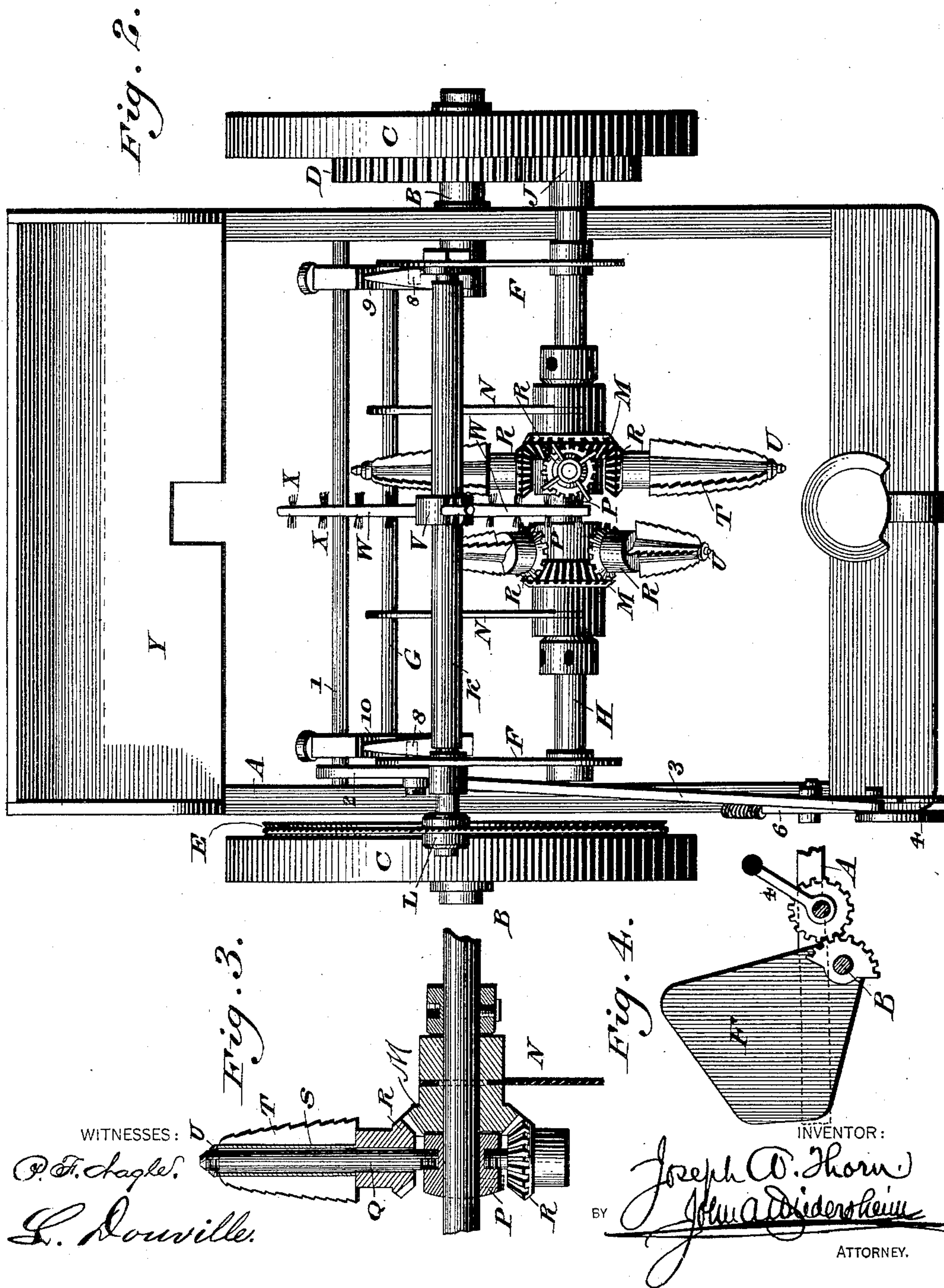
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UNITED STATES PATENT OFFICE.

JOSEPH W. THORN, OF IUKA, MISSISSIPPI.

COTTON-PICKER.

SPECIFICATION forming part of Letters Patent No. 442,405, dated December 9, 1890.

Application filed August 27, 1889. Serial No. 322,076. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH W. THORN, a citizen of the United States, residing at Iuka, in the county of Tishomingo and State of Mississippi, have invented a new and useful Improvement in Cotton-Harvesters, which improvement is fully set forth in the following specification and accompanying drawings.

My invention relates to cotton-pickers; and it consists of novel features of construction and combination, as will be hereinafter more fully described, and definitely pointed out in the claims which follow the specification.

Figure 1 represents a vertical section of a cotton-harvester embodying my invention. Fig. 2 represents a top plan view thereof. Fig. 3 represents a detail view in section. Fig. 4 represents a side elevation of a modification on a reduced scale.

Similar letters and numerals of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates the frame of the harvester having axles B for the wheels C, to which are connected, respectively, a gear-wheel D and a band-pulley E. On the inner projecting ends of the axles B are pivotally affixed plates F, connected by a tie-rod G. A shaft H has bearings in the forward part of the plates F, and on one end thereof is mounted a pinion J, meshing with a gear-wheel D. A shaft K also has bearings in the upper part of the plates F, and to one end thereof is affixed a pulley L, traversed by a band from pulley E. On the shaft H bevel-gears M are loosely fitted and prevented from rotating by arms N, extending from the tie-rod G and engaging with collars of said gears M, it being seen that the said gears are arranged in pairs with their toothed faces opposing each other, and as many pairs thereof employed as found desirable.

Collars P are keyed on the shaft H adjacent to the gears M and have radial arms or shafts Q connected therewith, on which are loosely mounted bevel-gears R, attached to sleeves S, Fig. 3, having a series of radial wings T, which are tapered and arranged in any suitable manner and formed with serrated or otherwise roughened edges, forming teeth for taking hold of the cotton.

The gears R and sleeves S, with wings T,

are held on the arms or shafts Q by a clamping-nut U, which also keeps the gears R in continual mesh with the gears M, the said parts forming the pickers.

On the shaft K is keyed a collar V, having radial arms W, provided with brushes X, said parts constituting a stripper to rotate between the pickers T and take the cotton from the latter and deposit it in a box Y, located in the rear of the machine.

In the rear of the plates F a shaft 1 has bearings in the frame A, and to one end thereof is attached an arm 2, to which is pivoted a link 3, extending to the forward part of the machine and connected to a lever 4, having a toothed sector 5. A spring-actuated dog 6, operated by a lever 7, engages the toothed sector 5 to sustain the adjustment of the parts. Stud 8 is secured to each of the plates F, and arms or links 9 10 on the shaft 1, engage said studs. When the lever 4 is operated, the plates F and the mechanism supported thereby may be moved so as to adjust the pickers to the depth required in the cotton and the travel on the road.

The shaft H rotates and the radial arms or shafts Q are revolved around the same, the sets of teeth or pickers T being independently revolved by the gears R, the motion of one set of said pickers being reverse to that of the other. The revolution of the shaft H carries the pickers and connected gearing with it, so that each picker is successively presented to the cotton and then carried away from the same.

The pickers take the cotton from the stalks as the machine travels over or between the stalks and draw it inward toward the center, from which it is taken by the stripper and deposited in the box or receptacle Y. Owing to the tapered formation of the pickers and the teeth arranged, as set forth, together with the rotary movement thereof around the drive-shaft H, the limbs or branches of the stalks are raised and caused to gradually fall over on the said pickers, thereby leaving the immatured limbs or branches uninjured and insuring a thorough picking or adherence of the cotton to the pickers to be successively relieved thereof by the stripper.

In lieu of the mechanism shown in Figs. 1 and 2, I may use the toothed segment-pin

and handle or lever shown in Fig. 4, said segment being secured to the plate F about the axis thereof and said pinion mounted on the frame A, the lever being secured to said pinion on the shaft thereof.

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

1. A cotton-harvester having a frame with axles and running-wheels, plates pivoted on said axles and having a connecting or tie rod, a shaft journaled in the plates and having a gear-wheel secured thereon and rotated by the movement of one of the running-wheels, non-rotatable bevel gear-wheels with collars on said shaft, radial arms extending from the shaft, bevel gear-wheels on said arms meshing with the bevel gear-wheels on the shaft, and sleeves connected with the bevel gear-wheels on the said arms and having a series of wings forming pickers, said parts being combined substantially as described.

2. A cotton-harvester having plates pivotally mounted on the axles of its running-wheels, a rotary shaft journaled in said plates, radial arms connected with said shaft, sleeves mounted on said arms and provided with radial wings forming pickers, and mechanism connected with said pickers, substantially as described, for imparting rotary motion to the same, said parts being combined substantially as described.

3. A cotton-harvester having plates pivotally mounted on the axles of its running-wheels, a rotary shaft journaled in said plates, radial arms extending from said shaft, rotary sleeves on said arms provided with tapered radial wings forming rows of pickers, and a second rotary shaft journaled in the plates and having radial arms carrying brushes, said brush-arms being between rows of said pickers, said parts being combined substantially as described.

4. A cotton-harvester having plates pivotally mounted on the axles of its running-wheels, a rotary shaft journaled in said plates, and radial arms extending from said shaft, rotary sleeves on said arms provided with radial wings forming rows of pickers, and a second shaft journaled in the plates and having radial arms with brushes thereon, said picker-shaft and said brush-shaft being operated, respectively, by mechanism, substantially as described, connected with different wheels of the running-gear, said parts being combined substantially as described.

5. A cotton-harvester having plates on the axles of its running-wheels, a rotary shaft journaled in said plates, bevel gear-wheels on said shaft having hubs connected by arms with the tie-rods of the plates, collars keyed on said shaft and provided with radial arms having bevel gear-wheels mounted thereon and meshing with the bevel gear-wheels of the shaft, sleeves connected with the bevel

gear-wheels of the arms and provided with radial wings forming pickers, and a second rotary shaft with radial arms having brushes thereon, said brush-arms being between two rows or series of picker-arms, said parts being combined substantially as described.

6. A cotton-harvester having plates pivotally mounted on the axles of its running-gear and provided with studs, rotary pickers and brushes connected with radial arms of rotary shafts journaled in said plates, a shaft journaled in the frame of the device and at the rear of the plates, arms or links secured to said last-mentioned shaft and to said studs, and arms extending from said shaft and having a link-connection with a lever pivoted to the frame, said parts being combined substantially as described.

7. A cotton-harvester having plates mounted on the axles of its running-wheels, a shaft having a pinion meshing with a gear-wheel attached to one of the running-wheels, said shaft being journaled in said plates, a non-rotatable bevel gear-wheel mounted on said shaft, radial arms extending from said shaft having bevel gear-wheels meshing with the bevel gear-wheels of the shaft and provided with collars secured to said bevel gear-wheels and having radial wings forming pickers, and a second shaft in said plates having a pulley with belt-connection with a pulley on one of the axles of the running-wheels, said parts being combined substantially as described.

8. A cotton-harvester having a frame with axles B and running-wheels C, the plates F on said axles B and having a tie-rod G, the shafts H and K, journaled in said plates, the shaft H being provided with a pinion meshing with the gear-wheel D of the running-wheels, the bevel gear-wheels M, having collars with arms N, the latter connected with the tie-rod G, the collars P, keyed on the shaft H and provided with the radial arms Q, and the bevel gear-wheels R, mounted on said arms Q and having the sleeves S, provided with the radial wings T, forming pickers, said parts being combined substantially as described.

9. In a cotton-harvester, the combination of pivoted side plates having studs thereon, a shaft to the rear of the plates having bearings in the frame of the machine, an arm secured to the said shaft, mechanism, substantially as described, connected with said arm for operating the same, and arms secured to the shaft and engaging said studs, said parts being combined substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH W. THORN.

Witnesses:

SAM F. BEALL,
A. B. PATTERSON.