

(No Model.)

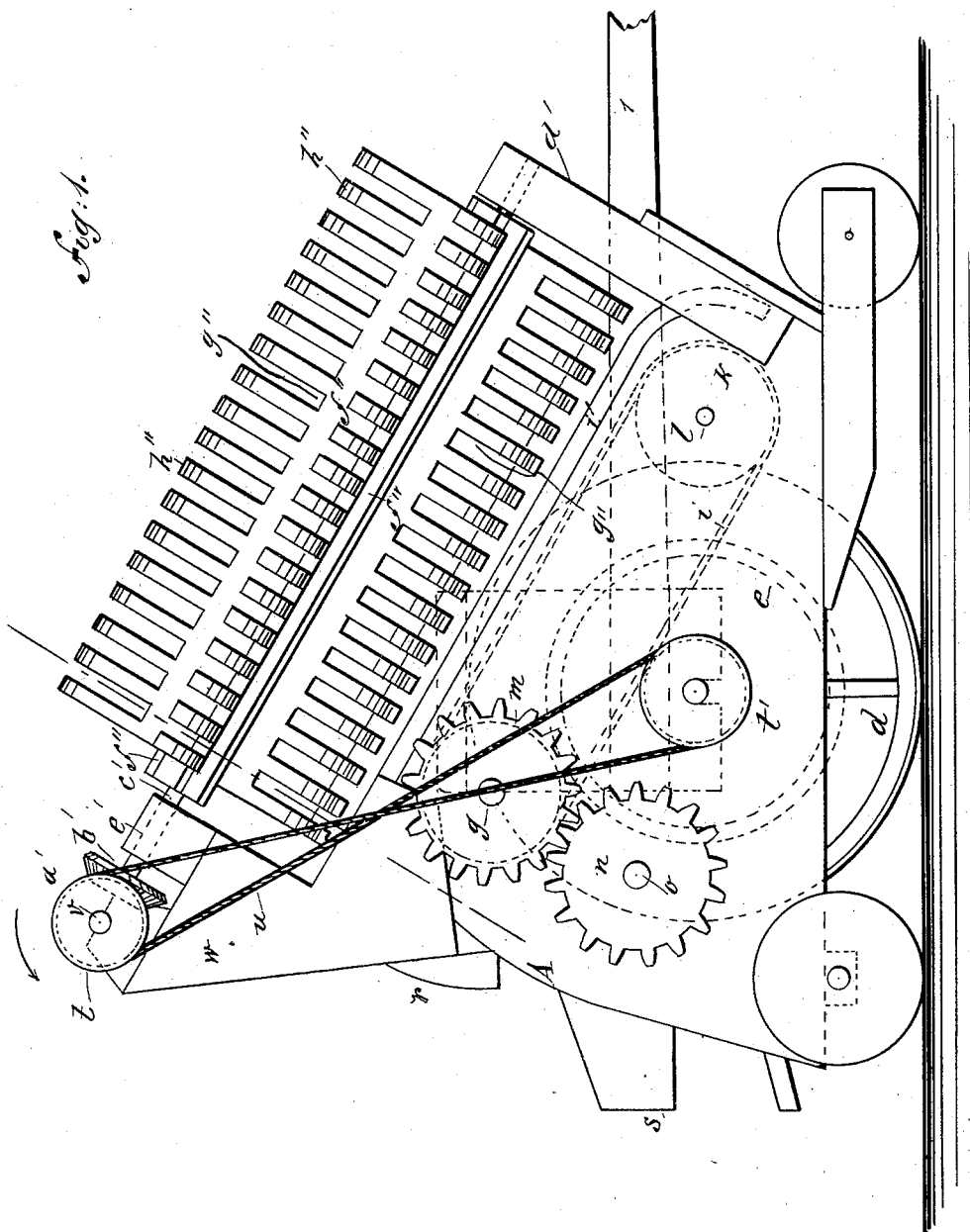
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W. H. ROHLING.

COTTON PICKER.

No. 364,440.

Patented June 7, 1887.



WITNESSES:

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Chas. Nida
C. Sedgwick

INVENTOR:

W. H. Rohling
BY Munn & Co
ATTORNEYS

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(No Model.)

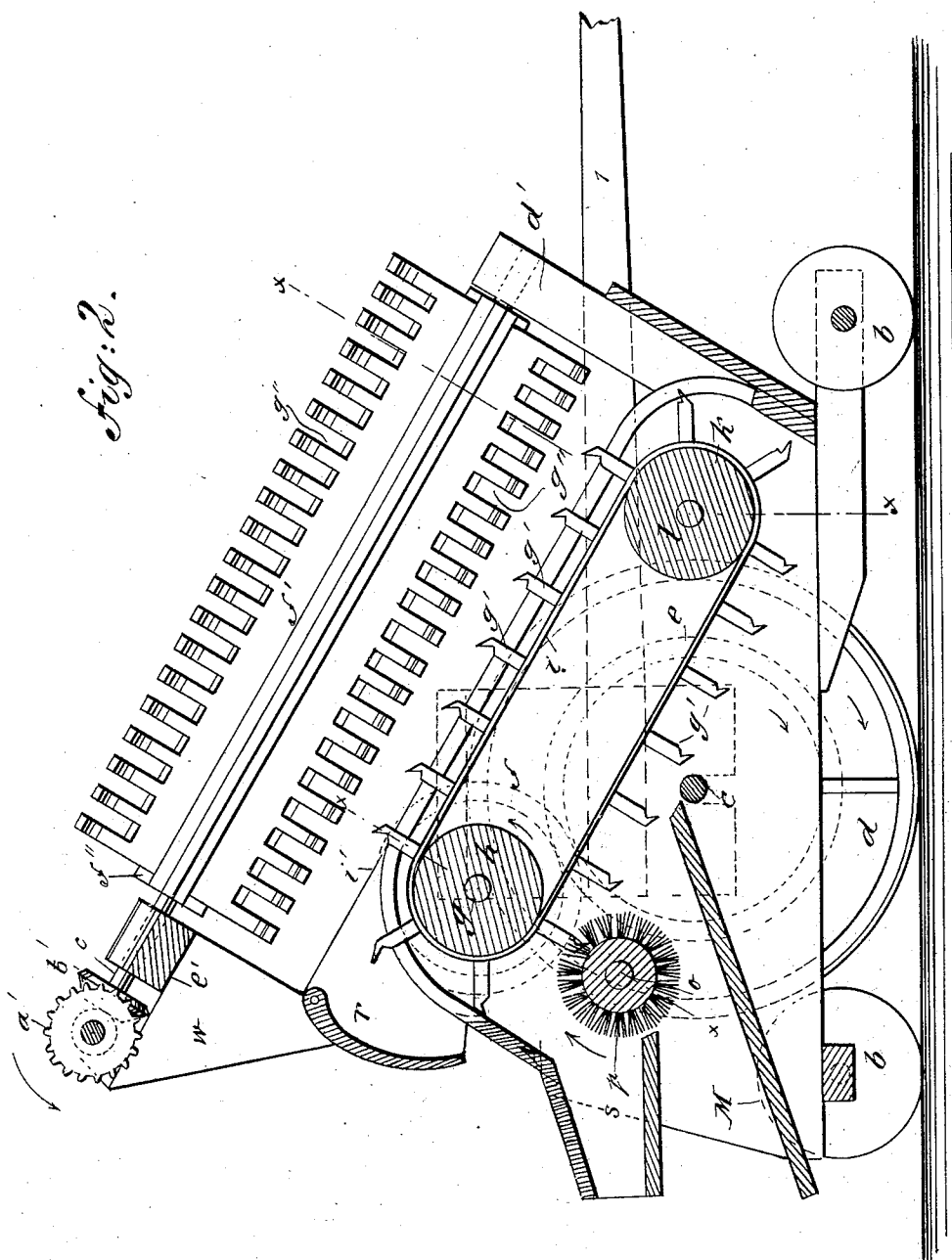
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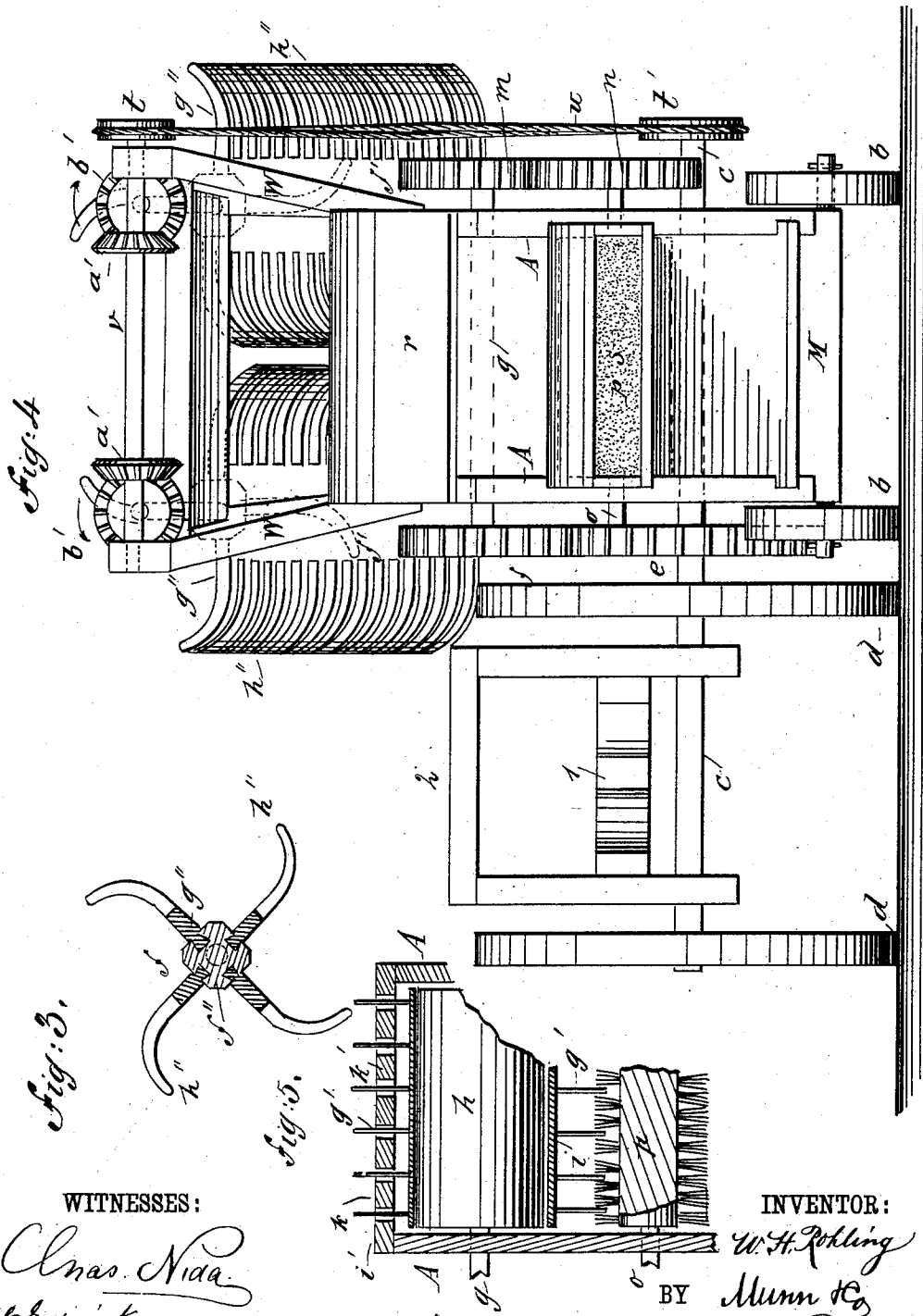
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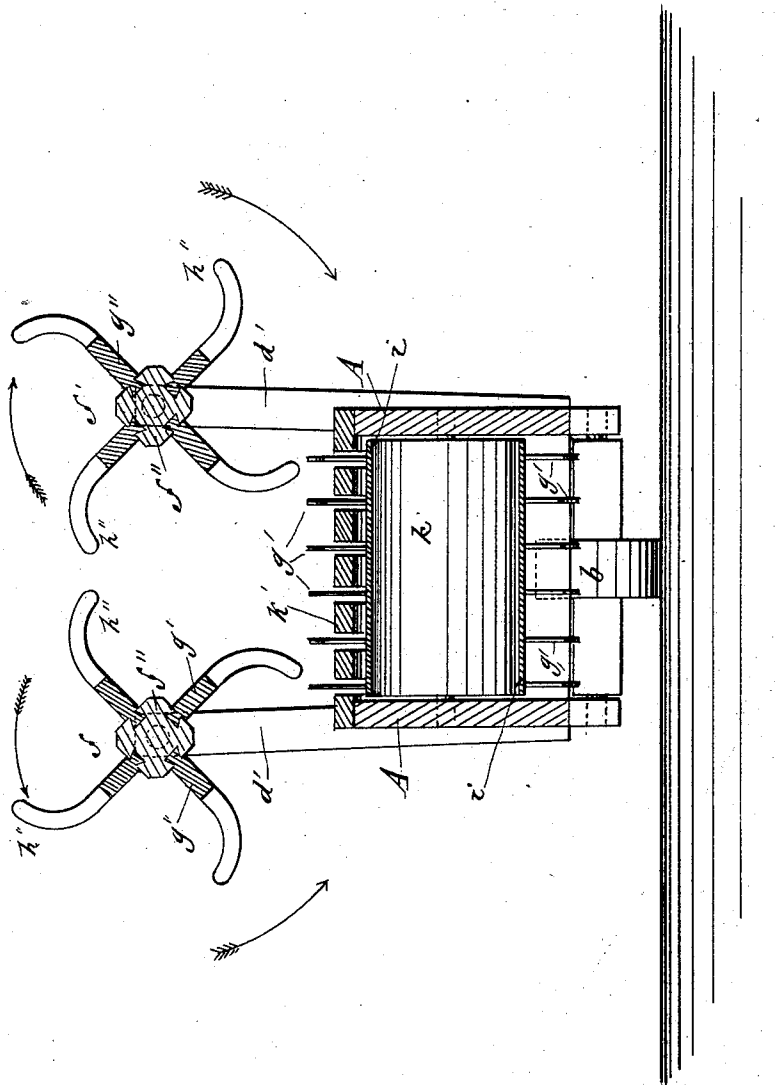
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Fig. 6.



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C. Sedgwick

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ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM H. ROHLING, OF LULA STATION, MISSISSIPPI.

COTTON-PICKER.

SPECIFICATION forming part of Letters Patent No. 364,440, dated June 7, 1887.

Application filed November 9, 1886. Serial No. 218,413. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. ROHLING, of Lula Station, Coahoma county, Mississippi, have invented a new and useful Improvement in Cotton-Pickers, of which the following is a full, clear, and exact description.

My invention relates to cotton-pickers, and has for its object to strip the cotton-plant, upon maturity, of the hulls containing the fiber, automatically separate the fiber from the hulls, discharge said hulls from the picker, and deposit the clear fiber in a compartment formed therein for the purpose.

The invention consists of the combination of parts, including their construction, substantially as hereinafter 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 letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of my cotton-picker, and Fig. 2 a central longitudinal vertical section thereof. Fig. 3 is a transverse section through one of the strippers. Fig. 4 is a rear elevation of my machine, and Fig. 5 a partial transverse section through the rear portion of the body. Fig. 6 represents a central transverse vertical section through the complete machine on the line *x x* in Fig. 2.

In the construction of my cotton-picker the body A, fitted with suitable wheels, *b*, (a single centrally-arranged one being applied at the forward end,) is usually provided with a horizontal base, inclosed sides, and a top surface, *i'*, adapted to incline at a decided angle from the rear downwardly to the front, the upper and lower ends of said inclined surface being positively curved at their intersection with the inclosed front end of said body and the partially-inclosed rear end thereof.

The inclined top surface, *i'*, which properly constitutes the face of the machine, is provided with a series of longitudinal slots extending approximately from end to end the width of said inclined face, whereby a series of longitudinal bars, *k'*, is formed, imparting to the entire face of the machine a grate-like appearance.

Within the body A, thus constructed, the

main axle C is journaled, adapted to extend beyond said body at each side. Upon one extended end of said axle C a grooved pulley, *t'*, is keyed, while to the other traction-wheels *d* may be attached. Between said traction-wheels the driver's seat 2 is usually located at an elevation above the axle, and secured thereto in any approved manner, the draft-pole *l* being attached to the uprights of said seat or to the axle itself.

Motion is conveyed to the main axle C through the traction-wheels *d*, which are adapted to travel each side of a line of plants having been previously stripped, thus allowing the body A to be drawn between said stripped row and the line of plants from which the cotton is to be gathered.

Upon the main axle C, between the inner traction-wheel, *d*, and the side of the body A, a gear-wheel, *e*, is keyed, adapted to mesh with a smaller toothed wheel, *f*, keyed upon the outer end of a shaft, *g*, journaled in the said body A, near the rear upper end thereof, which shaft *g* is adapted to carry a drum, *h*, within said body A. The said shaft is also provided with a second gear, *m*, upon its opposite end, whose function will be hereinafter set forth.

Another shaft, *l*, parallel with the shaft *g*, is journaled in the body A, the two shafts being in a plane parallel with the aforesaid surface *i'* of the said body, and adapted to carry a similar drum, *k*. The purpose of the said drums *h* and *k* thus mounted is to constitute carriers for an endless belt, *i*, of leather or other equivalent material, adapted to travel over said drums parallel with the inclined slotted face *i'*. The endless belt *i* is provided longitudinally with rows of vertical teeth *g'*, having sharp angular hook-like points inclined to the rear of the machine, adapted to project upward above and between the longitudinal bars *k'* of the inclined face *i'*, and act to carry the cotton-bolls delivered upon the inclined face of the body A to a chute or spout, as hereinafter described. The longitudinal rows of teeth *g'* upon the endless belt *i* are equal to the number of slots formed in the inclined face *i'*, as the said teeth are adapted to travel in the said slots.

Brackets W are provided on the rear end of the body A, adapted to extend upward there-

from, which may be connected by an ordinary brace, *e'*. The tops of said brackets are made to slant from rear to front at the same angle as the slotted face *i*, and to each side, at the front of said body, separate upwardly-extending standards *d'* are attached.

Longitudinal shafts *c c'* are journaled at one end in the vertical standards *d'*, and at the other end in bearings upon the brace *e'* of the brackets *W*, parallel with the inclined slotted face *i'*, the said shafts having keyed upon their rear ends, which project over said brace *e'*, bevel-gears *b'*, which bevel-gears *b'* are adapted to mesh with similar bevel-gears, *a'*, keyed upon a transverse shaft, *v*, journaled in bearings upon the rear brackets, *W*, and provided with a grooved pulley, *t*, secured to its projecting end. Motion is conveyed to the longitudinal shafts *c c'* from the main axle *C*, through the medium of the said upper transverse shaft, *v*, by a belt, *u*, adapted to engage the grooved pulley *t'* of the main shaft and the similar pulley, *t*, of the said upper transverse shaft, *v*.

The above-mentioned longitudinal shafts *c c'* are purposed to carry strippers *f'*, which consist of a suitable body, *f''*, encircling the shafts *c c'*, provided with radial arms *g''*, carrying a series of upwardly-curved fingers, *h''*, as shown in Figs. 4 and 6. The said strippers are adapted to engage the plants, strip the bolls from them, and deliver the same upon the inclined slotted face *i'* to the picking-teeth *g'*.

A spout or chute, *r*, provided with one open side and a contracted open bottom, is hinged to the rear brackets, *W*, so as to form a chamber behind the rear curved portion of the face *i'*, and extend a distance down the end of the body to retard the passage of the bolls out from the machine, in order that the picking-teeth *g'* may take the cotton fiber from the bolls crowded into the chute or spout.

A brush, *p*, is fitted upon a shaft, *o*, journaled in the rear portion of the body *A*, in such position as that the said brush will engage the picking-teeth *g'* as they carry the cotton fiber within the said body, and the said shaft *o*, extending through the side of the body upon one side, is provided with a toothed wheel, *n*, adapted to mesh with the similar toothed wheel, *m*, above it, connected to the drum-carrying shaft *g*, hereinbefore described, by which the brush *p* also receives motion from the main axle *C*.

In the rear of the body *A*, a chute, *S*, is provided about centrally with the revolving brush *p*, through which any leaves, light twigs, or trash escape, drawn in with the cotton fiber, while the cotton fiber itself, weighted with the seed, passes down with the brush and drops into a lower and larger chute, *M*, from whence it is taken out and disposed of as desired.

The direction in which the strippers are revolved is illustrated by arrows in Fig. 6, as are also the movements of the principal gearing likewise in the other figures.

The draft-pole may, if desired, be attached

centrally to the body *A*, and but one traction-wheel, *d*, be employed to drive the main axle, or said axle may be driven from the wheels *b* of the body.

In the operation of my cotton-picker, constructed as shown in the drawings, the side traction-wheels are adapted to travel one upon each side of a line of plants from which the cotton has been previously picked, the body of the machine being entered between said line and the row from which the product is to be gathered. Through the rotation of the traction-wheels the main axle *C* is operated, and from the said main axle motion is given the operative parts of said machine, which are arranged with respect thereto, as heretofore set forth. As the machine advances, the rotary strippers carried thereby are revolved in the direction shown in Fig. 6, the curved ends of their fingers pointing upward, thus revolving inward toward the center of the face *i'*. The stripper upon the one side engages the plants as yet untouched and relieves them of the cotton-bearing bolls, delivering the same upon the inclined slotted face of the body *A*, while the strippers upon the other side gather any bolls remaining upon the previously-stripped row. As the bolls are delivered upon the inclined face *i'*, the pickers carried by the endless belt *i*, moving rearward, carry the cotton-bolls and convey them within the body *A*. The same crowding in the rear chamber, *r*, are retained therein sufficiently long to be engaged by the pickers, the hulls passing out therefrom to the ground. The cotton fiber, as it is conveyed by the said pickers downward, is removed therefrom by the rotary brush *p*, the chaff gathered with the cotton, as it is relieved from the pickers, finding its escape through the chute or flue *s*, immediately opposite said brush, to the outside, while the cotton rendered more or less heavy by the attached seed falls from the brush into the compartment *M* below it, from whence it is removed in any desired or convenient manner.

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

1. A cotton-picker provided with an inclined slotted face, an endless belt carrying picking-teeth adapted to enter the slots in said face, rotary strippers having curved fingers and arranged above said face at the sides to strip the bolls from the plant and deposit them upon the inclined face, and a rotary brush beneath said belt, together with means for operating the same from a common shaft, substantially as set forth.

2. A cotton-picker provided with rotary strippers mounted above and at the sides of the slotted face to strip the bolls from the plants and deposit them upon said face, and means for rotating the same, substantially as shown and described, and for the purpose herein set forth.

3. A cotton-picker provided with a body

having an inclined slotted face, and rotary strippers mounted above and at the sides of the said face to strip the bolls from the plants and deposit them upon the face, said strippers consisting of a shaft having radial curved fingers, together with means for rotating said strippers from the main shaft, substantially as and for the purpose set forth.

4. A cotton-picker provided with a body having an inclined slotted face, revolving strippers above said face, said strippers being arranged at the sides to strip the bolls from the plant and deposit them upon the inclined face, an endless belt carried upon drums in said body, having rows of picking-teeth thereon, a rotary brush below said belt adapted to engage said teeth, a flue for the discharge of chaff, and a chamber to receive the fiber, together with means for operating the same from the main axle, substantially as shown and described, and for the purpose herein set forth.

5. The combination, with the body A, having an inclined slotted front, *i'*, an endless belt, *i*, carrying picker-teeth *g'*, and a rotary brush, *p*, of the revolving strippers *f'*, journaled in bearings above the said slotted inclined face *i'*, and having curved fingers *h''*, integral with their radial arms *g''*, said revolving strippers being arranged at the sides to strip the bolls from the plant and deposit them upon the inclined face, substantially as shown and described, and for the purpose herein set forth.

6. The combination, with the body A, having journaled therein the main axle C, provided with an outer grooved pulley, *t'*, of the strippers *f*, mounted upon longitudinal inclined shafts *c c'*, having bevel-gear *b'*, and the upper transverse shaft, *v*, provided with corresponding bevel-gear, *a'*, and a grooved pulley, *t*, said pulley connected with the similar pulley, *t'*, upon the main axle by a belt, *u*, substantially as shown and described, whereby the said strippers are rotated, as set forth.

7. The combination, with the body A, having an inclined slotted front, *i'*, a rear discharge-chute, S, a receiving-compartment, M, and an endless belt, *i*, carrying picking-teeth *g'*, adapted to rotate with the drums *h* and *k*, of the rotary brush *p*, mounted upon the shaft *o*, journaled in said body A beneath said endless belt, as shown and described, whereby the said brush receives the cotton fiber from said teeth and conducts the same to the compartment M, the chaff escaping through the flue S, said chute or spout S being arranged about opposite the rear end of the endless picker-belt, and the said compartment M being disposed below the said belt, as set forth.

WILLIAM H. ROHLING.

Witnesses:

R. H. HAZEN,
L. W. BARBEE.