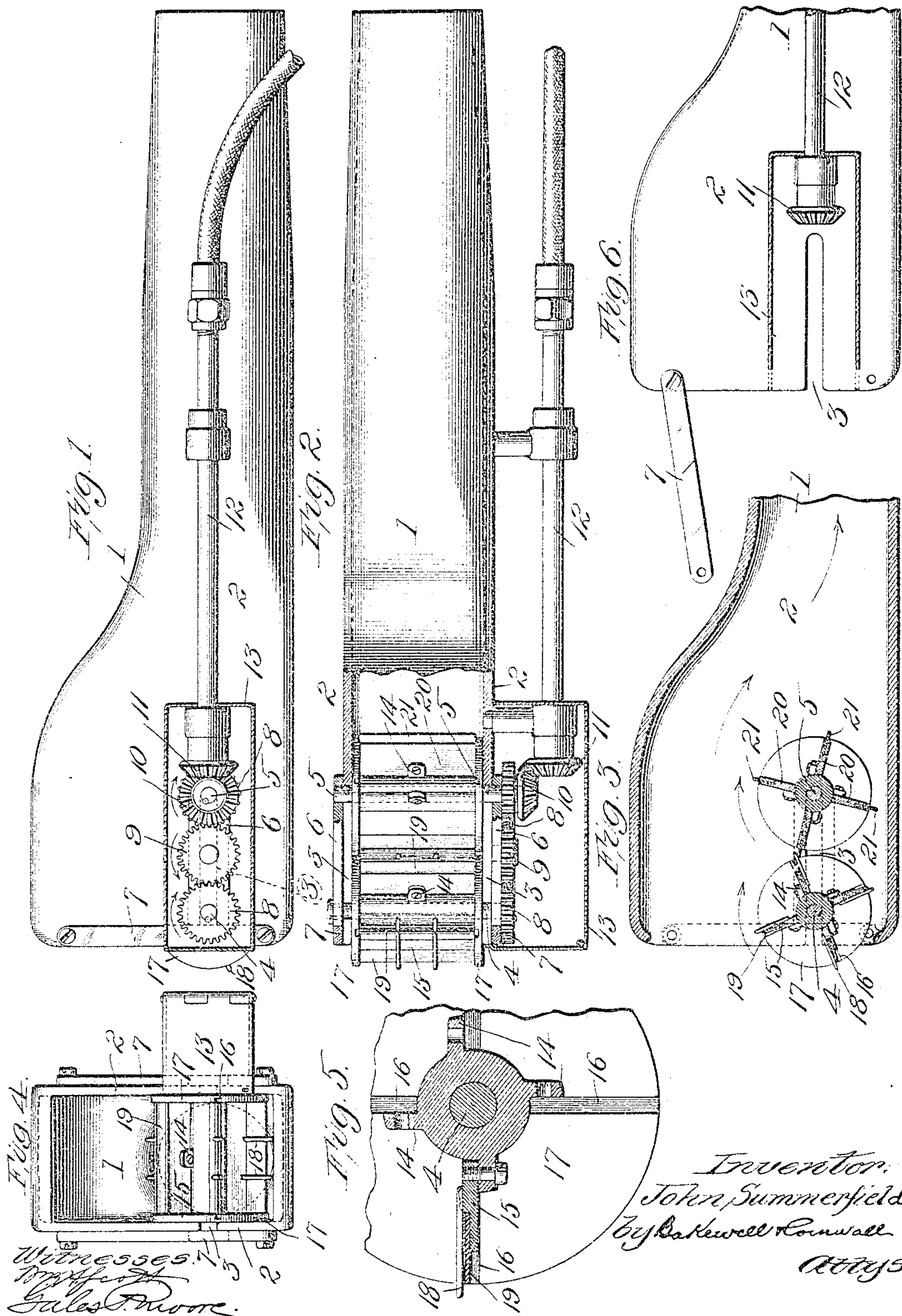


No. 787,314.

PATENTED APR. 11, 1905.

J. SUMMERFIELD.
COTTON PICKER.

APPLICATION FILED AUG. 4, 1902.



UNITED STATES PATENT OFFICE.

JOHN SUMMERFIELD, OF DALLAS, TEXAS.

COTTON-PICKER.

SPECIFICATION forming part of Letters Patent No. 787,314, dated April 11, 1905.

Application filed August 4, 1902. Serial No. 118,357.

To all whom it may concern:

Be it known that I, JOHN SUMMERFIELD, a citizen of the United States, residing at Dallas, Dallas county, Texas, have invented a certain
5 new and useful Improvement in Cotton-Pickers, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the
10 accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation, the housing for the gears being shown in section. Fig. 2 is a view partly in plan and partly in horizontal
15 section. Fig. 3 is a detail view in central sectional elevation. Fig. 4 is an end or front view. Fig. 5 is a fragmentary view illustrating details of the picker proper; and Fig. 6
20 is a fragmentary view of the character of Fig. 1, the gears and the parts connected thereto being removed.

My invention relates to improvements in cotton-pickers.

Heretofore it has been proposed to provide
25 cotton-pickers with a rotating member carrying teeth for tearing the cotton from the boll, the machine being also provided with brushes designed to remove the cotton from the said teeth and deliver the same into a tube along
30 which it is drawn by suction. This manner of picking cotton has proved to be unsatisfactory, however, as the fiber wraps about the spindle or shaft upon which the rotating members have been mounted and the brush fails to properly
35 remove the cotton from the teeth, the result being that the machine soon becomes clogged and inoperative.

The object of my invention is to overcome the difficulties above noted and to provide a
40 simple and efficient machine.

To these ends and also to improve generally upon devices of the character indicated, my invention consists in the various matters hereinafter described and claimed.

Referring now more particularly to the drawings, 1 represents the chute or tube which serves for a handle, and 2 the side walls thereof,
45 said walls being provided with longitudinal slots 3, which open upon the forward end of the casing. A shaft 4 for carrying the here-

inafter-mentioned picker-fingers and a shaft 5, provided with a wiper, are journaled in plates 6 and are inserted in the slots 3, the said plates 6 lying against the side plates of the casing and outside of the same. Locking-bars 7, se-
55 cured to the sides of the casing, serve to lock the said plates and their carried parts in position, the wiper-shaft bearing against the walls at the inner ends of the slots 3. Each of the
60 said shafts is provided upon one end with a gear 8, which lies against the plate 6 and outside of the same, and between said gears is an intermediate gear 9, whereby motion is trans-
65 mitted from one of said shafts to the other thereof, and the shafts are caused to rotate in the same direction. The wiper-shaft lies behind the picker-shaft and has upon its end out-
side of the said gear 8 a beveled gear 10, which coöperates with a beveled gear 11 upon a ro-
70 tatable shaft 12, suitably supported upon the casing, proper means being provided for rotating the said shaft 12. All of the gears lie upon one side of the machine, and a single
75 housing 13 extends about and protects the same.

By reason of the construction described the picker proper and the wiper can be readily re-
moved from the casing by simply loosening the bars 7 and swinging them outwardly, as
80 shown in Fig. 6, the shafts 4 and 5, their gears, and the frame supporting said parts and composed of the plates 6 being then simply pulled from the slots 3.

Upon the picker-shaft are radially-extending lugs or supports 14, to which are secured
85 plates 15, which also extend radially about the said shaft and have their ends received in radial slots 16 in heads 17, fastened upon the said shaft. The picker fingers or teeth 18 are
90 secured to the said plates 15, and the parts are so positioned upon the casing that these fingers project beyond the casing end. In rear of the
95 fingers upon each plate, when traveling in the direction indicated by the arrows, is a piece of rubber or other suitable smooth and yielding material 19, this rubber backing extending
almost to the outer ends of the teeth and extending between the said heads 17.

The wiper-shaft has radially-extending sup-
100 porting members 20, to which are secured

pieces 21, of rubber or other smooth yielding material, said pieces of material extending across the wiper member between its heads. The picker-shaft and wiper-shaft are so located with relation to each other that as they revolve the pieces 21 wipe the teeth or picker-fingers 18 and also wipe the rubber backing 19.

In operation the picker is presented to the boll in a manner which will be at once understood, and the teeth or fingers tear off certain of the cotton. This cotton is received upon the smooth rubber backing which forms a shelf for the fiber, and as the teeth and shelf revolve the cotton is of course carried around. In the revolution of the two shafts the shelf and fingers meet one of the wiper-pieces 21, and this piece wipes said shelf and fingers, and thus removes the cotton-fiber from the same, the fiber being then caught by the air and carried along the tube in a well-understood manner. The rubber backing being yielding, the teeth can operate to remove the cotton even should the teeth strike a seed or some other hard substance.

Manifestly the length of the wiping stroke of the wiper depends upon the point at which the wiper engages the teeth and the backing-plate, and by reason of the present construction the length of such wiping stroke can be regulated. If when the parts are proportioned as indicated in the drawings the wiper meets the teeth and its backing at the point shown in Fig. 3 and it be desired to have the wiper make a longer stroke along the teeth, it is only necessary to remove the intermediate gear 9, turn the wiper-gear a tooth or more to the left, as the parts are shown in Fig. 2, and then replace said intermediate gear.

I am aware that many minor changes in the construction, arrangement, and combination of the several parts of my device can be made and substituted for those herein shown and described without in the least departing from the nature and principle of my invention.

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

1. In a device of the character indicated, a

rotatable shaft, pickers mounted thereon, a second rotatable shaft, slidable plates supporting said shafts and wipers mounted upon said second shaft and coöperating with said pickers; substantially as described.

2. In a device of the character indicated, a casing, a picker-shaft, pickers thereon, a wiper-shaft, wipers thereon, gearing for said shafts outside of said casing, slidable plates supporting said shafts and a single housing for said gearing; substantially as described.

3. In a device for picking cotton, pickers, a casing having side walls provided with slots which open upon the ends of the walls, shafts in said slots and extending across the casing, and slidable plates in which said shafts are mounted; substantially as described.

4. In a device for picking cotton, pickers, a casing having side walls provided with slots which open upon the ends of the walls, shafts in said slot, and extending across the casing, and slidable plates in which said shafts are mounted, said plates lying upon the outside of said side walls; substantially as described.

5. In a device for picking cotton, pickers, a casing having side walls provided with slots which open upon the ends of the walls, shafts in said slots and extending across said casing, slidable plates in which said shafts are mounted, one of said plates lying outside of the side wall of the casing, gears upon said shafts, and an intermediate gear mounted upon said plate; substantially as described.

6. In a device for picking cotton, pickers, a casing having side walls provided with slots which open upon the ends of said walls, shafts in said slots and extending across said casing, slidable frame-plates carrying said shafts, and removable bars secured to said casing and holding said frame in position; substantially as described.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 2d day of August, 1902.

JOHN SUMMERFIELD.

Witnesses:

GALES P. MOORE,
GEORGE BAKEWELL.