No. 806,941. PATENTED DEC. 12, 1905.

G. N. TODD.

SPIRAL COTTON PICKING SPINDLE AND WIPER.

APPLICATION FILED DEC. 8, 1899.

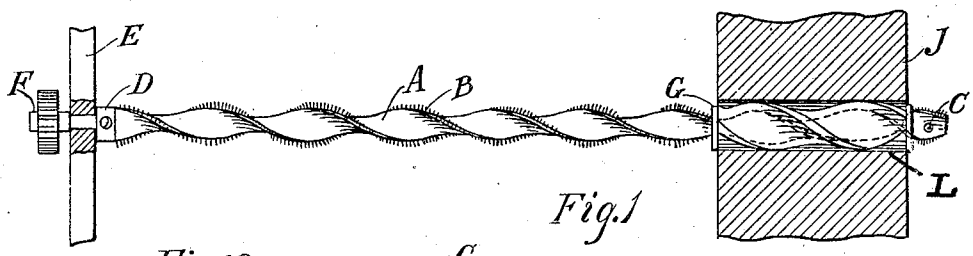
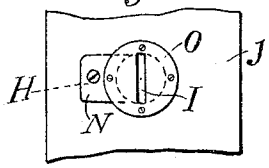


Fig. 1

Fig 12



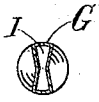


Fig. 2

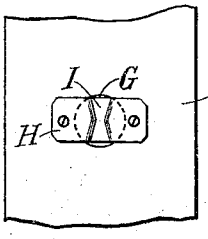


Fig. 3

Fig. 11

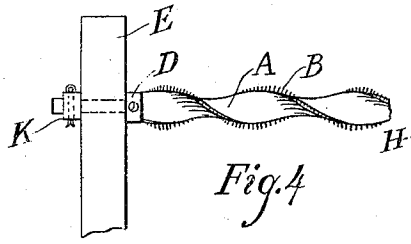
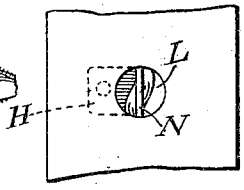


Fig. 4



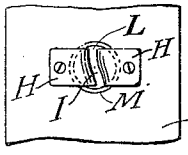


Fig. 10

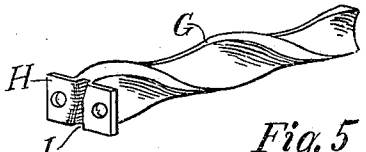


Fig. 5

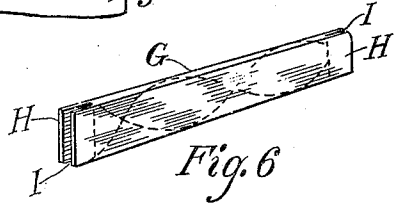


Fig. 6



Fig. 7



Fig. 8

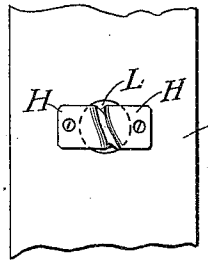


Fig. 9

Witnesses:

W. L. Bliss

B. W. Pierce

Inventor:

George N. Todd

UNITED STATES PATENT OFFICE.

GEORGE N. TODD, OF LOS ANGELES, CALIFORNIA.

SPIRAL COTTON-PICKING SPINDLE AND WIPER.

No. 806,941. Specification of Letters Patent. Patented Dec. 12, 1905.

Application filed December 8, 1899. Serial No. 739,713

To all whom it may concern:

Be it known that I, GEORGE N. TODD, a citizen of the United States of America, residing at Los Angeles, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Spiral Cotton-Picking Spindles and Wipers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters marked thereon, which form a part of this specification.

This invention relates to spiral cotton-spindles and wipers consisting of spiral cotton-picking spindles provided with hair or yielding picking-points and spiral tubes or tubular wiping devices.

The primal object of my invention is to provide a spiral wiper device for a spiral cotton-picking spindle.

The second object is to arrange said spiral wiper as a tube or tubular device for the passage and rotation of a spirally-twisted cotton-picking spindle.

The third object is to provide a spirally-twisted cotton-picking spindle with hair or yielding picking-points and to wipe said spindle by screwing it through a tubular spiral wiper device.

These several objects are obtained by the devices illustrated in the accompanying drawings, in which—

Figure 1 is a sectional side or plan view of my invention. Fig. 2 is an end view of the spiral wiper-piece in Fig. 1. Fig. 3 is an end view of the spiral wiper-pieces fastened by screws to a post or other support. Fig. 4 is a section or detail plan or side view of a modification of Fig. 1. Fig. 5 is a perspective view of the spiral tubular wiper-piece. Fig. 6 is a perspective view of a flat tube for forming the spiral wiper-piece by twisting said flat tube into a spiral tube, as indicated by the dotted lines. Fig. 7 is a perspective view of a flat piece of sheet metal to be twisted spirally, as indicated by the dotted lines. Fig. 8 is a perspective view of Fig. 7 as spirally twisted. Fig. 9 is a side or plan view of a spoke, arm, or support provided with a hole in which two pieces, twisted as in Fig. 8, are inserted and fastened by their heels to said support, thus arranged and adapted to form the preferred form of constructing the tubular spiral wiper device. Fig. 10 is a side or plan view of a detail of the support, the hole thereof being provided with a tube in which the two twisted spiral pieces are secured as a modification of Fig. 9. Fig. 11 is an end view showing the point N of a single spiral twisted piece which is used to form the spiral tubular wiper device. Fig. 12 is an end view showing the spiral twisted piece and its point N covered by a slotted wiper-piece.

Similar letters of reference indicate the same parts in the drawings and the several figures thereof.

Referring by letter to the accompanying drawings, the cotton-picking spindle consists of two flat flexible steel strips A, twisted together spirally and provided with haircloth sandwiched between them and forming hair-picking points B all along the spiral edges, forming a flexible spring-like spiral or screw with brush edges, the two bands A being twisted together at the point C, the other end being riveted in a slotted collar or stud-shaft D, journaled to rotate in a metallic arm or bar E and provided with a roller or gear F, whereby the said cotton-picking spindle is caused to rotate on its own axis, screwing its way in and out of the spiral wiper-tube G, which tube is twisted spirally to conform to the threads of the spindle, so as to form a spiral tube-nut therefor, and provided with ears or wing-pieces H, the central orifice I being arranged and adapted to only freely pass the said cotton-picking spindle spirally through said wiper-piece G, the said wiper-piece being fastened by screws or nails driven through holes in the wings H and into the wood spoke or support J, all of which is fully illustrated by Figs. 1, 2, 3, and 5. The said cotton-picking spindle is forced to screw its way in and out through the spiral wiper-piece, thereby rotating on its own axis by means of the bar E being pushed toward and away from the post, spoke, or support J. The said rotation of said spindle may be further increased by rotating the pinion F and arranging the wiper-tube G to also rotate in the post J; but the preferred construction is as in Fig. 4, wherein the gear or pinion F is not used, a simple collar K being substituted therefor and the said rotation of the spindle being caused solely by the bar E being pushed to and from the post J, thereby causing the said spindle to screw in and out through the

spiral wiper-piece G. The said movements being more fully illustrated and described in my patent applications Serial Nos. 681,148 and 730,468. It will be understood that the said tubular wiping device may be formed in one or more pieces by casting, twisting, or stamping with dies and that in Figs. 1, 2, 3, 5, and 6 the wiper is illustrated as a spirally-twisted tube which may be secured to the bar J in a hole L formed therein or otherwise.

In Figs. 7, 8, and 9 the tubular wiper device is illustrated as formed of two sheet-metal pieces, as in Fig. 7, twisted spirally, as in Fig. 8, and in Fig. 9 inserted in a hole L through the bar J, being fastened on both sides to the bar J by screws or nails through the heels or wings H, and by this arrangement forming a spiral wiping device for spiral cotton-picking spindles. In Fig. 10 in the hole L through the block J is driven a light tube M, through which is inserted the two spirally-twisted pieces, as in Fig. 9, and likewise fastened to the bar J. The object of these different views and modifications is to fully illustrate and describe that my invention broadly consists of a tubular spiral wiper device formed of one or more pieces arranged and adapted to wipe the gathered cotton from spiral cotton-picking spindles.

In the operation of my invention the cotton-picking spindle is pushed or screwed through the tubular wiper device and, projecting therefrom into the cotton-plants, picks the cotton therefrom by winding it upon its projecting body, which being drawn back through the wiper device the gathered cotton is wiped off, inasmuch as there is no space for the pasage of the cotton into the wiper device, the passage therein being filled by the spindle itself, or sufficiently so to bar the entrance of the cotton. The wiping off of the cotton is also facilitated by the hair or yielding picking points of the spindle bending or yielding forward, and thus more easily permitting of the wiping of the cotton from this form of spindle than would be possible in any rigid toothed spindle, and for this reason I desire to claim the said spindle in combination with said wiping device, as it would not be so practical in other forms of spindles.

It will be further understood that a single spirally-twisted piece, as in Fig. 8, may be inserted in the tube M (shown in Fig. 10) or in the hole L of the post J, as in Fig. 11, so as to thereby form a spiral tubular wiper device by the use of only one piece, which is secured by its heel H to the post, as indicated by dotted lines, Fig. 11, which is a front or end view showing the point N of the spiral twisted piece secured in the hole L of the post J. This point N may be made to project, and after the heel H is fastened to the post J the said point N may be then bent to form another heel and also fastened to the post J, thereby securing the spiral pieces at both ends to said post J, making it thus impossible to detach the said spiral twisted piece without first bending up again the point N into its former straight position. The said point N may then be covered by a slotted washer O, as in Fig. 12, or the said spiral piece be inserted in a tube M, as in Fig. 10, in which the picking-spindle is screwed in and out to form a spiral tubular wiping-piece.

Having described my invention, what I claim is—

1. A spiral cotton-picking spindle provided with a tubular spiral wiper device.

2. The combination, in a cotton-harvesting machine, of a picker provided with a spiral part which comes in contact with the cotton, and a spiral guide associated with the machine and engaging said spiral part of the picker, so that when the picker is moved therethrough it will be rotated.

3. A spirally-twisted guide arranged to form a spiral wiper device, combined with a cotton-picking spindle, and a support having a hole in which said wiper device is inserted.

4. A spiral cotton-picking spindle provided with hair or yielding picking-points; a tubular spiral wiper device; and means for screwing said spindle in and out of said wiper device.

5. A tubular spiral wiper device; a spiral cotton-picking spindle; and means for screwing said spindle in and out of said wiper device.

6. The combination of a tubular spiral wiper device secured in a holder or tube, with a spiral cotton-picking spindle; and means for screwing said spindle in and out of said wiper device.

7. In a cotton-harvesting machine, the combination of a spiral picker, and a spiral guide through which the picker passes, said spiral guide consisting of a continuous flattened tube formed into a spiral shape.

8. A cotton-picking device comprising a spiral picker provided with yielding picking-points, a spiral guide or wiper through which said picker passes, and a support for said spiral guide.

9. A cotton-picking device comprising a spiral picker consisting of two strips fastened together with a piece of haircloth between them and twisted into a spiral form, a tube twisted into a spiral guide through which the picker passes, and means for reciprocating the picker in the guide.

10. A picking device for cotton-harvesting machines, comprising a spiral part provided with engaging devices for engaging the cotton, a spiral guide through which said spiral part passes and adapted, when the spiral part is reciprocated, to produce a rotation thereof, and an inclosing device in which said spiral part is supported.

11. A spirally-twisted tube non-circular in

cross-section, inserted in a hole or tube and arranged to form a spiral tubular wiper device, combined with a cotton-picking spindle.

12. A tubular wiper device and spiral cotton-picking spindle, and means for screwing said spindle in and out of said wiper device.

13. A spiral cotton-picking spindle, a tubular wiper device arranged and adapted to conform to and inclose the spiral body of said spindle, and means for screwing said spindle in and out of said wiper device.

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

GEORGE N. TODD.

Witnesses:
SAML. PRAGER,
HARRIET S. TANEY.