Aug. 11, 1931. A. CULLANDER 1,818,537

COTTON NEEDLE AND STRIPPER

Filed Feb. 10, 1931

Fig. 1.

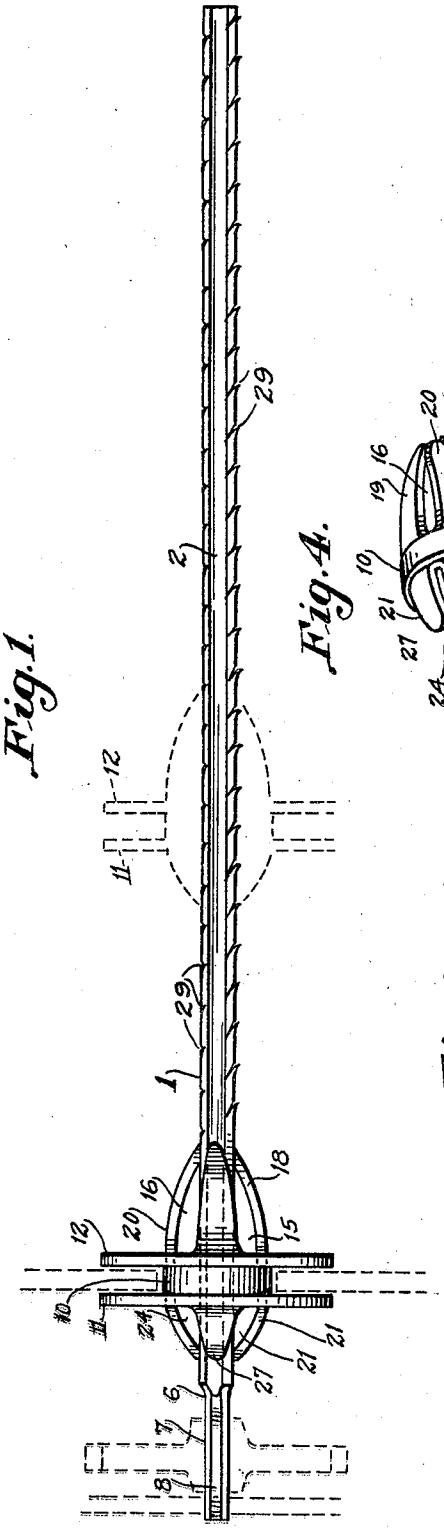


Fig. 4.

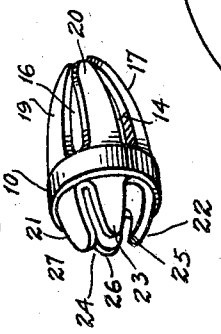


Fig. 3.

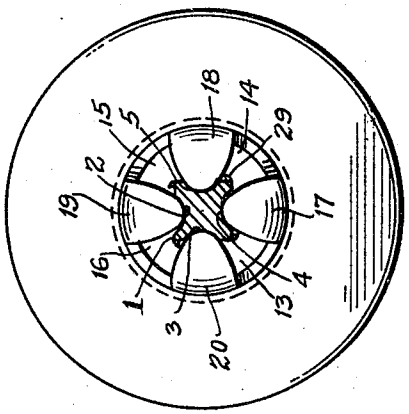
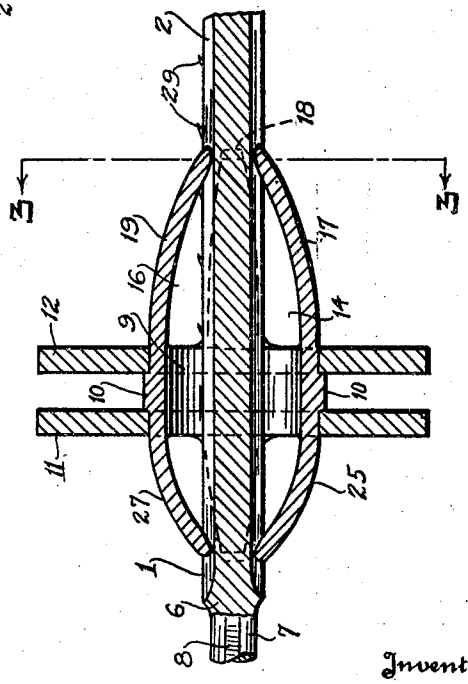


Fig. 2.



Inventor

Adolph Cullander

By Mason Fenwick & Lawrence

Attorneys

Patented Aug. 11, 1931 1,818,537

UNITED STATES PATENT OFFICE

ADOLPH CULLANDER, OF BELZONI, MISSISSIPPI, ASSIGNOR TO ENOCH HAGA AND ADOLPH CULLANDER, A COPARTNERSHIP OPERATING AS CULLANDER MACHINERY CO.

COTTON NEEDLE AND STRIPPER

Application filed February 10, 1931. Serial No. 514,878.

The invention forming the subject matter of this application is a cotton picking spindle or needle provided with a stripper peculiarly constructed to cooperate with said needle in removing cotton gathered by said needle during its operation in a cotton picking machine. The details of construction of the machine in which this invention is designed for use are not disclosed herein, as they form no part of the present invention, which is limited to the peculiar construction of the needle itself and the stripper slidably mounted thereon.

The main object of the invention is to provide a cotton stripper which can be very cheaply manufactured and applied to a cotton needle or spindle of the type disclosed herein for the purpose of efficiently stripping the cotton from such spindle or needle.

Other objects of the invention will become apparent as the detailed description proceeds.

In the drawings:

Figure 1 is a side elevation of a cotton needle having the stripper forming this invention applied thereto.

Figure 2 is a fragmentary longitudinal section through the cotton stripper as applied to the stem of the needle.

Figure 3 is a vertical section taken on the line 3—3 of Figure 2; and

Figure 4 is a perspective of the stripper detached from the needle.

In the drawings, the stripper is shown as applied to a cotton needle or spindle 1 or well known construction. As shown particularly in Figure 3, this needle is substantially square in cross section; and the faces thereof are provided with flutings 2, 3, 4 and 5, extending throughout the length of the needle and terminating at a joint 6 from which projects a shank 7 adapted to be received in a chuck or other holding device forming part of the cotton picking machine. The shank 7 is circular in cross section for the greater part of that section; and is provided with a flat face 8 adapted to be received in a correspondingly shaped part of the said chuck to prevent rotation of the needle 1 in said chuck, which is usually rotated in the ordinary cotton picking machine to cause rotation of the needle 1.

The stripper forming the most important part of the present invention comprises a cylinder 9 having its outer face turned down to provide an annular flange 10, the shoulders of which form seats and stops for the reception of a pair of washers, 11 and 12, which may be shrunk on to the cylinder 9 or otherwise suitably secured thereto as by welding, soldering or brazing. It is to be particularly noticed that the cylinder 9 is a great deal larger, comparatively, in diameter than the diameter of the spindle 1. This is purposely made so in order to prevent jamming of the cylinders on the needle 1 and to facilitate cleaning of cotton therefrom in case the space between the cylinder and needle should become choked.

For the purpose of slidably mounting the cylinder 9 on the needle 1, the cylinder is provided with longitudinal slots 13, 14, 15 and 16 to form the projecting arms 17, 18, 19 and 20. These arms are tapered from the inner edge of the slots adjacent the washer 12, and have their tapered ends rounded off to fit the flutings 2, 3, 4 and 5. These arms 17, 18, 19 and 20 form the stripper arms; and as will be seen from the drawings, slide in the flutings under the cotton and effectively strip the cotton from the needle when the stripper moves lengthwise along the said needle.

The opposite end of the cylinder 9 is provided with slots 21, 22, 23 and 24 to form arms 25, 26, 27 and 28 having their outer ends tapered also to fit in the flutings of the needle 1. The arms 25, 26, 27 and 28 are shorter than the arms on the other side of the cylinder 9, and they cooperate with such arms to position the washers or flanges 11 and 12 substantially perpendicular to the axis of the spindle 1 in order that they may be properly engaged by the elements of a cotton picking machine (not shown) for moving the stripper relatively to the needle 1 for stripping the cotton therefrom at the proper cycle of operation of the said machine.

The teeth 29 may be formed on the cor-

ners of the needle by nicking those corners or in any other suitable manner. It is immaterial how these teeth are made, and the size of them is relatively unimportant because the comparatively large diameter of the stripper cylinder 9 avoids the necessity of slotting a stripper in order to accommodate these teeth as the stripper moves over them.

It will be apparent from inspection of the drawings that I have provided a stripper for a cotton needle which can be very cheaply manufactured and which cooperates with needles of the fluted type for very efficient stripping of the cotton therefrom. It will also be apparent that because of the comparatively large diameter of the cylinder 9 with respect to that of the needles, and because of the large slots between the stripper arms, there is very little chance for choking or jamming of the stripper on the needle.

It is obvious from the foregoing description and drawings that the detailed arrangement and construction of the various elements may be modified considerably without departing from the spirit of the invention which must not be considered as limited strictly to the construction shown and described.

What I claim is:

1. A cotton picker needle substantially polygonal in cross section and having the faces thereof fluted, and a stripper having a cylindrical body provided with means projecting longitudinally therefrom in opposite directions to engage said flutings for slidably supporting the said stripper on said needle.

2. A cotton picker needle polygonal in cross section and having grooves formed in each face thereof, and a stripper comprising a body having spaced apart arms projecting therefrom with the ends thereof seated in said grooves for slidably mounting the stripper on the needle.

3. A cotton picker needle substantially polygonal in cross section, a stripper comprising a cylindrical body of larger diameter than the diameter of said needle, said body having annular flanges extending perpendicularly therefrom and spaced apart and having arms extending in opposite direction for slidably engaging the faces of said needles to support the stripper on the needle.

4. A stripper for a cotton needle comprising a cylinder having an annular flange formed thereon, a pair of annular discs seated on said cylinder and against the opposite edges of said flange, and arms separated from each other and extending lengthwise of said cylinder for slidably mounting the stripper on a cotton picking needle.

5. A stripper for a cotton picker needle comprising a cylinder having its opposite ends slotted to provide arms for engaging and slidably mounting a picker needle in said cylinder and a pair of parallel annular flanges projecting normally from said cylinder between said ends.

6. A stripper for a cotton picker needle comprising a cylinder having an annular flange formed on the outer periphery thereof, a pair of annular discs secured to said cylinder against opposite edges of said flange, and arms projecting from said cylinder in opposite directions from said discs for slidably mounting the stripper on a cotton picker needle.

7. A stripper for a cotton picker needle comprising a cylinder having a pair of parallel discs spaced apart thereon, and arms projecting from said cylinder in opposite directions from said discs for slidably mounting the stripper on a cotton picker needle.

In testimony whereof I affix my signature.

ADOLPH CULLANDER.