

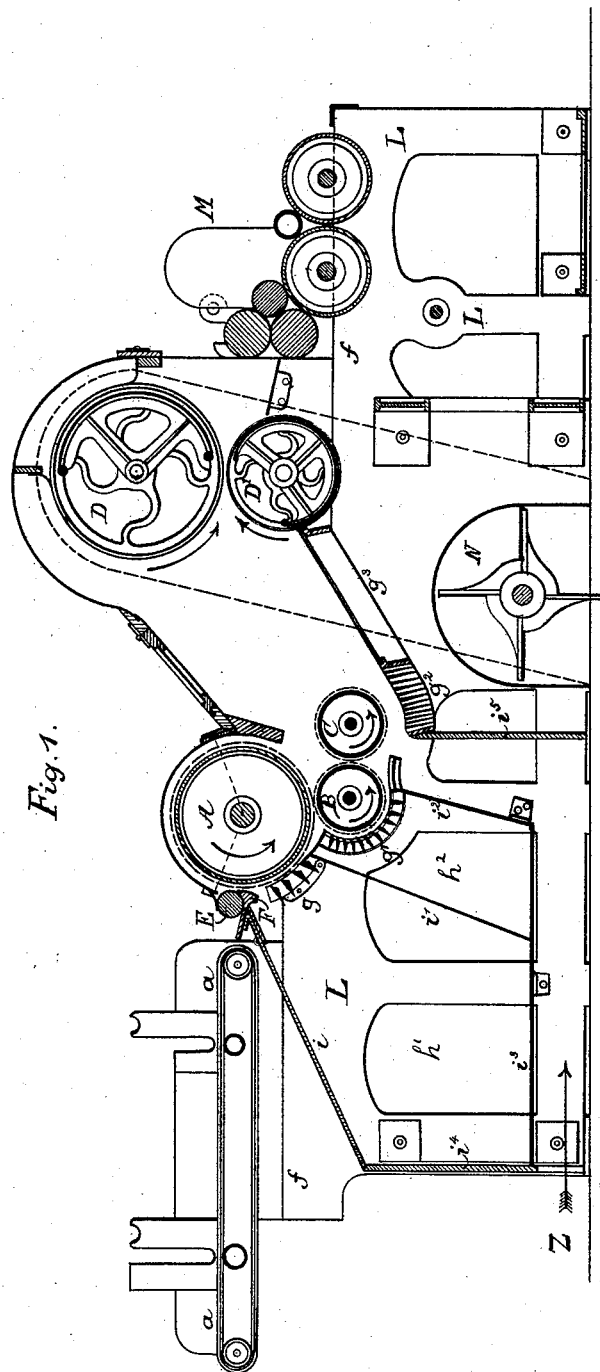
(No Model.)

2 Sheets—Sheet 1.

G. RISLER.  
COTTON PICKER.

No. 347,382.

Patented Aug. 17, 1886.



Witnesses:  
*Wm. F. G. G. G.*  
*H. B. G. G.*

Inventor.  
*George Risler*  
by *Brunswick & Co. Attys*

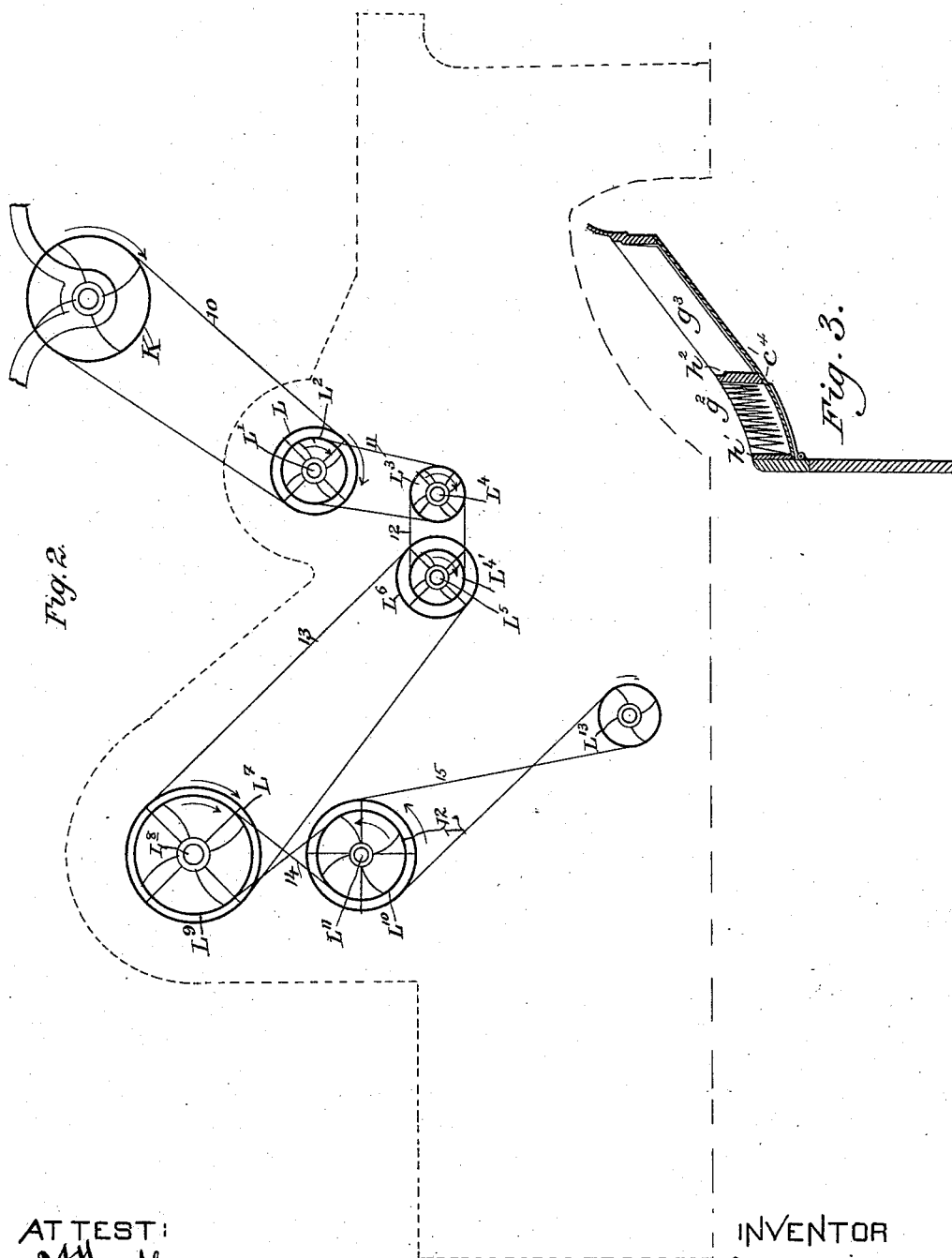
(No Model.)

2 Sheets—Sheet 2.

G. RISLER.  
COTTON PICKER.

No. 347,382.

Patented Aug. 17, 1886.



ATTEST:

*J. H. Hurdle*  
*Chas. W. Hurdle*

INVENTOR

*George Risler*

By

*A. Lury*  
Attorney

# UNITED STATES PATENT OFFICE.

GEORGE RISLER, OF SENNHEIM, ALSACE, GERMANY.

## COTTON-PICKER.

SPECIFICATION forming part of Letters Patent No. 347,382, dated August 17, 1886.

Application filed July 1, 1885. Serial No. 170,389. (No model.) Patented in Germany July 15, 1884, No. 31,439; in France November 3, 1884, No. 165,149, and in England November 5, 1884, No. 14,640.

*To all whom it may concern:*

Be it known that I, GEORGE RISLER, a citizen of Germany, residing at Sennheim, Alsace, in the German Empire, have invented certain new and useful Improvements in Cotton-Pickers, of which the following is a specification.

My invention relates to machines for preparing cotton for carding, and consists of an improved picker, with a set of three revolving drums provided with card-clothing and being partially surrounded with grating. The manner in which the cotton is acted upon resembles very much the process of carding, and a lap is obtained therefrom in which the fibers are laid very nearly parallel, and are freed from knots, leaves, and seeds. By this process the necessary succeeding operation is greatly facilitated. I obtained a United States Patent No. 234,613, November 16, 1880, for a picker very similar to the one presented in this specification, but having only two drums. It had the defect to clean the bottom face of the delivery-lap not quite as well as the top face of said lap, because only one doffing-cylinder was combined with the main cylinder.

The object of my invention is to overcome this defect and to clean the lap equally throughout. This result is obtained by adding a second doffing-cylinder, at the same time also increasing the grate surface.

Figure 1 of the accompanying drawings represents a vertical section of the machine. Fig. 2 represents an outline of part of the machine, in which is shown the driving mechanism. Fig. 3 represents a detail view of the hinged cover beneath the grates.

The drawings show in Fig. 1 a longitudinal section of the picker. As there are many parts in my machine which are found in most all pickers or lappers, and which are therefore well known to those skilled in the art of cotton spinning, I shall not describe said parts with more minuteness than is necessary, but shall simply refer to machines well known in the trade.

*f f* designate the framing of the picker, sustaining the operating parts of the device.

*A* represents a cylinder of cast-iron or wood covered with strong card-clothing, saw-blades or wooden laggins with steel points, such as

are also used in other pickers, and have been illustrated in my Patent No. 234,613, Fig. 3. This clothing of cylinder *A* with regard to size, number, and inclination of teeth, has to be selected according to quality of cotton.

*B* and *C* are other cylinders of cast-iron or wood, and are covered with similar card clothing, as cylinder *A*. Cylinder *B* is located underneath cylinder *A* and cylinder *C*, beside cylinder *B*. The surfaces of said drums set at the same distance from each other as the doffers, and likewise are set from the card or main cylinder in ordinary cards.

*g* is a grating, which lies about the arc of the revolution of cylinder *A*, which is between the feeder and the cylinder *B*. Grating *g'* partially surrounds cylinder *B*, and grating *g''* partially surrounds cylinder *C*, and *g'''* is a grating located between cylinder *C* and the dust-cages *D L*.

*E* designates a feed-roller revolving within a shell marked with *F*, and the cotton passes between this roller and over said shell on its way from the feeder to cylinder *A*. The feeding device is marked with *a a*, and consists of an apron onto which the cotton is put in shape of lap-rolls, as it is usual in lappers and pickers. Partition sheets of wrought-iron *i'* and *i''* are secured to the framing *f* underneath the grating *g* and *g'*, and sheets *i'*, *i''*, and *i'''* inclose a certain space beneath said grates for the reception of the seeds, leaves, and other impurities, which are thrown out through the grate-bars owing to the centrifugal force imparted to these impurities by the revolving cylinders. Beneath the sheet *i'''* a horizontal flue or trunk is formed by the floor, by said sheet *i''* and by the lower portion of the framings *f* of the machine. A vertical flue is formed between sheet *i''* and a sheet, *i''*, which runs up from the floor to grate *g''*.

*D D'* are screen-cylinders or dust-cages, which are in communication by means of a flue to the fan *N*, and are combined with the lapping apparatus *M* in the usual manner, as shown also in my Patent No. 234,613. Between said dust-cages and between the grate *g''* a fourth grating, *g'''*, is arranged, the bars of which run longitudinally with regard to the machine, while the bars of grates *g*, *g'*, and *g''*

run crosswise. The grates  $g^3$  and  $g^2$  are shut off air-tightly by means of covers  $c^4$ , hinged underneath the same, in order to prevent the current of air from passing through said grates.

5 The cotton, which is fed on the apron, is conveyed to the cylinder A by the feed-roller in shell B and F, and will be opened first by the cylinder A, after which it will be delivered to the doffing-roller B, and will be still more  
10 opened by the same. This roller B will convey the cotton to the doffer C, whereupon the cotton will be caught by the draft or current of air which is created by the fan, and which carries the cotton up toward the dust-cages.  
15 There said cotton is condensed and formed into a sheet or lap. The suction produced by fan N will act through the usual flue and the usual dust-cages, and will create a current of air which enters the machine at Z and, flowing  
20 through the flue underneath sheet  $i^3$ , and through the flue between sheets  $i^2$  and  $i^1$ , will pass between cylinder C and grate  $g^2$  up toward the cages. The cotton therefore, while being dragged along by the cylinders A, B, and C  
25 over the respective grates  $g$  and  $g'$ , will be carried by the said current of air over grates  $g^2$  and  $g'$ , and will drop most of the impurities mixed therewith through grates  $g$  and  $g'$  and into the grate-boxes  $h'$  and  $h^2$ .

30 The cleaning of the drums A, B, and C is always assured from the peculiar construction and arrangement of the teeth thereon, and by the surrounding grating, which relieves them by allowing the impurities to pass off. The  
35 bars in the gratings  $g$  and  $g^2$  may be placed at different distances apart and at different inclinations relative to the revolution of the drums. I prefer to drive the cylinder A at a  
40 speed of nine hundred to one thousand revolutions per minute, and the cylinders B and

C at a speed of six hundred and fifty to seven hundred and twenty revolutions per minute, in order to secure the most efficient action and the best result.

In Fig. 2 is represented a series of pulleys 45 and belts of which K is the driving-pulley, connected by means of the belt 10 with the pulley L mounted on the shaft  $L'$ , carrying the toothed cylinder A and pulley  $L^2$ , the latter of which is connected by means of a belt, 50 11, with one of the two pulleys  $L^3$  mounted on the shaft  $L^4$  carrying the small toothed cylinder B. One of the pulleys  $L^3$ , of which there is but one shown, is also connected by means of the belt 12 with pulley  $L^4$ , which is mounted 55 on the shaft  $L^5$  carrying toothed cylinders C and pulley  $L^6$ , which is connected by means of belt 13 with pulley  $L^7$  mounted on the shaft  $L^8$  carrying the perforated cylinder D and the pulley  $L^9$ , which is connected by means of the 60 belt 14 with pulley  $L^{10}$  mounted on the shaft  $L^{11}$  carrying the small perforated cylinder D and pulley  $L^{12}$ , which is also connected by means of the belt 15 with pulley  $L^{13}$  mounted on the shaft carrying the fan h. 65

What I claim is—

The combination, substantially as shown and described, of the toothed cylinder A, the small toothed cylinder B, located on the vertical central alignment with and beneath said 70 cylinder A, and the small toothed cylinder C, located on the horizontal alignment with said cylinder B.

In testimony whereof I hereunto sign my name, in the presence of two subscribing witnesses, this 12th day of May, 1885. 75

GEORGE RISLER.

Witnesses:

E. HAUVILLER,  
T. BARBIER.