G. RISLER.

Cotton Picker.

No. 234,613. Patented Nov. 16, 1880.

Fig. 2.

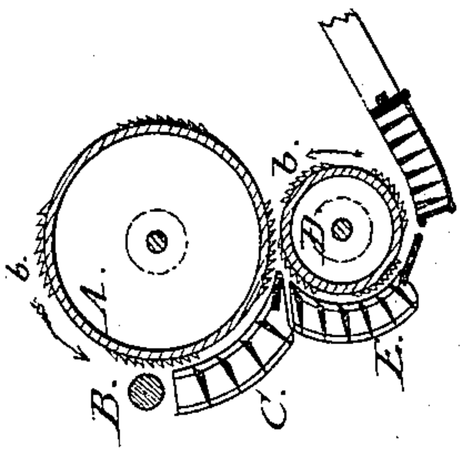


Fig. 3.

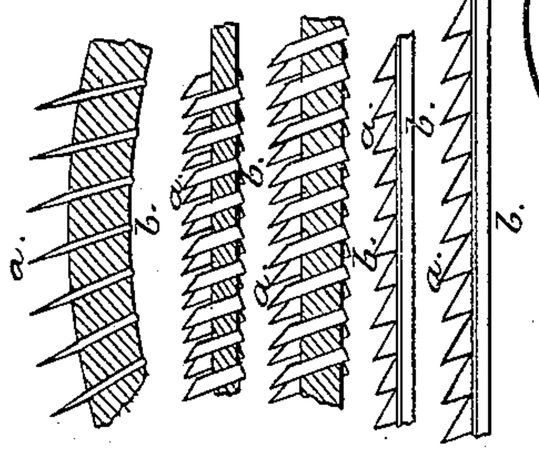


Fig. 1.

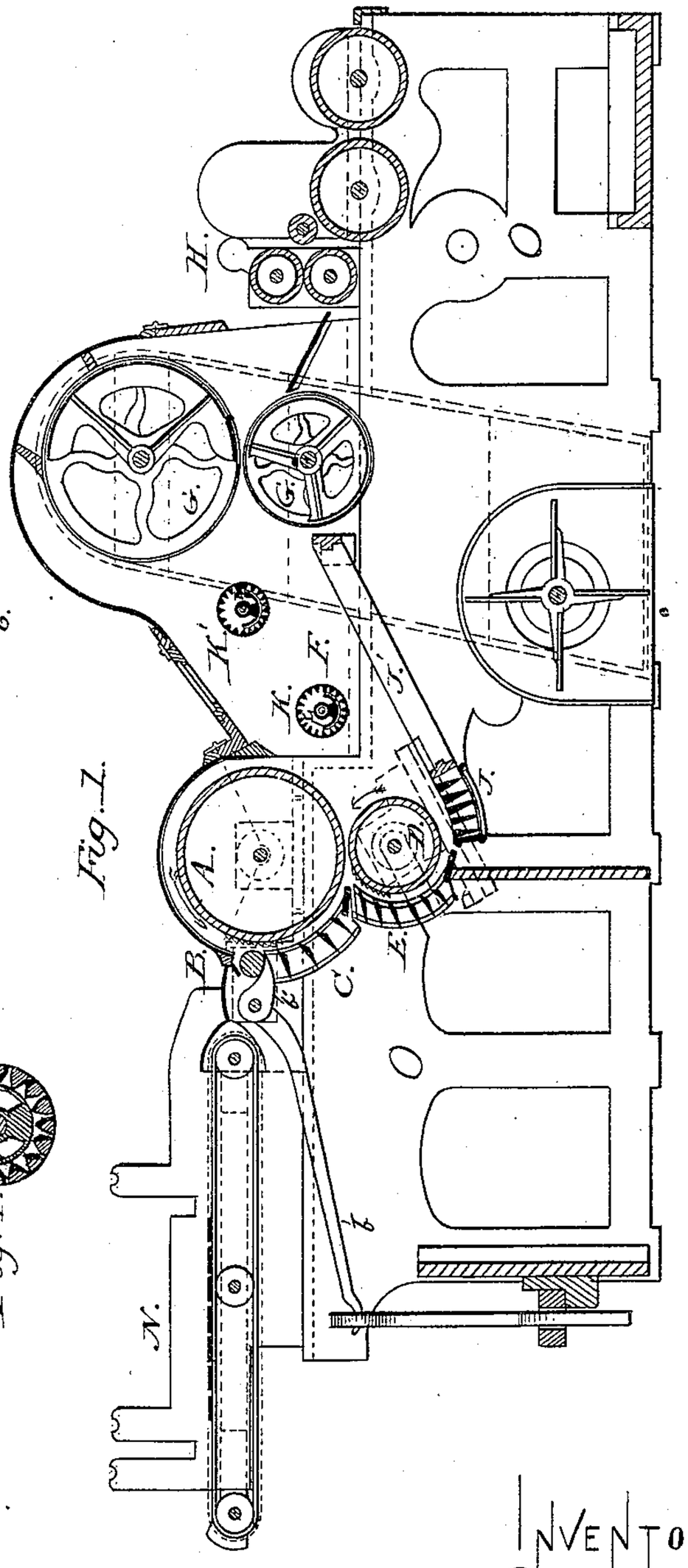


Fig. 4.


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# UNITED STATES PATENT OFFICE.

GEORGE RISLER, OF SENNHEIM, GERMANY.

## COTTON-PICKER.

SPECIFICATION forming part of Letters Patent No. 234,613, dated November 16, 1880.

Application filed February 17, 1880. Patented in Alsace May 15, 1875, and in Germany August 7, 1877.

*To all whom it may concern:*

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

The invention was patented in Alsace on the 15th day of May, 1875, and in Germany on the 7th day of August, 1877.

My invention relates to the preparation of cotton for carding, and is carried out by certain new and useful mechanism, hereinafter set forth and claimed.

Before the cotton is passed through a carding-engine it is submitted to a treatment by my improved picker, which consists, essentially, of revolving drums having toothed covers and being partially surrounded by grating. The manner in which the cotton is acted upon resembles very much the process of carding. A lap is obtained thereby, in which the fibers are laid very nearly parallel and are freed from tufts and curls. By this process the necessary succeeding operation is greatly facilitated.

The accompanying drawings form a part of this specification. Figure 1 is an elevation of my device in section; Fig. 2, a detail, showing the arrangement of the covered drums and grating. Figs. 3, $3^a$, $3^b$ are details of the toothed plates or cloth which cover the drums, showing the teeth of several different kinds and at several different inclinations. Fig. 4 is an enlarged view of one of the grated cylinders.

Similar letters of reference indicate corresponding parts in all the figures.

O O is the framing sustaining the operating parts of the device.

A is a cylinder, of cast-iron or wood, covered with plates *b*, which carry teeth, made of steel or other material, as shown in detail in Figs. 3, $3^a$, $3^b$. These teeth may be made of different forms and set at different inclinations, according to the nature of the cotton to be worked.

D is a second cylinder, of smaller size, situated beneath the cylinder A, and similarly covered with toothed plates or cloth. C is a grating, which lies about the arc of the revolution of the cylinder A, which is between the feeder and the drum D. E is a grating which partially surrounds the drum D. J is a third piece of grating, lying under the drum D.

B is a feeding-roller controlled by levers *b b'*. The cotton passes this roller on its way from the feeder N to the drums A D. As the cotton passes about the drums it is picked and torn and has the tufts and curls straightened out, is freed from seed, leaves, &c., which fall through the grating. From these it is thrown up over the grating J J' through the trunk F, in which, as already stated, it is laid in bats, and in a great measure straightened, and is drawn between the metallic cylinders G G, which are situated at the upper and rear end of the trunk. From these cylinders the cotton is taken into the lap apparatus H, which consists of a series of rollers, as is ordinarily used in machines of this character.

In the trunk F are placed the cylinders K K'. These cylinders turn in the direction in which the cotton moves as it passes from the picking-drums A D to the condensing-cylinders G G. They are formed open and present cylindrical grates, through which leaves, seed, and other impurities having escaped the pickers A D may drop and fall into the segmental receivers L, hanging from the shaft of the cylinder inside of the same, but not turning therewith. The seed, leaves, &c., may be removed from these receivers in any convenient manner. The number of these grate-cylinders may be increased as much as the needs of individual cases may require.

The cleaning of the drums A D 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 bars in the grating C E J 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 speed of nine hundred to one thousand revolutions per minute, and the cylinder D 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 best result.

The advantages gained by the use of my picker are as follows: First, an improved mode

of liberating cotton of leaves, seed, husks, &c., with which it is mingled, and an improved manner of opening the same by separating the fibers; second, a decrease in quantity of waste, as the picker removes only seed, husks, &c., and does not throw out good cotton; third, an improvement in cotton-picking, with increased production, as the carding-engines are fed from my picker with cotton well opened and with separated fibers, and, besides, the picker liberates the cotton of the greater part of its leaves, seeds, husks, &c., and the waste from the carding-engines will therefore prove cleaner, whiter, and hence more valuable.

What I claim is—

1. In a cotton-picking machine having suitable feeding mechanism N B and grating C E J J′, the combination therewith of the cylinders A D, covered with toothed surfaces and arranged for operation substantially as set forth.

2. The picking-cylinders A D, provided with a toothed cover, *b*, in combination with the grates C E J, as and for the purpose set forth.

3. In a cotton-picking machine, the cylindrical grates K K′, located and operating as described, and provided with the interior receivers L, swinging loosely upon the axes of the grates, as set forth.

In testimony whereof I have hereunto set my hand.

GEORGE RISLER.

Witnesses:
EB. HAUVILLER,
E. MEYER.