R. Needham.

Cotton Picker.

No. 5,008. Patented Mar. 13, 1847.

Fig. 2.

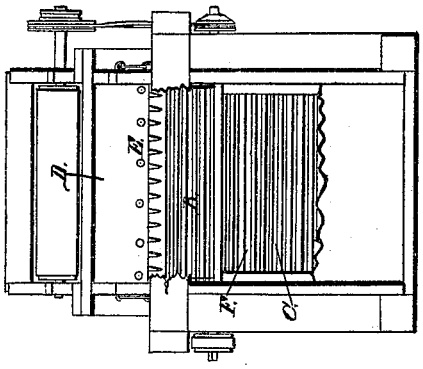


Fig. 4.

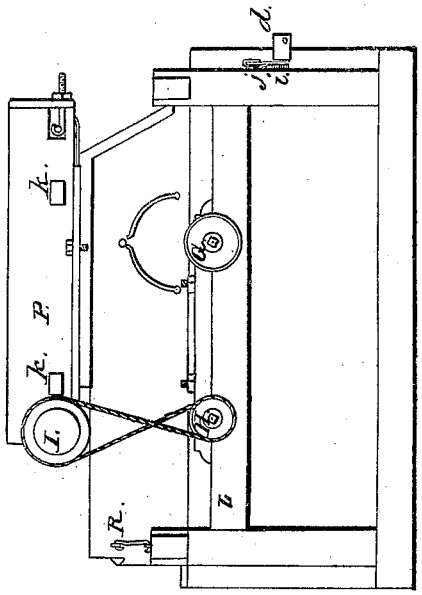


Fig. 1.

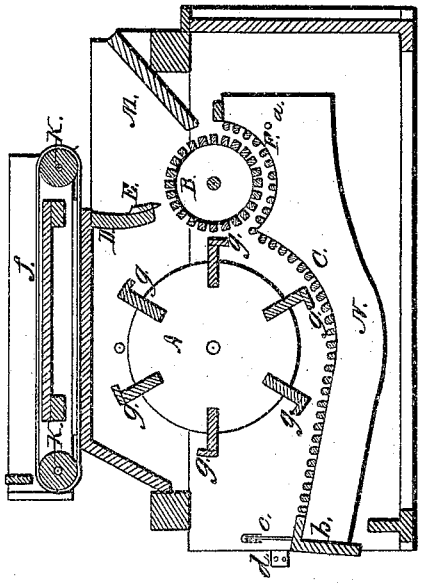
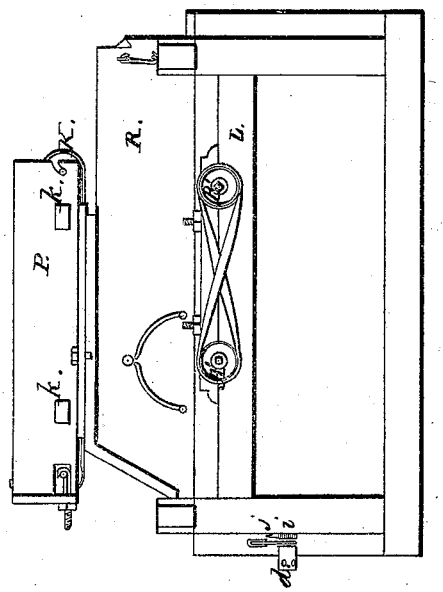


Fig. 3.



UNITED STATES PATENT OFFICE.

ROZELL NEEDHAM, OF MEMPHIS, TENNESSEE.

MACHINERY FOR CLEANING COTTON.

Specification of Letters Patent No. 5,008, dated March 13, 1847; Antedated December 21, 1846.

To all whom it may concern:

Be it known that I, ROZELL NEEDHAM, of Memphis, in the county of Shelby and State of Tennessee, have invented a new and Improved Cotton-Cleaner; and I do hereby declare the following to be a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification.

Figure 1, is a vertical longitudinal section. Fig. 2, is an end elevation with a portion of the casing broken away, to show parts that would otherwise be concealed, and Figs. 3 and 4, are side elevations of my cotton cleaner.

The same letters refer to corresponding parts in all the figures.

The different parts of my cotton cleaner are placed in an oblong frame constructed in any usual manner. To the top of the machine there are secured two longitudinal guiding pieces P, P, connected to each other by the transverse pieces *k*, *k;* an endless feeding apron *f*, is placed between the guiding pieces P, P, revolving on rollers K, K, having their bearings in each end of the side pieces P, P.

At the front end of the machine, between the upper side pieces R, R, of the same, is a receptacle M, immediately under the front roller K, into which the cotton falls from the endless apron *f*. A skeleton cylinder B, fills the space at the bottom of the receptacle M. The cylinder B, is formed of square sharp edged bars secured to disks,—the shaft passing through which has its bearings on the side pieces L, L, of the frame of the machine. The rear side of the receptacle M, is formed by the transverse partition piece D, to the lower edge of which is secured an adjustable hackle E. To the rear of the skeleton cylinder B, is placed the driving or main shaft, to the disks A, A, on each end of which, the beating wings *g*, *g*, are secured. The outer edges of the beating wings, as they revolve, pass close to the rear side of the skeleton cylinder B; thin slats are secured to the outer edges of the beating wings (*g*, *g*,) projecting over and forming ledges on their front surfaces, for the purpose of enabling them more effectually to take hold of and operate on the cotton. The main shaft has its bearings secured to the side pieces L, L, of the machine. Underneath the rotating beating wings *g*, *g*, and the skeleton cylinder B, are placed the adjustable open skeleton concaves C, and F; the concave C, under the beating wings, and the concave F, under the open cylinder B. The open concaves C and F, are formed of small transverse bars, rounded on their upper sides, having their ends made fast to the adjustable side pieces N, N. The front ends of the adjustable side pieces N, N, are suspended on joint pins *a*, *a*, inserted into the sides of the machine; their rear ends are connected by the cross piece *b*, and are suspended by cords *c*, *c*, passing through the sides of the machine and made fast to windlasses *d*, *d*, inserted into the rear corner posts of the machine.

i, *i*, are ratchet wheels on the axles of the windlasses.

j, *j*, are pawls falling on the ratchet wheels for adjusting the position of the concaves, and regulating their distance from the beating wings and the skeleton cylinder B.

G, is the driving pulley on the main shaft; A′, is a pulley on the opposite end of the same, communicating motion to the pulley B′, on the shaft of the skeleton cylinder B, by means of a crossed band. On the opposite end of the shaft of the skeleeton cylinder, is a pulley H, communicating motion to the pulley I, on the axle of the rear roller K, by means of a crossed band, and thereby imparting motion to the endless apron *f*.

The operation of my cotton cleaner is as follows, viz: Motion being given to the main shaft, by any suitable or convenient power, it communicates an opposite motion to the skeleton cylinder B, (by means of the crossed connecting band) and a motion of the feeding apron toward the front end of the machine. The cotton is placed upon the feeding apron *f*, which carries it forward and deposits it in the receptacle M; the skeleton cylinder B, carries the cotton to the rear, passing it under the hackle E, to be acted upon by the beating wings *g*, *g*. In passing the cotton under the hackle E, the sharp corners of the bars of the skeleton feeding cylinder B, in conjunction with the teeth of the hackle, open the fibers, thereby preparing it for the more effectual operation of the beating wings. The beating wings *g*, *g*, beat the cotton against the rear side of the skeleton cylinder (B,) and against the bars of the open concave C,

thoroughly opening its fibers, separating the impurities from it, and discharging it at the rear open end of the machine in a fit state for ginning, the impurities and the seed separated from the cotton, falling between the bars of the open concave. The distance of the teeth of the hackle E, from the skeleton cylinder B, can be varied, thereby regulating the feed of the cotton to the beating wings, and preventing its clogging the machine.

Having thus fully described the construction and operation of my improved cotton cleaner, what I claim therein as new and desire to secure by Letters Patent, is—

The combination of the adjustable hackle E, and the skeleton cylinder B, with each other and with the rotating beating wings *g*, *g*, and adjustable open concaves C and F, substantally in the manner and for the purpose herein set forth.

ROZELL NEEDHAM.

Witnesses:
THOS. LANPHIER,
JESSE P. PRESCOTT.