R. DICKINSON.

COTTON-GINS.

No. 194,136. Patented Aug. 14, 1877.

Fig. 1.

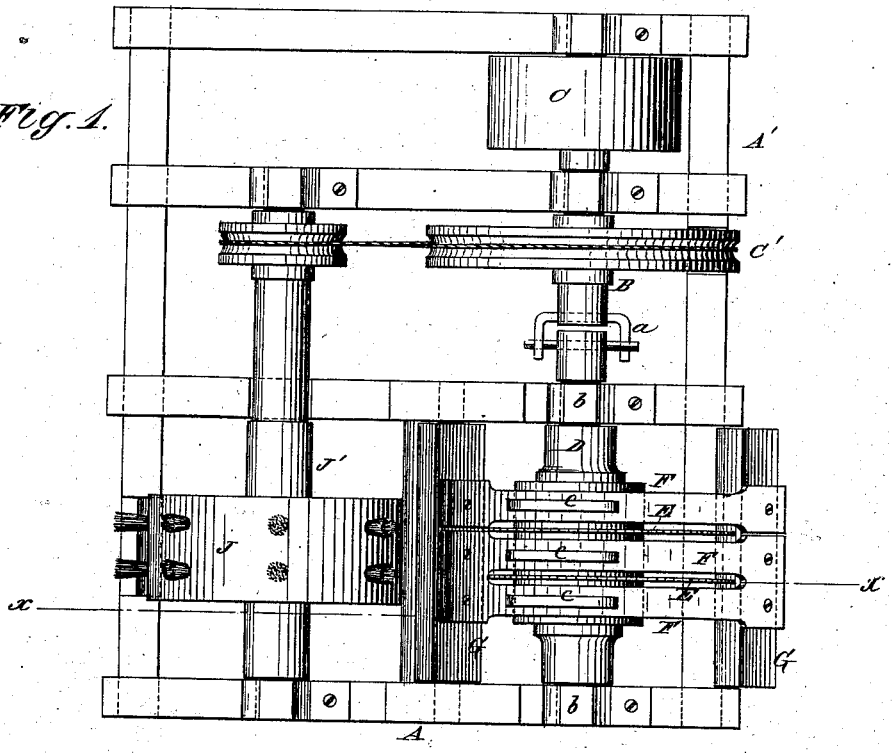
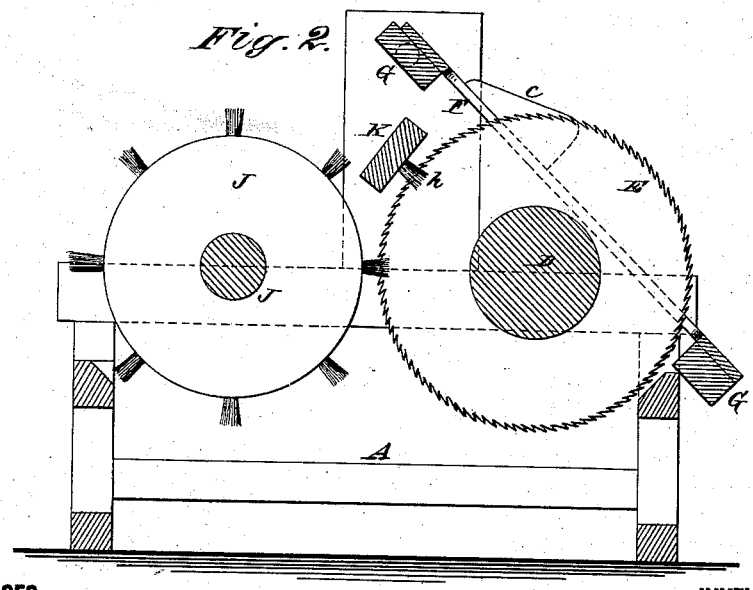


Fig. 2.



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UNITED STATES PATENT OFFICE.

ROBERT DICKINSON, OF DARLINGTON COURT-HOUSE, SOUTH CAROLINA.

IMPROVEMENT IN COTTON-GINS.

Specification forming part of Letters Patent No. **194,136**, dated August 14, 1877; application filed May 21, 1877.

To all whom it may concern:

Be it known that I, ROBERT DICKINSON, of Darlington Court-House, county of Darlington, and State of South Carolina, have invented a new and useful Improvement in Cotton-Gins, of which the following is a specification:

Figure 1 is a plan view of my improved cotton-gin. Fig. 2 is a section taken vertically through the machine in the plane indicated by dotted line *x x* in Fig. 1.

Similar letters of reference indicate corresponding parts.

This invention relates to cotton-gins; and consists, first, in constructing the ribs forming the breast in pairs or gangs, as will be hereinafter explained, for the purpose of allowing them to be secured firmly and substantially in their places; second, in flanges or fins fixed to the ribs, and so constructed and arranged that foreign substances cannot be brought in contact with the saw-teeth; third, in clearing-brushes, arranged between the saws and the brush-cylinder, and receiving the saw-teeth through them, for the purpose of preventing clogging and danger from fire, and also for the purpose of carding and straightening out the lint on its way to the brush-cylinder.

In the annexed drawing, A designates the main frame of the gin, and A′ an extension thereof. B is the driving-shaft, which is journaled on the extension A′, and provided with belt-pulleys C C′. D designates the saw-shaft, the axis of which coincides with the driving-shaft B, and receives rotation therefrom by means of a coupling, *a*.

The saw-shaft is journaled in boxes *b b* on the main portion A of the frame, and is consequently detached from the driving-shaft, and will not be thrown out of true thereby, nor caused to heat in its bearing.

This arrangement prevents any grinding or rubbing of the saws against the ribs or bars, and lessens vibration and wear.

The saws E are constructed and applied on their shaft in the usual well-known manner, and between the saws are the ribs F, forming the breast of the gin.

Hitherto the ribs were made separate. I now construct them in pairs or gangs, for the purpose of more rigidly securing them to the end rails G. Single ribs work loose, and have less bearing on their rails than the double or triple ribs, and are more liable to cause clogging.

The ribs F are all provided with flanges or fins *c*, which are arranged as shown in Figs. 1 and 2, and constructed of an angular form, with the lower ends rounded and the upper edge sloping upward.

These flanges *c* serve as guards, and protect the saw-teeth from contact with sticks, nails, matches, and other foreign substances which might be in the cotton.

I contemplate applying the flanges *c* to curved ribs as well as to the straight ones shown in the drawing.

J designates the brush-cylinder, the shaft J′ of which has its bearings in boxes on the two portions A A′ of the frame, and receives rotation from the driving-shaft B.

This brush-cylinder is constructed in the usual manner, and its shaft is entirely independent of the saw-shaft; consequently the latter will not be subjected to strain or wear, which is so objectionable in gins where the saw-shaft and brush-cylinder are geared or belted together.

K designates a bar, which is secured fast to the main frame between the saws and brush-cylinder, and in a place above the shafts thereof. To this bar I attach brushes *h*, which are preferably made of bristles, and which are arranged to receive the teeth of the saws.

These brushes are designed to extinguish fire which may take place, from any cause, in the gin, and they also operate to card and straighten out the lint on its way to the brush-cylinder.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. The ribs F, constructed in pairs or gangs, substantially as described.

2. The flange C, arranged on ribs F, and rising between the saws above the teeth, as shown and described, for the purpose set forth.

3. The bar K, fixed between the saws and brush-cylinders, but above their shafts, and provided with bristles that receive the teeth of saws, as specified.

ROBERT DICKINSON.

Witnesses:
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