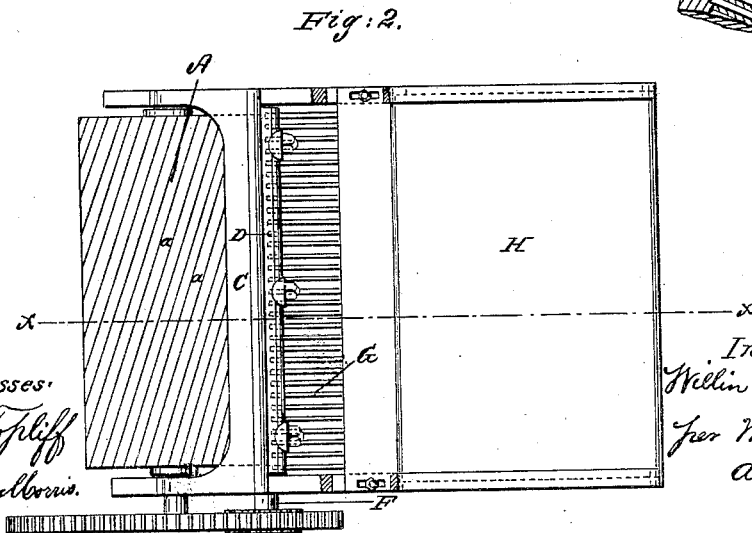
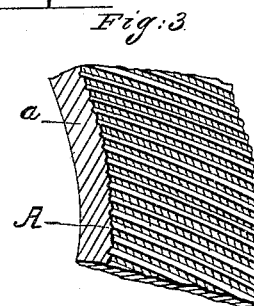
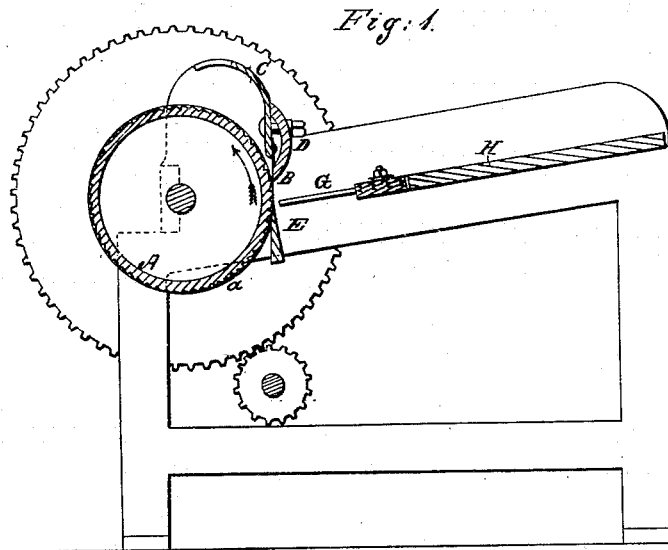


W. WAUKLYN.
Roller for Cotton Gins.

No. 45,109.

Patented Nov. 15, 1864.



Witnesses:
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UNITED STATES PATENT OFFICE.

WM. WANKLYN, OF THE ALBION MILLS, BURY, ENGLAND.

IMPROVEMENT IN ROLLERS FOR COTTON-GINS.

Specification forming part of Letters Patent No. 45,109, dated November 15, 1864.

To all whom it may concern:

Be it known that I, WILLIAM WANKLYN, of the Albion Mills, Bury, in the county of Lancaster, in that part of the United Kingdom of Great Britain and Ireland known as England, have invented certain new and useful Improvements in the Construction of Machinery for Ginning Cotton; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the annexed drawings, forming part of this specification.

My invention is chiefly applicable to the machines for ginning cotton known as the "Macarty Gins;" but it may be applied to other machines for ginning cotton in which a grooved roller is employed. It has hitherto been customary to make these rollers of wood or iron covered with leather, in which spiral grooves of three-fourths of an inch, or more, asunder are cut. It has also been proposed to construct the cylinder of metal and cover its surface with wires or strips spirally arranged, and notched in such a manner as to produce the necessary toothed or roughened surface.

Now, my invention consists in making the rollers of cast-iron or other suitable metal, in which fine spiral grooves are cast or cut, the edges and sides of the spiral grooves being more or less serrated or corrugated or wrinkled. By this means a greater quantity of cotton may be cleaned in a given time, and the roller is made more durable.

Figure 1 represents a side sectional view of the principal parts of a cotton-gin constructed according to my improvements, *x x*, Fig. 2, indicating the line of section. Fig. 2 is a plan of the same; Fig. 3, an enlarged and detached perspective view of a portion of my improved roller.

Similar letters of reference indicate like parts.

A is the roller, which, instead of being made of wood, or of iron covered with leather, is made of cast-iron or other suitable metal. The circumference of the roller is made with spiral grooves *a*, of such form that the seeds cannot enter therein, but that the fibers of the cotton will be drawn in between the roller and the doctor B. By making the spiral grooves in the iron or other metal of which the roller A is composed, instead of in the

leather covering of the roller, as heretofore customary, the grooves can be made much finer or closer together than usual, thus obtaining a greater number of points of contact between the roller and the doctor for drawing in the cotton from off the seeds, and increasing to a great extent the production and the durability of the machines.

The guard C, to which the doctor B is secured, the rail D for regulating the pressure of the doctor against the roller A, and the vibrating knife E, are made as usual; but the roller A and the crank F are connected and worked by toothed pinion and wheel, instead of the usual pulley and strap. The grid G is made by securing wires to a stock or back rail, which has slots at each end to enable the distance between the grid and the roller to be adjusted with facility. The feeding-table H is detached from the grid G.

The form of grooves *a* shown in Fig. 3, the distance between them, and the angle of the grooves, have been found in practice to give good results. I do not, however, limit myself to the same. The edges and sides of the grooves *a* are serrated, corrugated, or wrinkled, as shown in Fig. 3, for taking better hold of the fibers.

As before explained, I am aware that the idea of making a gin-roller entirely of metal with toothed or roughened surface is not broadly new. This, therefore, I do not claim. The superiority of my invention consists in forming the grooves and serrations in the surface of the solid metal, whereby the roller is rendered more effective, durable, cheap, and secure against injury than by the mode heretofore practiced.

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

A roller for cotton-gins made of cast-iron or other metal, with its grooves cast or cut in the solid face of the periphery of the roller, and with a "land" between, serrated, wrinkled, or notched, as herein described and represented.

WILLIAM WANKLYN.

Witnesses:

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