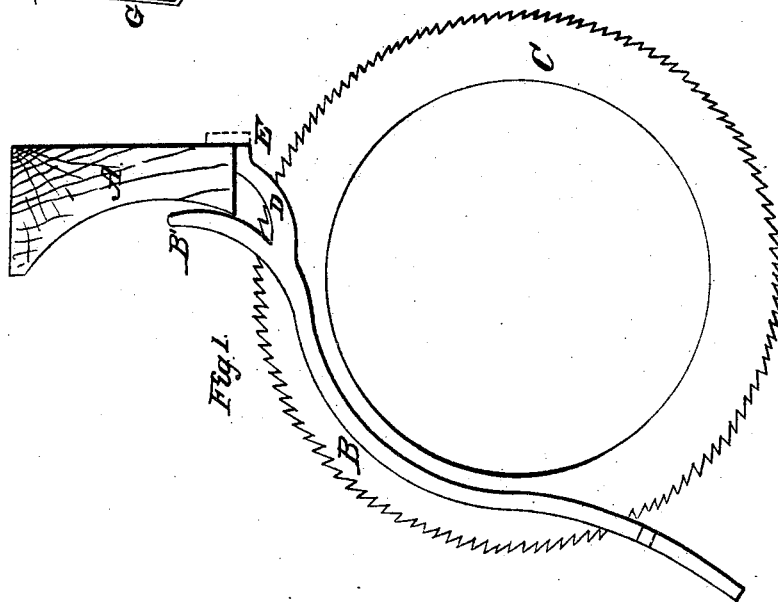
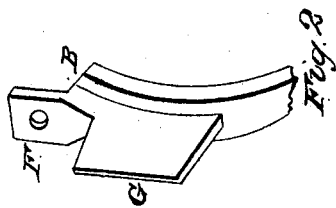
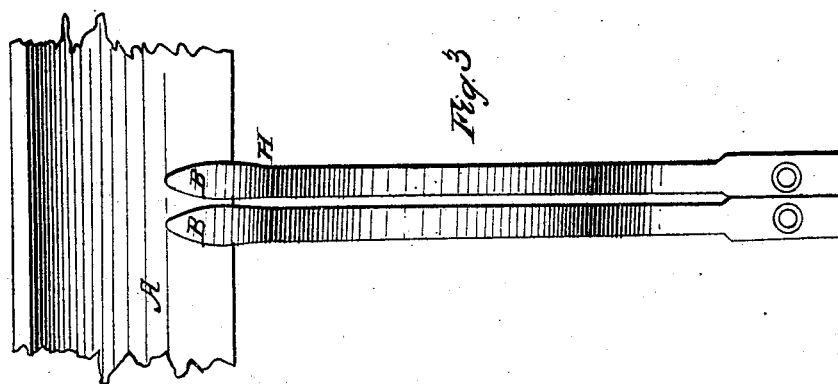


A. COPELAND, Jr.
Cotton-Gin Rib.

No. 1,547.

Patented April 8, 1840.



UNITED STATES PATENT OFFICE.

ASA COPELAND, JR., OF BRIDGEWATER, MASSACHUSETTS.

IMPROVEMENT IN THE MANNER OF CONSTRUCTING AND AFFIXING THE RIBS OF SAW-GINS FOR GINNING COTTON.

Specification forming part of Letters Patent No. 1,547, dated April 8, 1840.

To all whom it may concern:

Be it known that I, ASA COPELAND, Jr., of Bridgewater, in the county of Plymouth and State of Massachusetts, have made certain Improvements in the Manner of Constructing and Affixing the Ribs or Grates of Saw-Gins for Ginning Cotton; and I do hereby declare that the following is a full and exact description thereof.

In the saw-gin as ordinarily constructed the cotton is liable to collect in the spaces between the ribs and around them above the point where the saws operate, thus choking or clogging the grate, and preventing the rising and free escape of the fibers and seed therefrom. To obviate this inconvenience, instead of attaching the ribs by their upper ends directly to the part usually denominated the "breast" or "grate-fall" I in general extend a brace or arm out from near the upper ends of said ribs, by which to attach them to the breast in such a manner as that they shall stand out from said breast and leave a free space of a fourth of an inch (more or less) for the escape of the cotton. The attachment may be made to the front, bottom, or back of the breast, and the mode in which this is effected will admit of much variation without departing from the general principle upon which the improvement is founded.

In the accompanying drawings, Figure 1 represents a section of the breast A, with a rib, B, attached to it, C being one of the saws. D is a brace or arm extending out from the under side of the rib, and attached by a screw to the under side of the breast at E. I sometimes carry the end E up on the back side of the breast and screw it to that part, as shown by the dotted lines; or it may be carried up on the front and there attached. The arm D may be round or flat where it leaves the rib B, and it should be made narrower than the rib—say about two-thirds of its width. The top end, B', stands at the distance of one-fourth of an inch, or nearly so, from the lower part of the breast, the distance increasing toward the extreme end, so as to remove all obstruction out of the way of the ascent of the fibers of cotton.

In the above-described arrangement the teeth of the saw pass between the ribs at a point above the branching-off of the arm D, as shown in Fig. 1; but I sometimes omit this arm and attach the rib in another manner to the front of the breast, in which case it may be constructed as shown in Fig. 2, in which F is a piece extending above the point or upper end of the rib, through which it is screwed to the front of the breast, it being so formed as to sustain the end B of the rib at a distance from the breast similar to the part B' in Fig. 1. G is a wing or flat piece projecting out from the rib, and which is let into the breast. The whole of the said rib is above the saw, and the fibers pass freely up on either side of it and escape with the seed at the top. Although this mode of construction has been found to answer a good purpose, that first described is preferred.

Fig. 3 shows the form which I give to the faces or outsides of the ribs, A being a portion of the breast or grate-fall, with two of the ribs attached thereto. At the part H, where the saw terminates, I widen them out, as shown in the drawings, so as to narrow the space between them, and then again narrow them off toward the point to aid in affording an unobstructed rise and escape of the fibers and seed.

What I claim as my invention and improvement is—

In the constructing and affixing the ribs of saw-gins for the ginning of cotton, the so forming and affixing them to the breast or grate-fall as that their upper ends shall stand off from the front of said breast in the manner herein described, in order to allow of a free and uninterrupted rise and escape of the fibers and seed from the upper ends of said ribs; and this I claim whether the said ribs be formed and attached precisely in the manner set forth or in any other way which is substantially the same and by which a like result is obtained.

ASA COPELAND, JR.

Witnesses:

ROBT. T. PAINE,
T. G. HAUGHTON.