

S. ELLIOTT.

Corn Sheller.

No. 13,640.

Patented Oct. 9, 1855.

Fig. 2

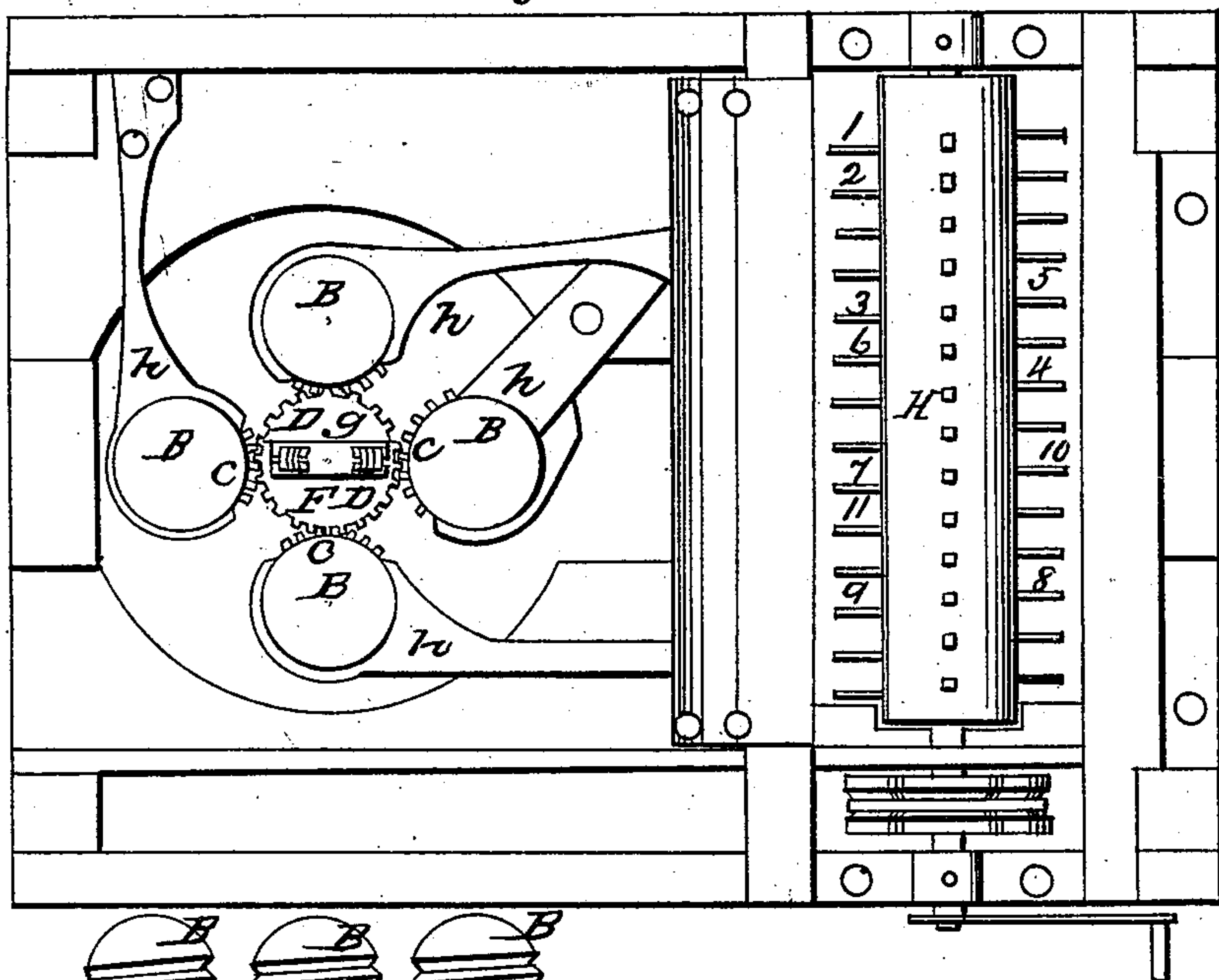
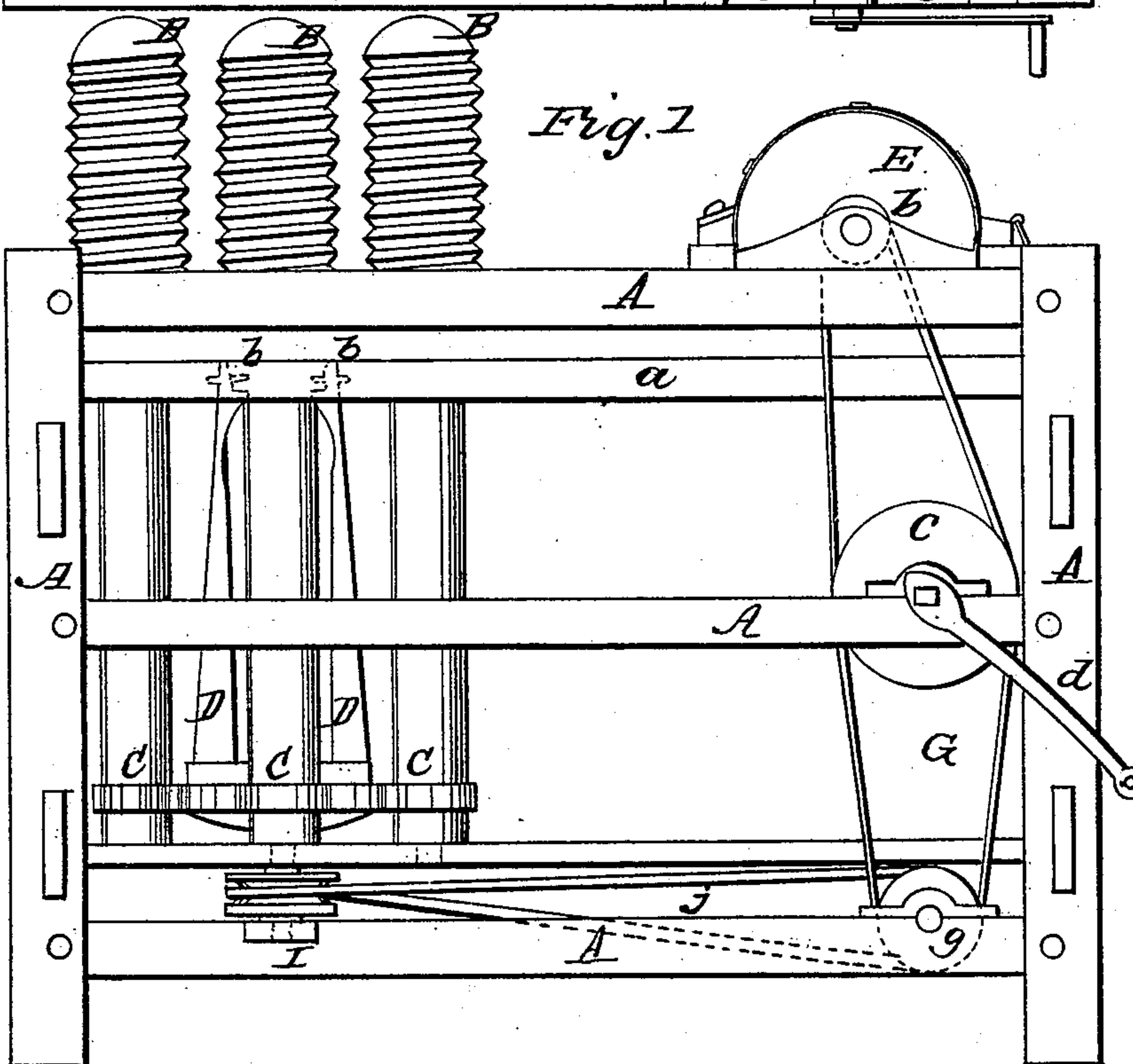


Fig. 1



UNITED STATES PATENT OFFICE.

H. H. FULTZ, OF LEXINGTON, MISSISSIPPI.

IMPROVEMENT IN COTTON-GINS.

Specification forming part of Letters Patent No. 13,641, dated October 9, 1855.

To all whom it may concern:

Be it known that I, H. H. FULTZ, of Lexington, in the county of Holmes and State of Mississippi, have invented a new and useful Improvement in Cotton-Gins; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a transverse vertical section of my improvement. Fig. 2 is a front view of the same, the seed-board being removed.

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

The nature of my invention consists in giving the cotton, which is placed upon the usual breast within the feed-box and directly over the saws, a spiral motion by means of spiral plates or by any other proper device, so that the cotton will pass from one end of the feed-box to the other, and cause a fresh surface of cotton to be presented to the action of the saws as it passes along, thereby preventing the staple or fibers of the cotton from being cut by the saws, and at the same time causing the cotton to be perfectly ginned, or deprived of the seed and motes, and discharged from the machine in separate parts, according to its quality.

To enable others skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the saw-shaft on which the saws B are placed, and C represents the breast, between the ribs *a* of which the saws rotate. D is the seed-board, which is secured between side pieces, *a' a'*, of a frame, E, to which the breast C is attached.

The above parts are of the usual construction, and therefore do not require a more minute description. The frame E of the breast C is secured by hinges *b b* to the frame F of the gin, so that the breast may be raised or lowered to allow the saws to project the requisite distance between the ribs *a*.

To the upper part of the frame E and between the ribs *a* of the breast the lower ends of oblique or spiral plates *c* are fitted. These plates are of curved form, as shown clearly in Fig. 1, and the back edges are fitted or made to correspond in form to the upper curved cross-piece of the frame E. The upper ends of the plates *c* are fitted in a bar, G, the ends

of which are of cylindrical form and pass through the side pieces, *a' a'*, of the frame E. The ends of the bar G have screw-threads cut on them, on which thumb-nuts *d d* are fitted, and by operating said nuts more or less obliquity may be given the plates, if desired.

The cotton to be ginned is placed in the feed-box, which is formed by the seed-board D, side pieces, *a' a'*, and breast C. The cotton is placed at one end of the feed-box, (indicated by H, Fig. 2.) Motion being given the saw-shaft A, the cotton will be turned within the feed-box by the action of the saws B, and the oblique or spiral plates *c* will feed or move the cotton from the end H toward the opposite end of the feed-box, as indicated by the red arrow. By this means a fresh surface of cotton is presented to the action of the saws as the cotton is moved along within the feed-box. The long staple or fiber is taken out by the saws at the part H of the box, the medium sized at the center, and the short fiber at the end opposite to the end H. The seed and hulls pass out underneath the breast or seed-board D at the end toward which the cotton passes.

It will be seen by giving the cotton the spiral or twisting feed-motion within the feed-box, that the staple or fiber of the cotton will not be cut by the saws, because the saws do not act continually upon one part of the cotton, for that is constantly turning and passes along over the whole series of saws. Consequently the long fiber is taken out by the saws at the feed end of the feed-box, (the part H,) and is subjected to the action of the saws for a short period of time only. The medium-sized fiber is taken out at about the center of the box, and the short at the end opposite to the end H. At this end of the box the seed will be stripped of the short fiber or fuzz, and the saws B may be placed nearer together at this point, as shown in Fig. 2. The seed and hulls will also pass out underneath the seed-board at this part of the box, a suitable opening being made for that purpose. The seed and hulls will not be acted upon by the saws at the part H of the box, but will pass with the cotton toward the opposite end of the feed-box, and as the fibers get shorter, and as the quantity of cotton gets gradually less in bulk at this end of the feed-box, the seeds are stripped of their fuzz and the seed and hulls pass out

