

No. 656,205.

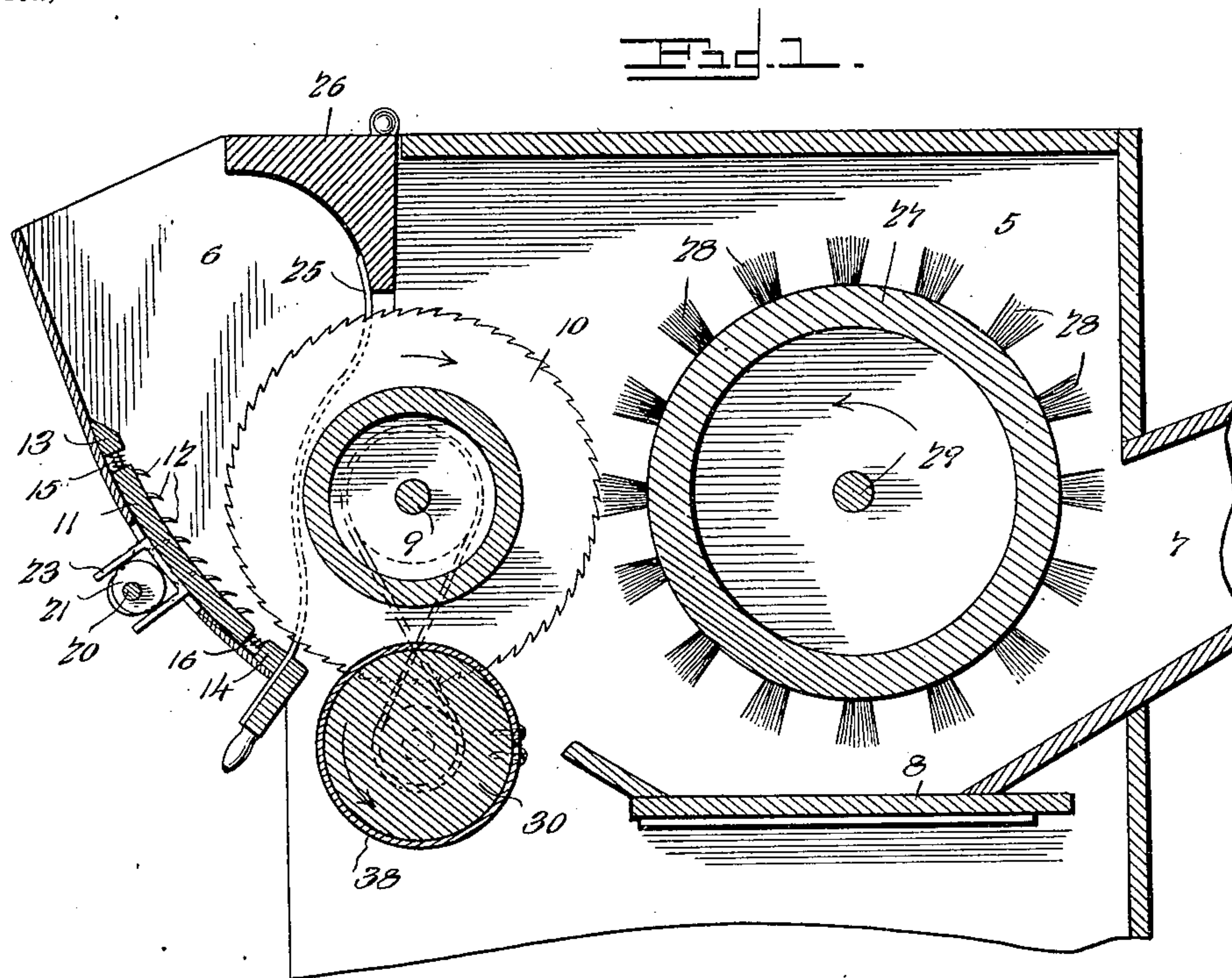
Patented Aug. 21, 1900.

B. F. McGAW.
SAW GIN.

(Application filed Oct. 28, 1899.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses

E. F. Stewart
Geo. H. Chandler

By *W. S.* Attorneys,

B. F. McGaw Inventor

C. A. Snow & Co.

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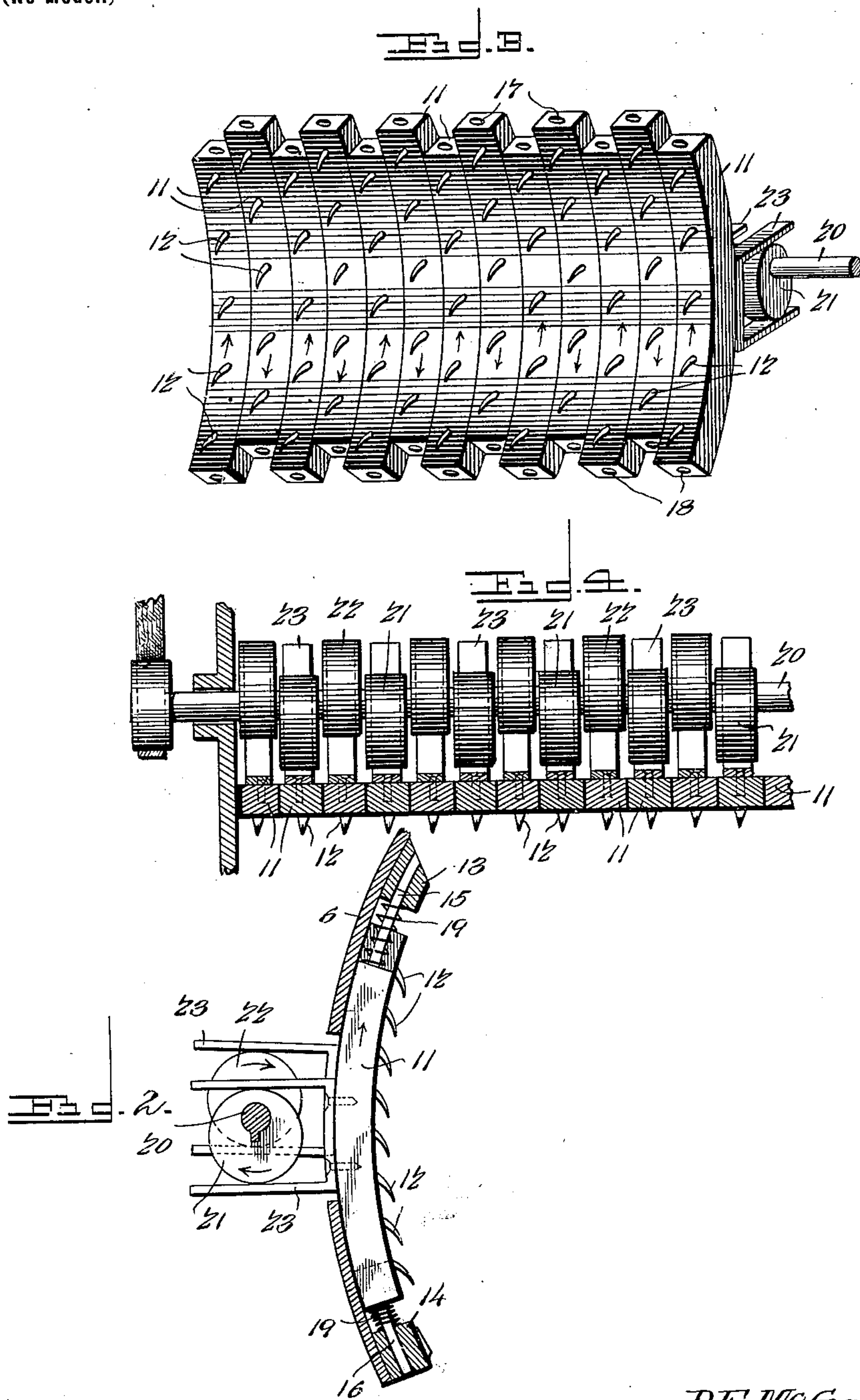
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(Application filed Oct. 28, 1899.)

(No Model.)

2 Sheets—Sheet 2.



Witnesses

E. F. Stewart
Geo. H. Chandler

By *Two* Attorneys,

B. F. McGaw Inventor

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

BENJAMIN F. MCGAW, OF COLUMBIA, TENNESSEE, ASSIGNOR OF TWO-THIRDS TO JAMES M. PARKER AND ZACHARIAH A. PARKER, OF PULASKI, TENNESSEE.

SAW-GIN.

SPECIFICATION forming part of Letters Patent No. 656,205, dated August 21, 1900.

Application filed October 28, 1899. Serial No. 735,095. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. MCGAW, a citizen of the United States, residing at Columbia, in the county of Maury and State of Tennessee, have invented a new and useful Saw-Gin, of which the following is a specification.

This invention relates to cotton-gins, and more particularly to that class including a series of saws to which the cotton is fed and by means of which it is ginned, the object of the invention being to provide means for positively feeding the cotton from a hopper to the saws to insure its proper and efficient treatment.

In the drawings forming a portion of this specification, and in which similar numerals of reference designate like and corresponding parts in the several views, Figure 1 is a central vertical section taken through the gin and showing the saws at the base of the hopper, the location and arrangement of the movable breast-board and the position of the brush-cylinder. Fig. 2 is a longitudinal section through one of the segmental elements of the breast-board. Fig. 3 is a detail perspective view showing the inner sides of the sectional and movable breast-board. Fig. 4 is a horizontal section taken through a portion of the movable elements of the breast-board, their operating-cams and shaft being shown in elevation.

Referring now to the drawings, 5 represents the gin-frame, having the usual structure and at one end of which is formed a hopper 6 and at the other end an exhaust-chute 7, the latter reaching to the usual bottom boards 8. Mounted in the sides of the gin-frame and at the lower end of the hopper is a saw-shaft 9, upon which is mounted a plurality of equidistant and mutually-parallel saws 10, adapted to be rotated in any desired manner.

The hopper 6 instead of having the usual fixed breast-board has its upper portion rigid and has a movable lower portion. This movable portion of the breast-board acts to feed the cotton from the hopper to the saws, and consists of a plurality of segmental sections 11, which conform to the curvature of the breast-board, and each of which sections

has a number of teeth or spikes 12 upon its inner concaved face, these spikes or teeth extending inwardly and downwardly in a direction against the rotation of the saws. 55

The segmental elements 11 are disposed between strips 13 and 14, secured to the inner surface of the breast-board proper, and the elements 11 are held between these strips through the medium of pins 15 and 16, fixed to the strips and entering longitudinal perforations 17 and 18 in the ends of the segmental elements. Upon these pins and between the elements 11 and the strips are disposed helical springs 19, which tend to hold the elements normally in predetermined positions. 60 65

The segmental elements 11 are so arranged and connected that the alternate elements will move simultaneously in the same direction—one series of elements moving in one direction, while the other series move in the opposite direction, after the manner of the usual feed motion. This movement is secured through the medium of a shaft 20, which is journaled in the sides of the gin-frame and has a series of cams 21 and 22 fixed thereto and extending in opposite directions. These cams are adapted to rotate in engagement with the arms of U-shaped plates 23, which are fixed to the rear faces of the segmental elements with the arms inclosing the cams. The shaft 20 may be driven from the shaft 9, either directly or indirectly, or may be connected with any other suitable source of power. 70 75 80 85

The usual gin-ribs 25 are connected with the top plate 26 above the saws and extend downwardly and below the saws and are connected with the lower end of the breast-board in the usual manner, as shown. In connection with this portion of the apparatus there is employed the usual brush-cylinder 27, having brushes 28 upon its periphery, this cylinder being mounted upon a shaft 29, journaled in the gin-frame and in position to permit engagement of the ends of the brushes with the saws, the cylinder being rotated in a direction to discharge the ginned cotton through the chute 7. 90 95 100

With the construction above described it will be seen that the cotton which is placed

into the hopper will be engaged by the teeth of the movable elements of the breast-board and will be fed positively to the saws, which in their rotation will properly treat the cotton, which will be engaged by the brush-cylinder and discharged through the chute.

It will of course be understood that the specific means for moving the parts of the breast-board may be varied, that the several parts may be rotated in any desired manner, and that other changes may be made without departing from the spirit of the invention.

Having thus described the invention, what is claimed is—

1. In a gin, the combination with the saws and a hopper leading thereto, of a breast-board comprising movable elements adapted for reciprocation to feed to the saws.

2. In a gin, the combination with the saws and the hopper, of a breast-board comprising sections provided with teeth and adapted for reciprocation to feed from the hopper to the saws.

3. In a gin, the combination with the saws

and the hopper leading thereto, of a breast-board comprising movable sections arranged in two alternate series, and means for reciprocating the series alternately, said sections having teeth adapted to engage the cotton and feed it to the saws.

4. In a gin, the combination with the saws and the hopper leading thereto, of a breast-board comprising a plurality of elements having teeth adapted to engage the cotton and feed it to the saws, U-shaped plates carried by the sections, a shaft, a plurality of cams mounted upon the shaft and lying within the inclosure of their respective U-shaped plates, and means for rotating the shaft to reciprocate the elements of the breast-board.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

BENJAMIN F. MCGAW.

Witnesses:

J. M. FOWLER,

JAS. L. DANNWOOD.

It is hereby certified that in Letters Patent No. 656,205, granted August 21, 1900, upon the application of Benjamin F. McGaw, of Columbia, Tennessee, for an improvement in "Saw-Gins," errors appear requiring correction, as follows: In line 7, of the grant and in the printed head of the specification, it is stated that said McGaw assigned "two-thirds" to James M. Parker and Zachariah A. Parker, whereas it should have stated that he assigned *one-half*; and that the said Letters Patent should be read with these corrections therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 18th day of September, A. D., 1900.

[SEAL.]

F. L. CAMPBELL,
Assistant Secretary of the Interior.

Countersigned:

C. H. DUELL,
Commissioner of Patents.