

No. 663,583.

Patented Dec. 11, 1900.

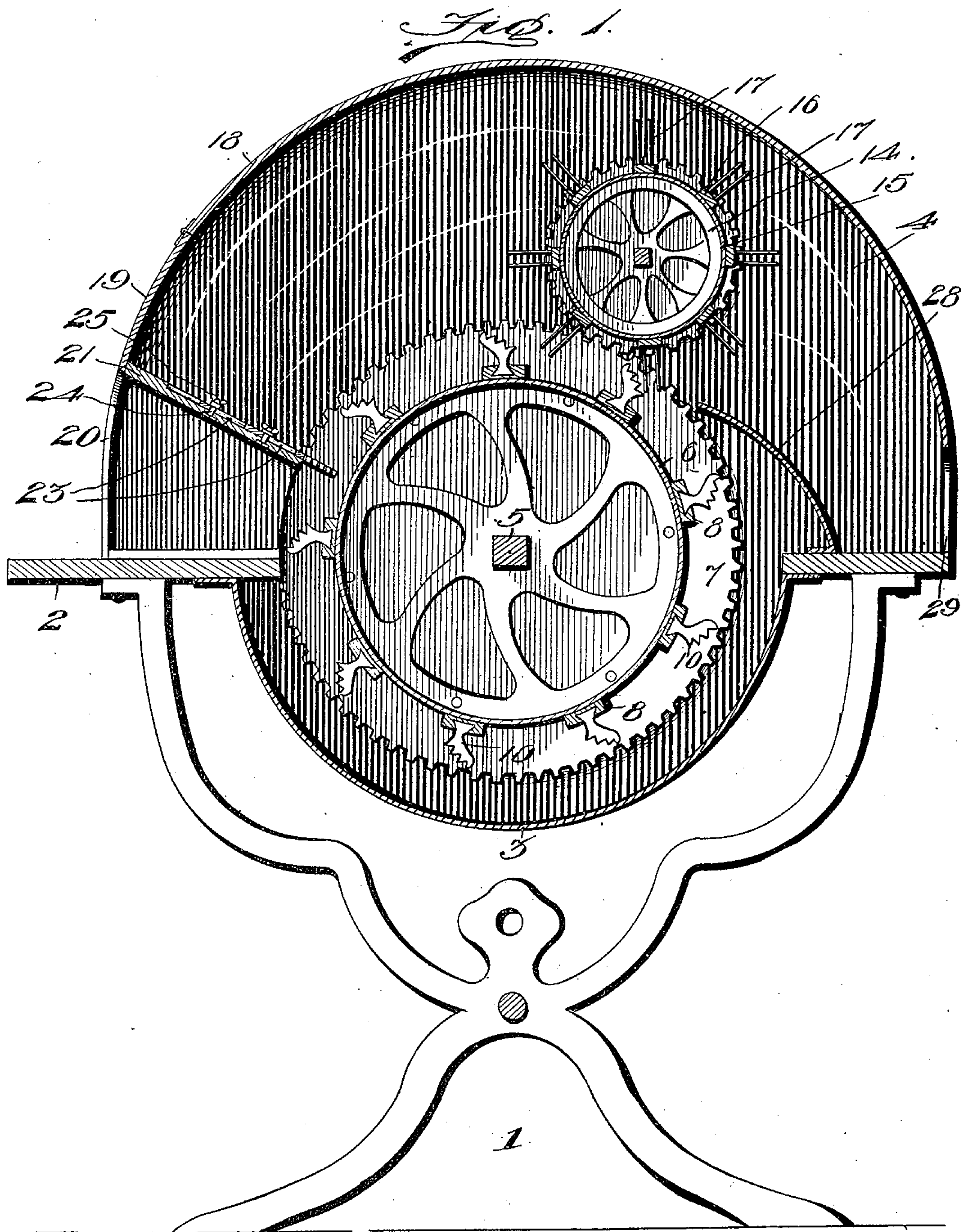
M. J. SCAIFE.

COTTON RENOVATOR AND BATTING MACHINE.

(Application filed Apr. 7, 1900.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses
James North
Herbert Lawson

Inventor
Margaret J. Scaife,
By *Victor J. Evans*
Attorney

M. J. SCAIFE.

COTTON RENOVATOR AND BATTING MACHINE.

(Application filed Apr. 7, 1900.)

(No Model.)

2 Sheets—Sheet 2.

Fig. 2.

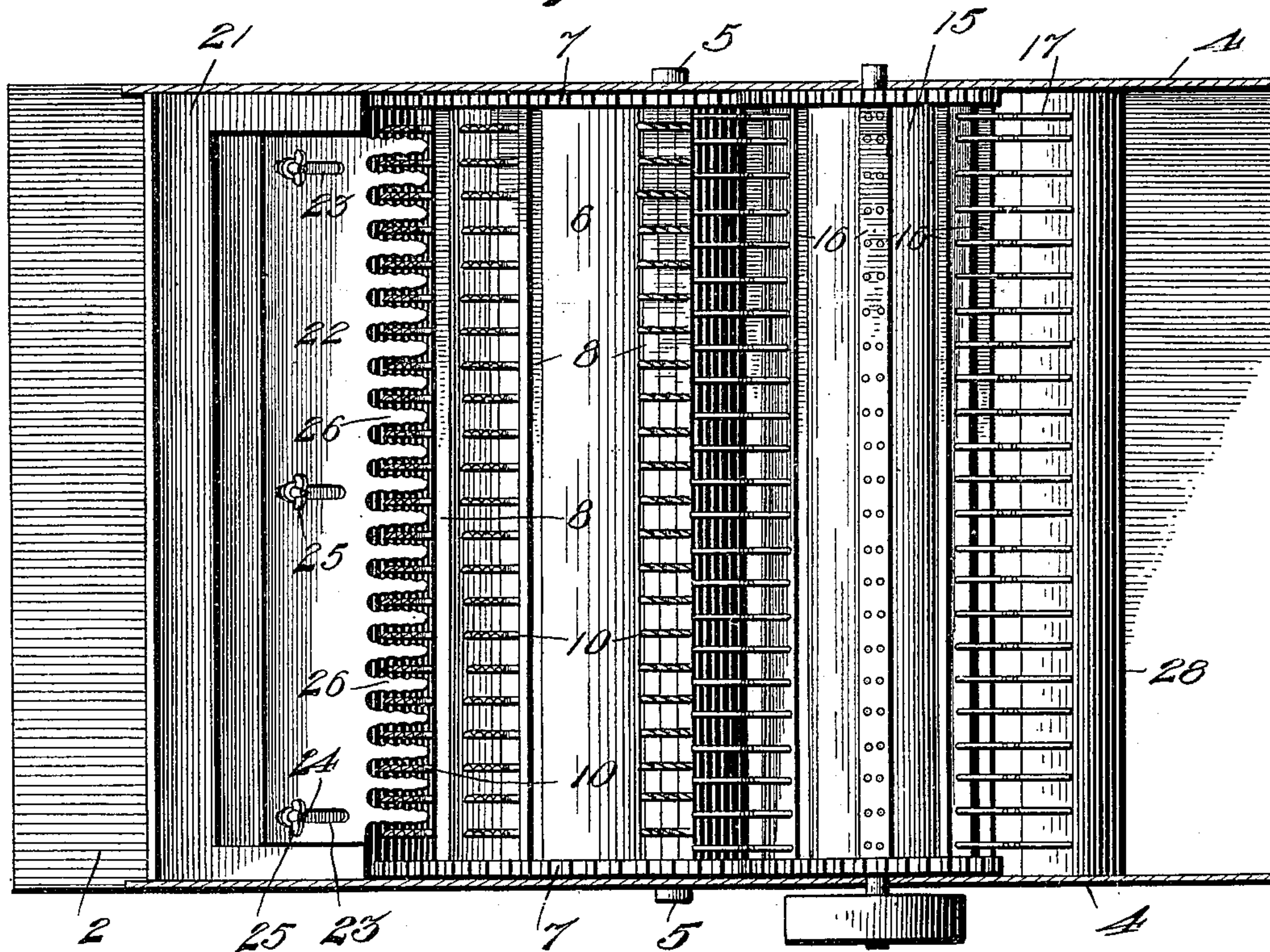


Fig. 4.

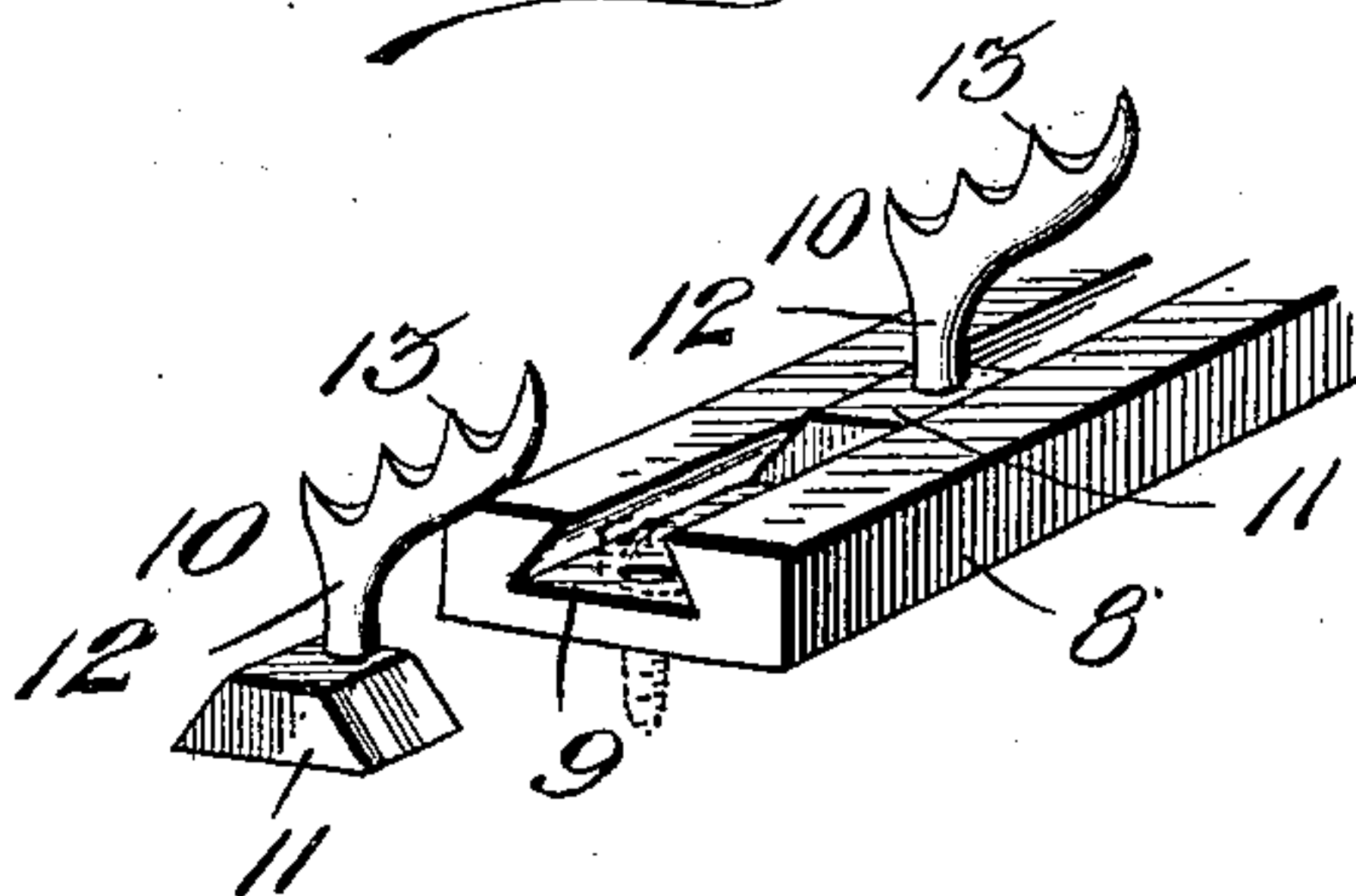
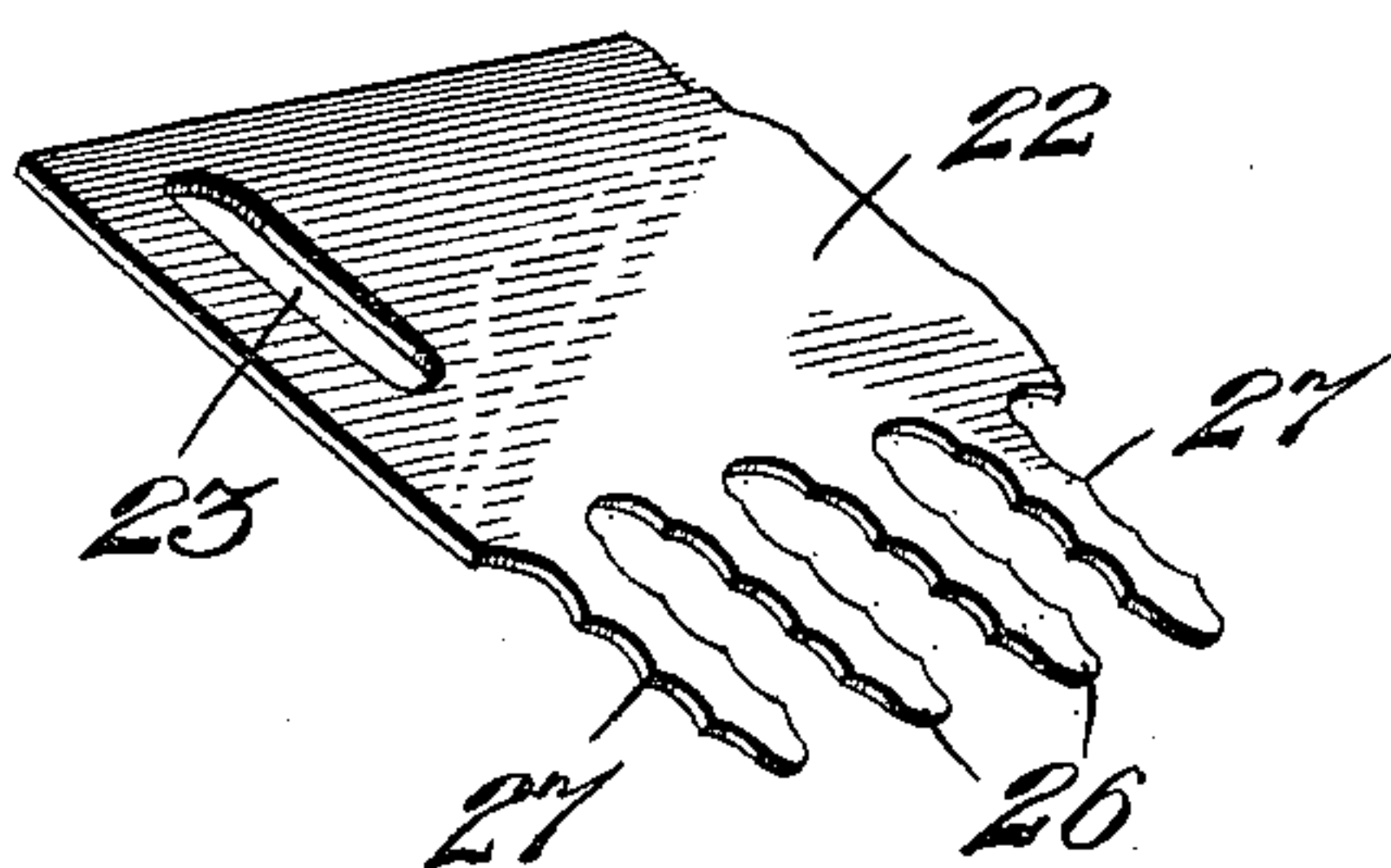


Fig. 3.



Witnesses

Amos North
Herbert Benson

Inventor
Margaret J. Scaife,
By *Victor J. Evans.*
Attorney

UNITED STATES PATENT OFFICE.

MARGARET J. SCAIFE, OF CAMILLA, GEORGIA.

COTTON RENOVATOR AND BATTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 663,583, dated December 11, 1900.

Application filed April 7, 1900. Serial No. 11,944. (No model.)

To all whom it may concern:

Be it known that I, MARGARET J. SCAIFE, a citizen of the United States, residing at Camilla, in the county of Mitchell and State of Georgia, have invented new and useful Improvements in Cotton Renovators and Bating-Machines, of which the following is a specification.

This invention relates to new and useful improvements in cotton renovators and bating-machines; and its primary object is to provide a device which is simple and durable and effective in operation.

A further object is to provide teeth of novel construction which are detachably secured to the cylinder of the machine.

A further object is to provide a toothed check-plate adapted, together with the teeth of the cylinder, to effectually separate the cotton and to provide a rotary brush of novel construction whereby the cotton may be readily removed from the cylinder-teeth and discharged.

To these ends the invention consists of a cylinder having detachably secured thereto suitably-arranged bars within which are detachably mounted teeth of the novel construction hereinafter described, said teeth being readily removable in case of breakage, &c. Cog-teeth are secured to one end of the cylinder and adapted to mesh with similar teeth formed upon one end of a cylinder arranged thereabove and having bars secured to the outer surface thereof, from which project bristles formed of wire or other suitable material and adapted to project between the paths of the teeth of the cylinder and travel therebetween.

The invention also consists in providing a hopper into which project the teeth of the cylinder and to the upper surface of which is adjustably secured a check-plate having suitably-arranged teeth, whereby the cotton engaged by the teeth of the cylinder will be torn therethrough, as will be hereinafter described.

The invention also consists in the further novel construction and combinations of parts hereinafter more fully described and claimed, and illustrated in the accompanying drawings, showing the preferred form of my invention, and in which—

Figure 1 is a vertical transverse section through the device. Fig. 2 is a plan view of the interior mechanism thereof with the top broken away. Fig. 3 is a detail view of a portion of the check-plate, and Fig. 4 is a similar view of a cylinder-tooth and its bar.

Referring to said figures by numerals of reference, 1 is a standard to the upper end of which is secured a base 2, having a longitudinal opening therein, from the bottom of which and extending under said opening is a semicylindrical casing 3, which is secured to said base in any suitable manner. End plates or supports 4 project upward from the base 2 at each end thereof, and within the same are journaled the ends of a shaft 5, upon which is mounted a cylinder 6, having a toothed ring 7 secured thereto at one end by means of screws or in any other suitable manner. Detachably secured to the outer surface of this cylinder are longitudinally-extending bars 8, arranged parallel to each other and each provided within its upper surface with a dovetailed groove 9, adapted to receive teeth 10, of novel construction. These teeth each comprise a dovetailed base 11, adapted to fit within a groove 9, and extending upward from which is a stem 12, provided with a series of points 13, arranged diagonally to the bottom of the base 11. These points are preferably of the form shown in Fig. 4 and are arranged so as to point in the direction of the revolution of the cylinder.

Meshing with the teeth upon the ring 7 of cylinder 6 are teeth formed upon a second ring 14, secured to one end of a cylinder 15, journaled within the end plates 4 of the casing at a point above the cylinder 6 of the device. Bars 16 are detachably secured to the outer surface of this cylinder and are arranged parallel to each other, and from each bar project parallel series of wires 17, which are adapted to project down between the paths of the teeth of the cylinder 6, as shown.

Connecting the end plates 4 of the device is a preferably semicylindrical casing 18, which may be provided with a suitable cover 19, as shown. Extending longitudinally of the casing 18, at the bottom thereof, is an opening 20, above which is arranged an inclined plate 21, secured at opposite ends to the end plates 4 of the device. Upon the upper surface of

this plate is secured a check-plate 22, having transversely-extending slots 23 therein adapted to receive bolts 24, which are secured to the plate 21. These bolts are provided with suitable nuts 25, whereby the same may be readily tightened to clamp the check-plate in adjusted position.

Arranged along the inner edge of the check-plate are a series of tongues 26, which project between the paths of the teeth of the cylinder 6 and are provided upon opposite sides with teeth or serrations 27, as shown in Fig. 3. Secured to the base 2 at the opposite side of the cylinder 6 of the device is a curved shield 28, which extends longitudinally of the device and the upper edge of which lies just without the path of the teeth of the carding-cylinder 6, and an aperture 29 is formed within the casing 18 at a point adjacent to said guide, whereby suitable receptacles may be inserted within the casing to receive the cotton delivered by the wires of the brush 15.

The cylinder 15 is so mounted within the casing as to bring the outer ends of the wires 17 upon the front surface thereof—i. e., the surface nearest the hopper—directly above the center of the carding-cylinder.

In operation the cotton is fed into the hopper at 20 and is engaged by the teeth of the carding-cylinder, as is obvious, and will be carried upward between the toothed tongues of the check-plate to a point adjacent to the upper edge of the shield 28, when the wires 17 of the brush passing between the teeth will withdraw the cotton therefrom and throw the same over the shield into a suitable receptacle provided therefor upon the base 2, adjacent to the opening 29 within the casing. By adjusting the check-plate 22 back or forth upon its supporting-plate 21 the amount of cotton carried by the teeth of the carding-cylinder may be readily regulated.

Foreign substances are often admitted to cotton-renovators and cause the breaking of one or more teeth of the carding-cylinder. By providing detachable teeth upon the cylinder I am enabled to replace one or more of them in the event of breakage without necessitating the substitution of a complete bar of teeth, as heretofore. The teeth may be secured within the bar in any suitable manner. For instance, the heads of the securing-screws of the bars may be of such thickness as to effectually prevent the base portions 11 of the teeth from slipping longitudinally within the slots of the bars. By this construction one or more teeth may be readily removed and replaced.

I attach importance to the peculiar form of carding-teeth, as I find the same to be more effective in use than those usually heretofore employed.

In the foregoing description I have shown the preferred form of my invention; but I do not limit myself thereto, as I am aware that modifications may be made therein without departing from the spirit or sacrificing the

advantages thereof, and I therefore reserve the right to make such changes as may fairly fall within the scope of my invention.

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

1. In a device of the character described, the combination with a casing, of a hopper therein, an adjustable plate secured thereto, tongues projecting from said plate and having teeth upon the opposite edges thereof, a cylinder mounted within the casing, and teeth thereon adapted to travel between the tongues.

2. In a device of the character described, the combination with a casing, of a hopper therein, an adjustable plate secured thereto, tongues projecting from said plate and having teeth upon the opposite edges thereof, a cylinder mounted within the casing, teeth thereon adapted to travel between the tongues, and a cylinder mounted within the casing and having wires adapted to travel between the paths of the teeth.

3. In a device of the character described, the combination with a casing, of a hopper therein, a plate adjustably secured thereto, tongues projecting therefrom and having teeth on the opposite edges thereof, a cylinder mounted within the casing and having parallel longitudinally-extending series of teeth thereon, a toothed ring secured to the cylinder, a second cylinder mounted within the casing at a point above the toothed cylinder, parallel series of wires arranged longitudinally upon said upper cylinder and adapted to travel between the paths of the cylinder-teeth, and a shield secured within the casing.

4. In a device of the character described, a cylinder, parallel bars detachably secured to the outer surface thereof and having dovetailed grooves within their outer surfaces, teeth, each having a base corresponding in cross-section to the groove of the bar and mounted within said groove, and points upon said teeth arranged in a plane diagonally to the base of the tooth.

5. In a device of the character described, a tooth comprising a base having oppositely-tapered sides, a stem thereto, and points upon said stem arranged in a plane diagonally to said base.

6. In a device of the character described, the combination with a standard, of a base secured thereto, a casing depending from said base, end plates secured to the base, a cylinder journaled within the end plates and having a toothed ring secured thereto, longitudinally-arranged parallel bars detachably secured to the outer surface of the cylinder and provided with dovetailed grooves, teeth detachably secured within said groove, a hopper within the casing, a check-plate adjustably secured thereto, tongues projecting from said plate between the paths of the teeth, teeth upon the opposite edges of said tongues,

a brush mounted within the casing at a point above the cylinder, and to the rear of the center thereof, said brush comprising longitudinally-arranged bars detachably secured
5 to the cylinder, parallel series of wires projecting from the bars and adapted to travel between the paths of the teeth, and a toothed

ring secured to the brush and adapted to engage with the teeth of the cylinder, and a guide secured to the base.

MARGARET J. SCAIFE.

Witnesses:

J. P. MCREE,
C. R. TWITTY.