A. H. SORY.

COTTON GIN.

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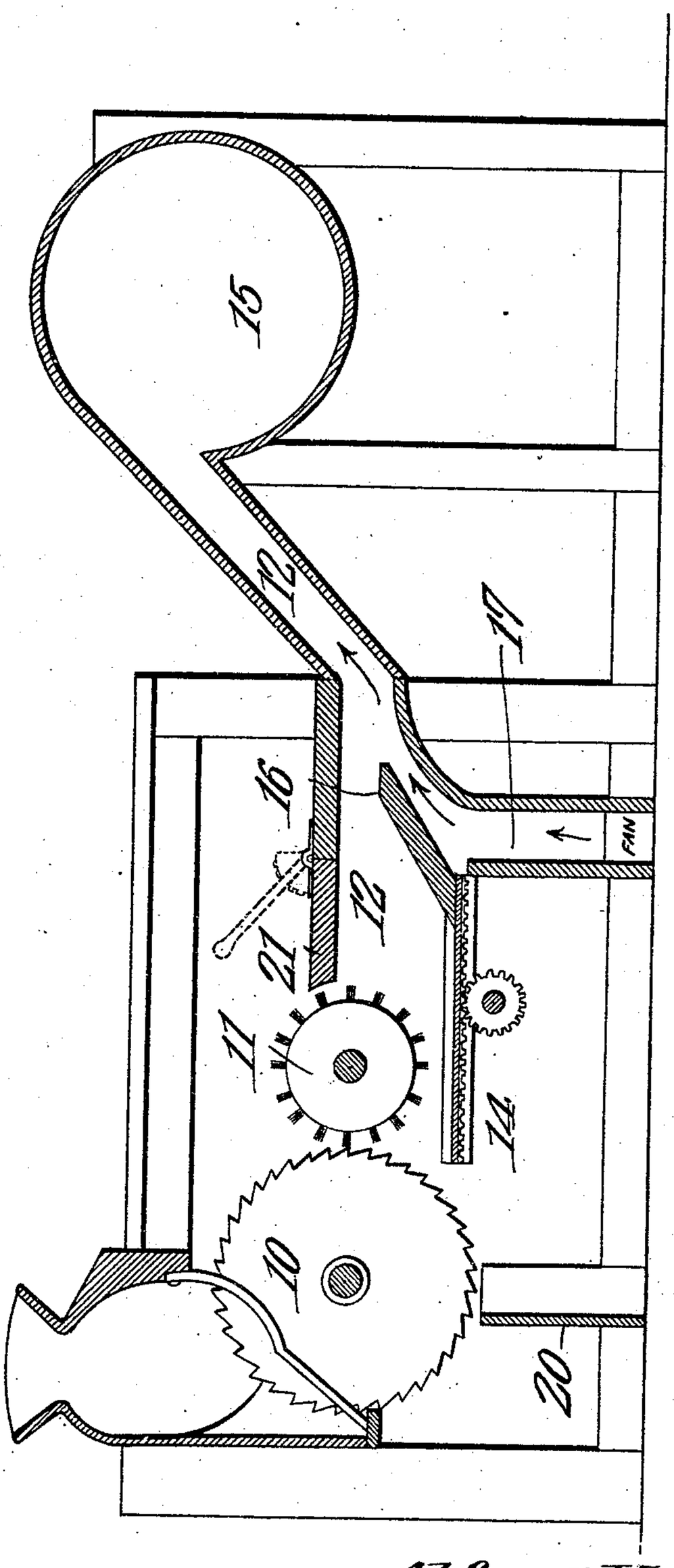
929,335.

Patented July 27, 1909.



Witnesses.

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ALFRED HARRIS SORY, OF SALTILLO, MISSISSIPPI.

COTTON-GIN.

No. 929,335. Specification of Letters Patent. Patented July 27, 1909.

Application filed July 8, 1908. Serial No. 442,612.

To all whom it may concern:

Be it known that I, ALFRED H. SORY, a citizen of the United States, residing at Saltillo, in the county of Lee and State of Mississippi, have invented a new and useful Cotton-Gin, of which the following is a specification.

In cotton gins, as ordinarily constructed, the saws revolve at a speed of approximately 400 revolutions per minute and the brush revolves at a speed four times greater, the function of the brush being to remove the cotton from the saws and to create a draft that will carry the cotton up the lint flue to the condenser or other point. The brushes are ordinarily of much greater diameter than the saws and under the high speed developed there is always normally a danger of fire, especially where any of the parts become over-heated through friction. It is necessary, however, that the brush rotate at a speed much higher than that of the saws, otherwise the machine would soon clog and the lint become choked in the flue. It has been proposed to dispense with the brush and utilize air jets or blasts for the purpose of removing the cotton from the saws but this has not been altogether successful, one of the principal defects experienced in practice being that the motes are carried through the flue with the cotton.

The principal object of the present invention is to provide a novel construction of gin in which the diameter of the brush cylinder may be materially reduced and its speed cut down to such an extent as to minimize the danger of fire.

A further object of the invention is to provide a gin in which the work of the brush is materially reduced, the brush acting to take the lint from the saws and deliver the same to the entrance end of the flue after which an auxiliary air blast is employed to carry the lint through the flue to the condenser or other point.

The accompanying drawing illustrates in sectional elevation, a cotton gin constructed in accordance with the invention.

The general plan and arrangement of the gin is similar to that followed in ordinary practice.

The saws 10 carry the cotton to the brush cylinder 11 and from the brush the cotton travels through a flue 12 to a main flue 15 which may be connected to a battery of gins and through which the entire product may be carried to a condenser. The mote board 14 is of ordinary construction and is arranged under the brush in the usual manner. The brush cylinder 11, instead of being of a diameter greater than the saws is approximately only one-half or two-thirds the diameter of the saws and is given a speed of about two and one-half times that of the saws instead of the regular speed which is about four times greater than that of the saws. The cotton removed by the brush is thrown to the rear through the entrance end of the flue where it passes over a short partition 16 that is located about eighteen inches to the rear of the brush and having carried the cotton thus far the work of the brush is complete. Opening into the lower portion of the flue at a point under this partition 16 is an air blast flue 17 through which a current of air is directed upward through the flue and this current of air strikes against the cotton as it is delivered from the brush and carries it up to the main flue 15 so that the brush is relieved of the work of creating a current sufficient to convey the cotton through the entire distance.

In order to reduce the draft through the forward end of the machine, a partition 20 fits up close to the bottom of the saws so that there will be no suction over the mote board and the withdrawal of the motes through the flue will be avoided. A second partition 21 is arranged in the upper rear portion of the brush, this partition being pivoted so that more or less air may be allowed to enter around the brush as required.

It is found in practice that the danger of fire is practically eliminated by reducing the speed of the brush and by the reduction in diameter and weight of the brush cylinder, the cost of construction and maintenance of the brush is also reduced.

I claim:—

In a cotton gin, a casing, saws, the forward end of the casing being closed up to the peripheral line of the saws, a mote board, a

brush cylinder of smaller diameter than the saws, a lint flue, a pivotally mounted partition arranged at the rear of the brush cylinder and adjustable to vary the quantity of air passing to the flue, and a passage under and in communication with the entrance end of the lint flue for directing thereinto a current of air.

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

ALFRED HARRIS SORY.

Witnesses:
W. P. GARDNER,
T. L. WESSON.