

No. 757,188.

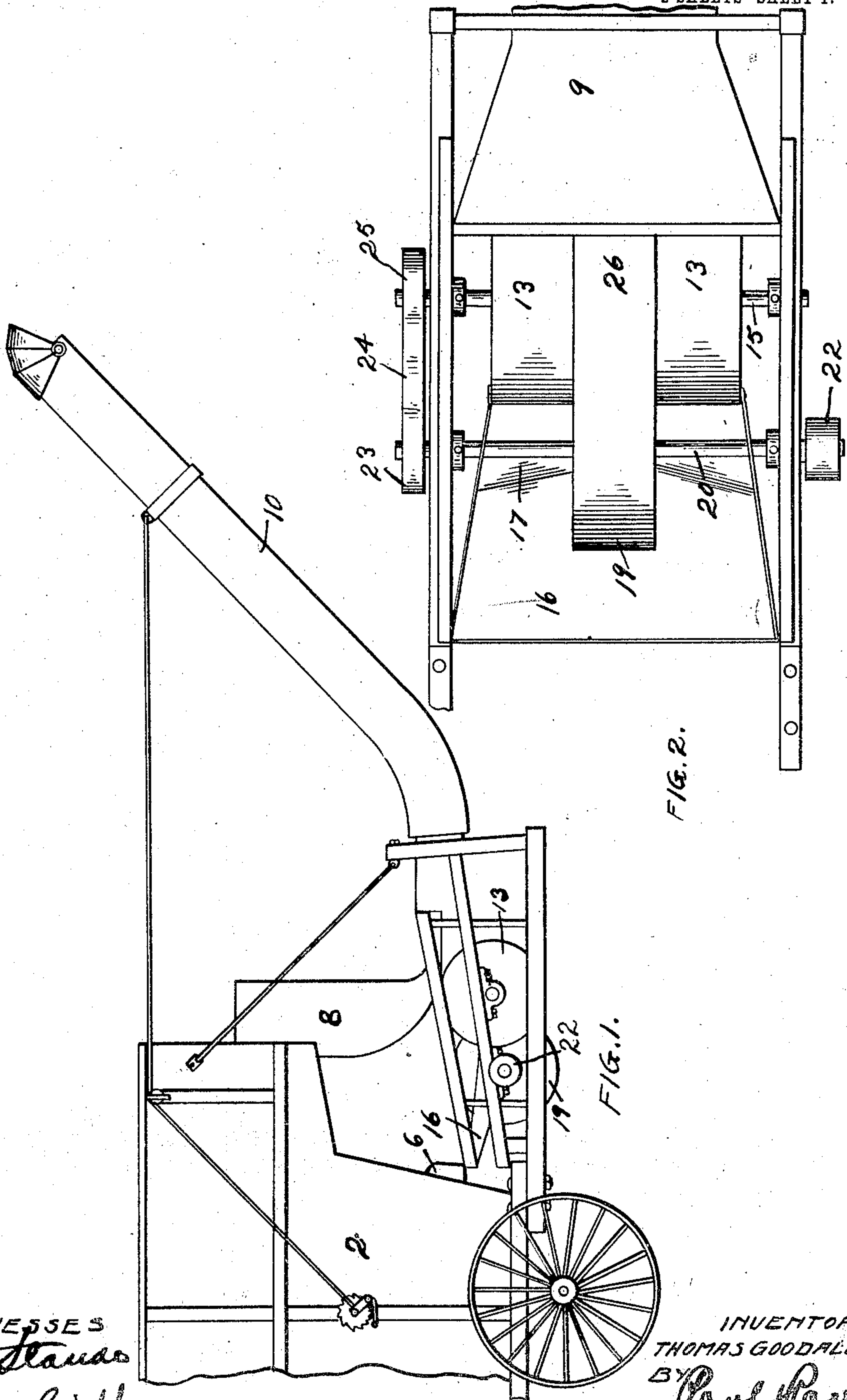
PATENTED APR. 12, 1904.

T. GOODALE.
PNEUMATIC STRAW STACKER.

APPLICATION FILED OCT. 29, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES
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S. V. Griffin

INVENTOR
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BY *Paul Paul*
HIS ATTORNEYS

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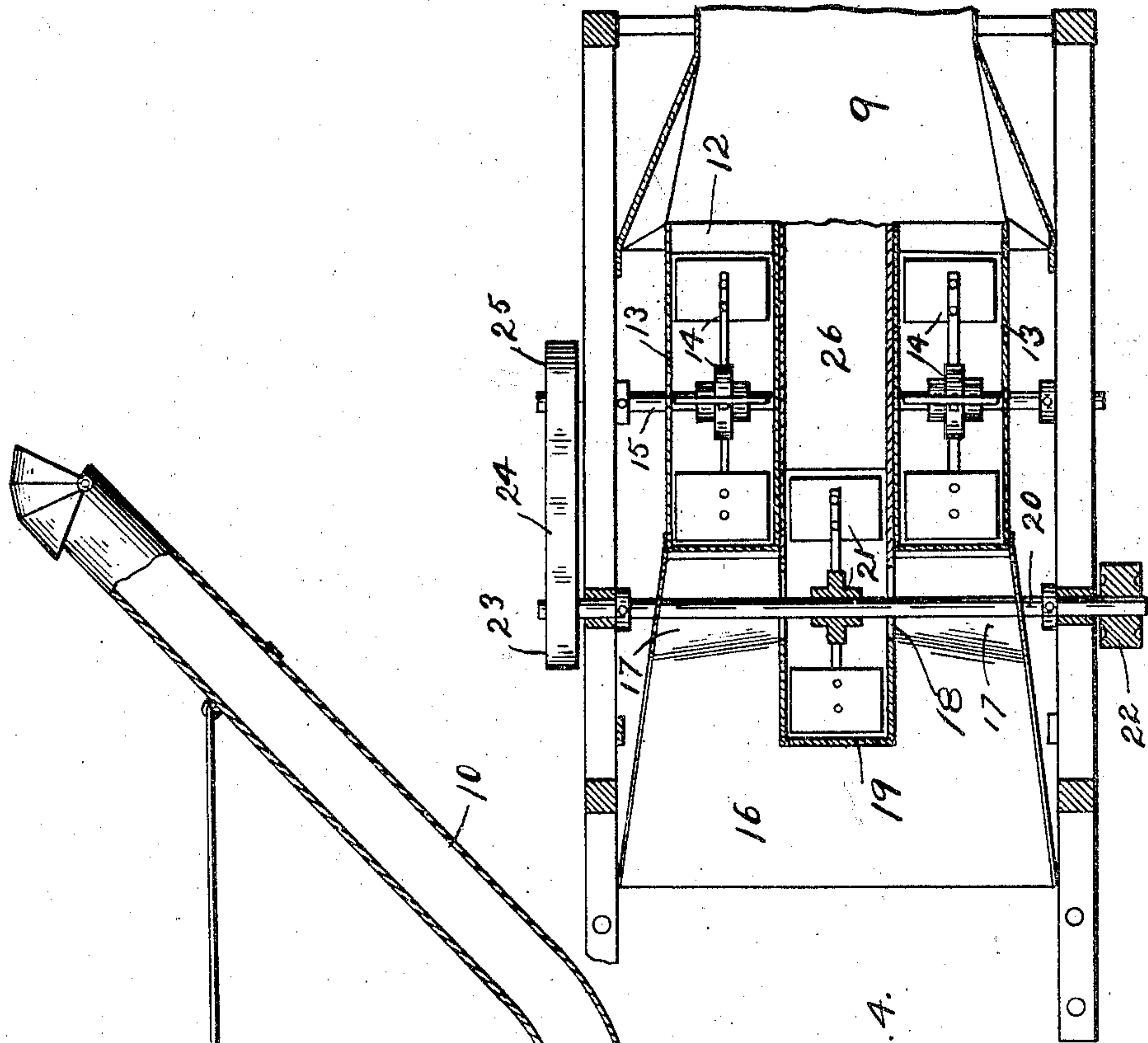


FIG. 4.

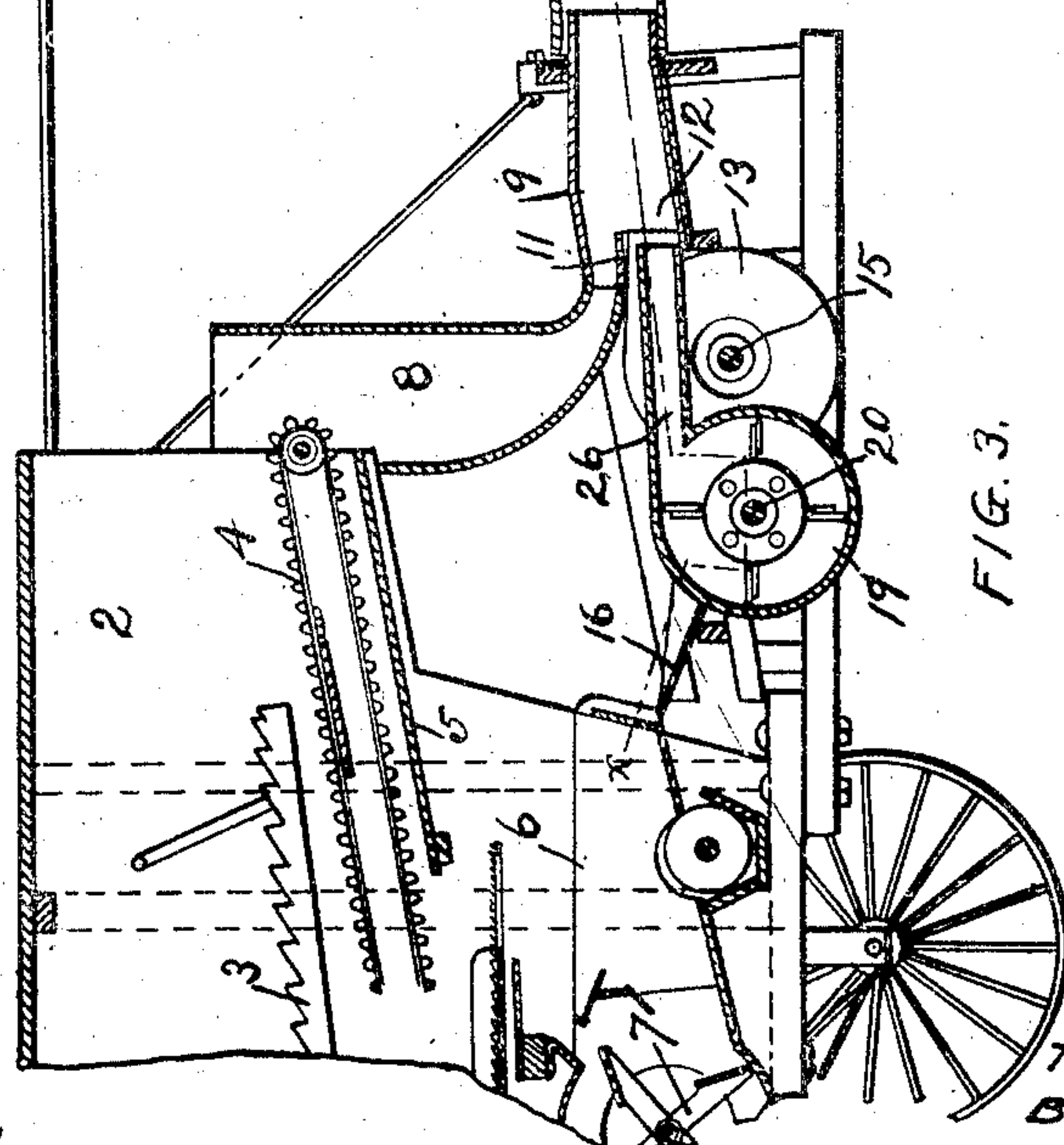


FIG. 3.

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UNITED STATES PATENT OFFICE.

THOMAS GOODALE, OF WADENA, MINNESOTA.

PNEUMATIC STRAW-STACKER.

SPECIFICATION forming part of Letters Patent No. 757,188, dated April 12, 1904.

Application filed October 29, 1903. Serial No. 178,970. (No model.)

To all whom it may concern:

Be it known that I, THOMAS GOODALE, of Wadena, in the county of Wadena, State of Minnesota, have invented certain new and useful Improvements in Pneumatic Straw-Stackers, of which the following is a specification.

The object of my invention is to provide a straw-stacking apparatus which will not break up the straws into short pieces in discharging them from the machine upon the stack, to the end that the stack will shed water better and the fiber of flax-straw be longer and more suitable for making tow.

A further object is to provide an easy-running straw-stacking machine that is simple in construction and can be readily attached to any style of separator.

The invention consists generally in various constructions and combinations, all as hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation of a separator with my improved straw-stacking apparatus applied thereto. Fig. 2 is a plan view of the same. Fig. 3 is a vertical section of the end of the separator and straw-stacking apparatus, and Fig. 4 is a section on the line *xx* of Fig. 3.

In the drawings, 2 represents a separator-casing having the usual straw-rack 3, belt 4, pan 5, and shoe 6, arranged beneath the discharge end of said pan. A fan 7 is arranged to create a current of air over the shoe 6 and past the discharge end of the pan 5 to separate the light chaff and refuse material from the grain. An upright spout 8 is arranged at one end of the belt 4 and communicates at its lower end with an air-trunk 9, arranged horizontally and communicating at its outer end with a swiveled stacker-tube 10. A plate 11 extends across the inner end of the air-trunk 9, dividing the same into an upper and lower passage, the former leading to the throat of the spout 8 and the latter to air-blast passages 12, that communicate with fan-casings 13, inclosing fans 14, mounted on a shaft 15. The straw that falls upon the belt 4 is carried along to the spout 8 and discharged therefrom into the air-trunk 9, where it meets the blasts

of air from the passages 12 and is blown out through the stacker 2 without passing through the fan-casings. It follows, therefore, that the fibers of the straw will not be broken, and it will require considerably less power to operate the fans than it would where the straw is carried directly through the casings.

To carry away the chaff and light refuse material that collects beneath the belt 4, I prefer to provide an auxiliary fan mechanism located in the rear of the twin fans and arranged to discharge the chaff into the air-trunk 9, so that it will mingle with the straw and pass out through the stacker-tube to the stack. This chaff-blowing apparatus consists, preferably, of a plate 16, arranged in the rear of the fan-casings 13 and near the shoe 6 in position to receive the chaff and light refuse material that is separated from the grain by the action of the fan 7. The inner end of the plate 16 is preferably provided with depressions 17, communicating through openings 18, arranged between and in front of the casings 13. A shaft 20 extends through the casing 19 and is provided with a fan 21, a driving-pulley 22, and a pulley 23, connected by a belt 24 with a similar pulley 25 on the shaft 15. All three fans are thus connected and will be operated simultaneously. A blast-passage 26, closed except at its ends, is provided between the casings 13 and communicates at its inner end with the casing 19 and at its forward end with the air-trunk 9. The chaff and refuse material, therefore, that falls upon the plate 16 will slide down over the same into the fan-casing 19 and be blown through the air-passage 26 and mixed with the straw from the spout 8. These fans are made of any suitable size, according to the size of the separator and the stacker-tube, and may be arranged to operate at varying speeds, if preferred. Their use will insure a uniform blast of air through the trunk 9, and by conducting the straw around the fan-casings instead of through them I am able to preserve in an unbroken condition the fibers of the straw and render it more easily handled and better suited for feed and making tow.

I claim as my invention—

1. The combination, with a stacker-tube, of

a trunk adapted to receive the straw and having air-passages at the sides, blast-fans communicating with said passages, a centrally-arranged air-passage leading into said trunk, a third blast-fan adapted to receive the chaff and communicating with said centrally-arranged passage.

2. The combination, with a trunk arranged to receive the straw and provided with a stacker-tube and having air-passages at its sides, of blast-fans connected with said passages, a centrally-arranged air-passage between said side passages, and a third blast-fan having a chaff-collecting plate and communicating with said centrally-arranged passage.

3. In a separator, the combination, with a straw belt or carrier, of an air-trunk communicating with the discharge end of said belt, a stacker-tube connected with said trunk, air-passages provided at the sides of said trunk, blast-fans communicating with said passages, a middle air-passage, a third blast-fan provided in advance of said side fans and communicating with said middle passage, and means for delivering chaff to said third fan, substantially as described.

4. The combination, with a separator, of an air-trunk arranged near the straw belt or carrier to receive the straw therefrom, a stacker-tube connected with said air-trunk, two blast-fans having air-passages leading into said air-trunk, a third blast-fan between said first-named fans and in front of the same and having an air-passage leading into said trunk,

and a chaff-collecting plate partially inclosing said third blast-fan and communicating with the interior of its casing, substantially as described.

5. In a separator, the combination, with a shoe and a grain-pan, of a plate provided near said shoe, a fan-casing having openings in its side walls to receive material from said plate, a fan operating in said casing, a blast-passage connected with said casing, an air-trunk into which said blast-passage discharges, a stacker-tube connected with said trunk, fan-casings provided on each side of said air-blast passage and having passages also communicating with said air-trunk, blast-fans provided in said last-named casings, a straw-conveying spout provided above said fan-casings and having its discharge end leading into said air-trunk, and a straw-conveying belt or carrier having its discharge end near the receiving end of said spout, substantially as described.

6. The combination, with a stacker-tube, of a trunk adapted to receive the straw and having two air-passages, blast-fans communicating with said passages, a third air-passage leading into said trunk, and a third blast-fan adapted to receive the chaff and communicating with said third passage.

In witness whereof I have hereunto set my hand this 23d day of October, 1903.

THOMAS GOODALE.

In presence of—

DELIA PERKINS,
HALL SCHWARTZ.