

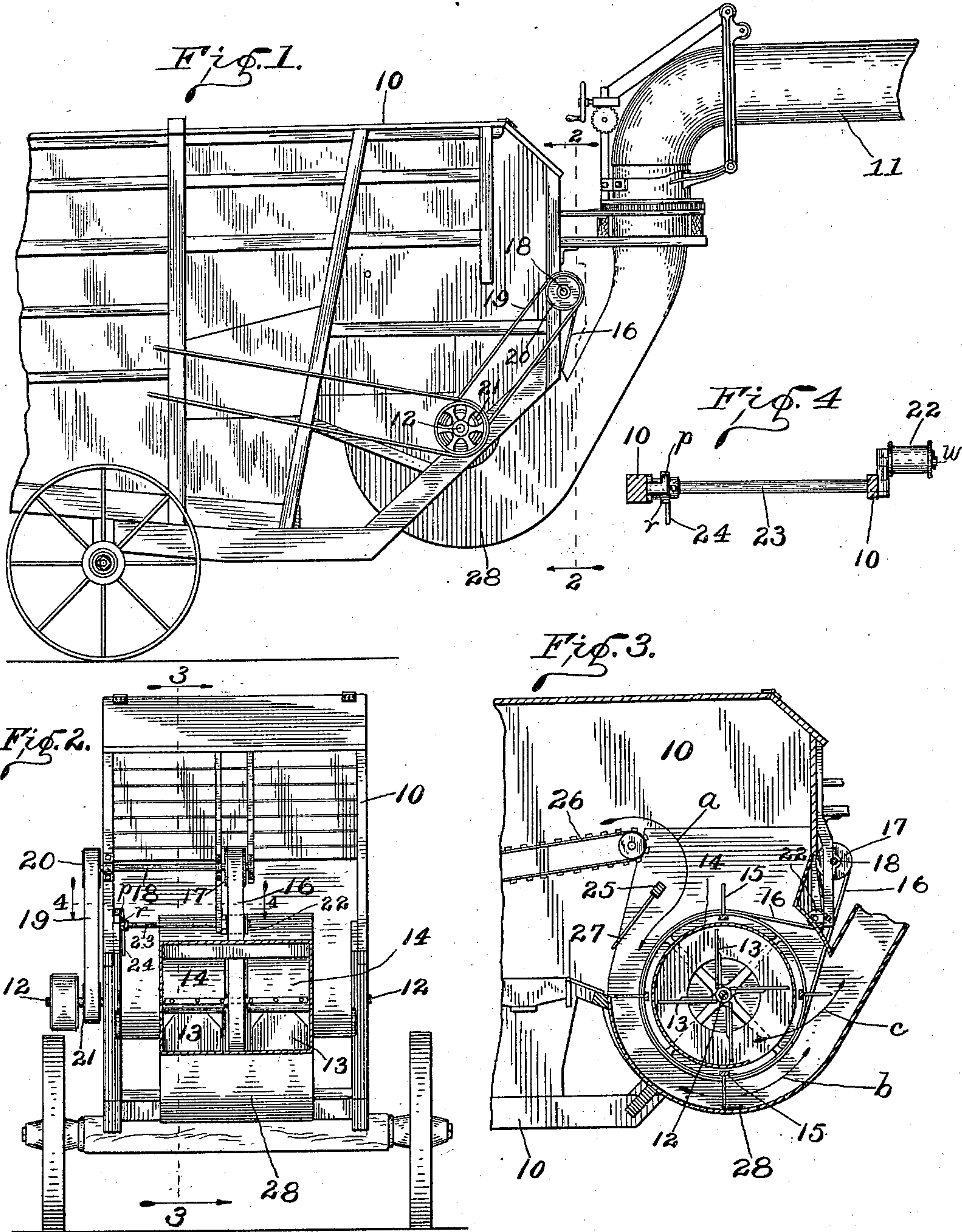
No. 686,144.

Patented Nov. 5, 1901.

J. B. SCHUMAN.
PNEUMATIC STRAW STACKER.

(Application filed June 15, 1901.)

(No Model.)



WITNESSES:
C. S. Frye.
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UNITED STATES PATENT OFFICE.

JAMES B. SCHUMAN, OF COLUMBIA CITY, INDIANA, ASSIGNOR TO THE
INDIANA MANUFACTURING COMPANY, OF INDIANAPOLIS, INDIANA,
A CORPORATION OF WEST VIRGINIA.

PNEUMATIC STRAW-STACKER.

SPECIFICATION forming part of Letters Patent No. 686,144, dated November 5, 1901.

Application filed June 15, 1901. Serial No. 84,727. (No model.)

To all whom it may concern:

Be it known that I, JAMES B. SCHUMAN, a citizen of the United States, residing at Columbia City, in the county of Whitley and State of Indiana, have invented certain new and useful Improvements in Pneumatic Straw-Stackers, of which the following is a specification.

My present invention consists in certain improvements on that which forms the subject-matter of Letters Patent of the United States No. 594,124, issued to me November 23, 1897, whereby a better means of driving the rotary fork is provided.

Referring to the accompanying drawings, which are made a part hereof, and on which similar reference characters indicate similar parts, Figure 1 is a side elevation of the rear end of a threshing-machine or separator provided with a pneumatic straw-stacker embodying my present invention; Fig. 2, a sectional rear elevation thereof as seen when looking in the direction indicated by the arrows from the dotted line 2 2 in Fig. 1; Fig. 3, a vertical sectional view through the fan of the straw-stacker, its housing, and adjacent parts as seen when looking in the direction indicated by the arrows from the dotted line 3 3 in Fig. 2; and Fig 4, a detail view showing the idler and its adjusting devices more plainly.

The threshing-machine or separator 10 and the straw-stacker trunk or chute 11 are or may be of any ordinary or desired form, and not being peculiar to my present invention will not be further described herein, except incidentally in describing said invention.

The fan-shaft 12, the fans 13 thereon, and the fan-housing 14 are substantially like those shown in my Patent No. 594,124, before mentioned, except that the construction has been somewhat improved. The rotary fork 15 is also (generally speaking) very similar to that shown and described in said patent, except that the central portion thereof is now formed as a pulley over which a driving-belt 16 runs. This pulley is driven from a small pulley 17 on a counter-shaft 18, and this in turn is driven by a belt 19, running to a pulley 20 thereon, from a pulley 21 on the fan-shaft 12. These pulleys are so pro-

portioned as to give the proper speed to the rotary fork, which, as stated in my former patent, should be considerably less than that of the fans. In order to bring the two members of the belt 16 to the outside of the casing at the proper point and near together, I provide an idler 22, which may also be and preferably is at the same time a tightener-pulley, by means of which I am enabled to regulate the tension of the belt 16. This pulley 22 is shown as mounted on a rock-shaft 23, mounted in bearings on members of the frame of the separator 10, being immediately carried by a wrist *w* of a crank-arm of said shaft, the position of which is governed by a pawl *p*, mounted on an adjacent portion of the frame of the separator and engaging with a segmental rack *r* on the shaft 23, the latter being operated when desired by a lever-handle 24.

In order to prevent the straw from being thrown back onto the sieves of the separator by the rotary fork and at the same time to provide a free exit for the chaff and dust, so that the same may be delivered freely to the straw-stacker, I have provided a transverse bar 25 at a point just below the delivery end of the straw-rattles 26 and inserted in said bar several fingers 27, which are close enough to prevent the straw from being thrown back and at the same time provide a free passage for chaff and other refuse.

In operation the rotary fork takes the straw as it comes from the riddle 26 and carries it around between the fan-casing 14 and the outer casing 28 to in front of the blast from the fan, the course being that indicated by the curved arrows *a* and *b* in Fig. 3, while the direction of the blast is indicated by the arrow *c*. The outer casing 28 develops into a conduit 29, leading to the straw-stacker "stump," the course being thence to the curved telescopic rear end of the trunk or chute 11, similarly as in my former patent. By this means of driving the rotary fork I avoid all gearing and reduce greatly the liability of wear and breakage. I am also enabled to maintain the proper tension of the belt at all times, the same being capable of being instantly regulated whenever desired and without stopping the machine. The bar

25 and its fingers 27 constitute a slatted fender, and this also may be adjusted to requirements, according to the amount of straw passing through the machine.

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

1. The combination, in a pneumatic straw-
10 stacker, of a fan, a fan-casing, a rotary fork
mounted on the fan-shaft and adapted to
throw the straw into the path of the air-blast
from the fan, a large pulley on said rotary
fork, a belt running therefrom to a pulley on
15 a counter-shaft, and another belt running
from said counter-shaft back to the fan-shaft,
whereby suitable relative speeds between the
fork and fan are secured, substantially as
shown and described.

2. The combination, in a pneumatic straw-
20 stacker, of a fan-shaft, two fans thereon, a
fan-casing for each fan, a rotary fork mounted
on the fan-shaft between the two fans the
central portion whereof constitutes a pulley,
a belt running from said pulley to a counter-

shaft outside the separator, an idler for bring- 25
ing the two members of the belt close together
and also constituting a tightener, and suit-
able means for driving said counter-shaft.

3. The combination of a separator, a pneu-
matic straw-stacker secured to said separator 30
the fan whereof is within the inclosure be-
hind and below the straw-carrying raddles of
said separator, a rotary fork mounted on the
fan-shaft and adapted to throw the straw as
it comes from the raddles into the path of the 35
blast from the fan, and a slatted fender po-
sitioned below the straw-raddles and along-
side the path of the fork whereby the straw
is prevented from being thrown by the fork
back onto the sieves of the separator while 40
free egress of the chaff and dust is permitted.

In witness whereof I have hereunto set my
hand and seal, at Indianapolis, Indiana, this
12th day of June, A. D. 1901.

JAMES B. SCHUMAN. [L. S.]

Witnesses:

CHESTER BRADFORD,
L. H. COLVIN.