

No. 648,514.

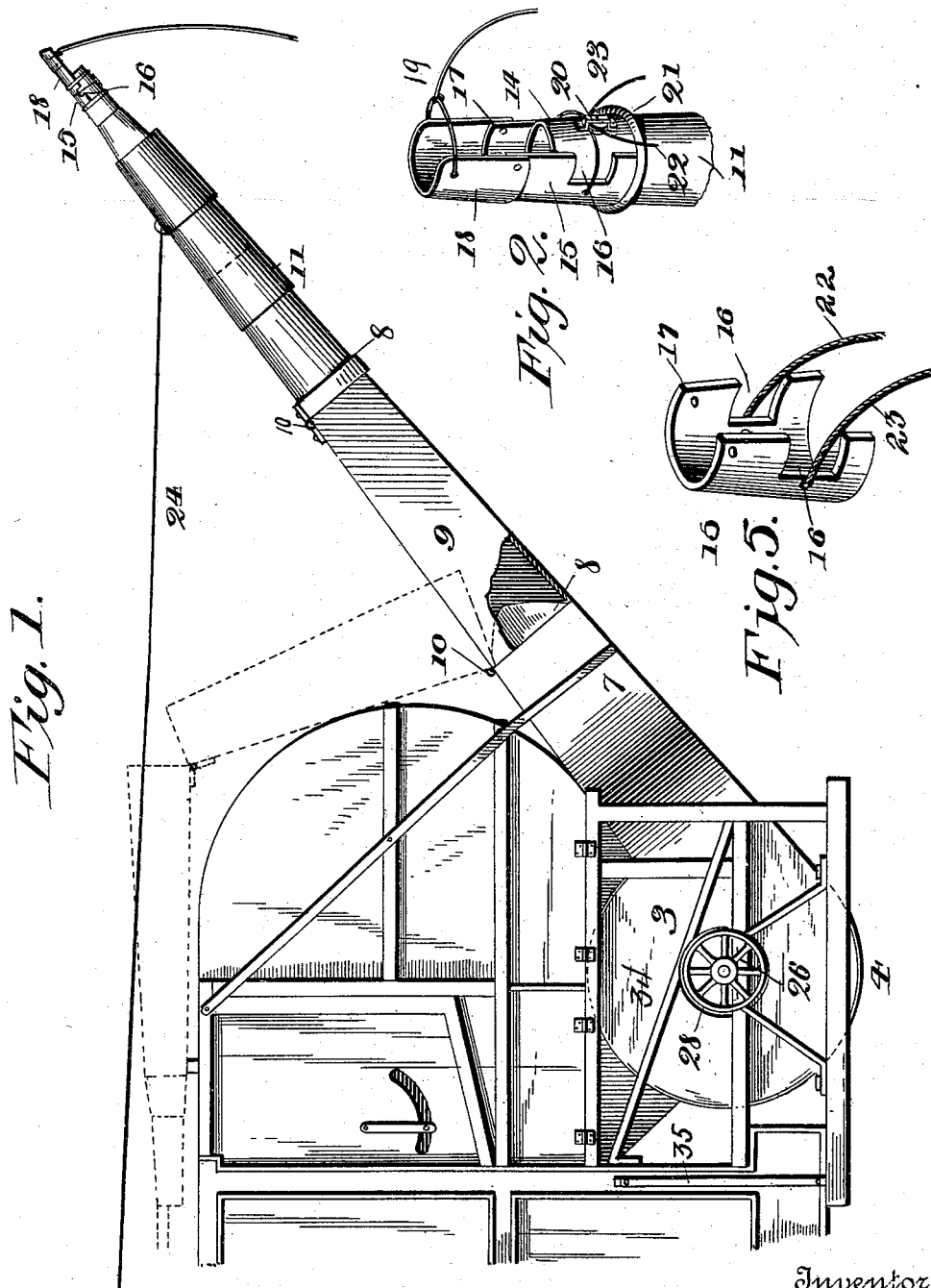
Patented May 1, 1900.

O. A. MICKELSON.
COMBINED STRAW BLOWER AND SPOUT.

(Application filed Apr. 7, 1899.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses

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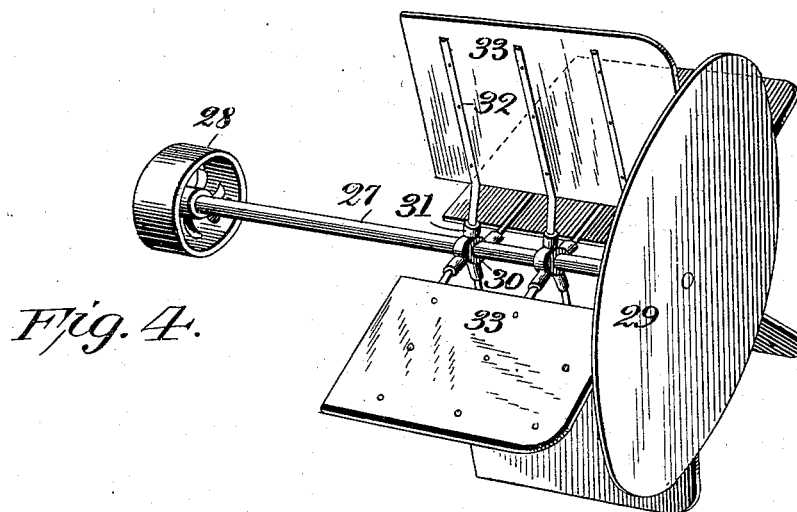
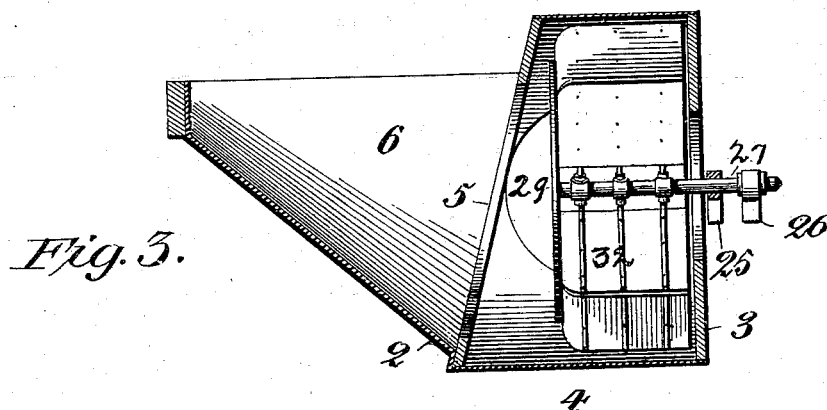
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UNITED STATES PATENT OFFICE.

OLE A. MICKELSON, OF WINGER, MINNESOTA.

COMBINED STRAW BLOWER AND SPOUT.

SPECIFICATION forming part of Letters Patent No. 648,514, dated May 1, 1900.

Application filed April 7, 1899. Serial No. 712,127. (No model.)

To all whom it may concern:

Be it known that I, OLE A. MICKELSON, a citizen of the United States, residing at Winger, in the county of Polk and State of Minnesota, have invented certain new and useful Improvements in a Combined Straw Blower and Spout; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain new and useful improvements in a combined straw blower and spout.

The invention has for its object to construct a straw blower and spout for threshing-machines, separators, and the like which will be simple in its construction, strong, durable, effectual in its operation, and comparatively inexpensive to manufacture.

In describing my invention in detail reference will be had to the accompanying drawings, forming a part of this specification, and wherein like figures of reference indicate corresponding parts throughout the different views, in which—

Figure 1 is a side view of a part of a separator, showing my improved blower and spout in position, the latter being partly broken away to illustrate the construction and also showing the position when folded in dotted lines. Fig. 2 is a perspective view of the adjustable cap which is secured to the end of the spout. Fig. 3 is a longitudinal sectional view of the blower with fan in position. Fig. 4 is a perspective view of my improved fan.

Referring now to the drawings by reference-numerals, 1 indicates the fan-chamber of the blower, the side walls 2 and 3 and rim 4 of which inclose the fan. The side wall 2 is provided with a central opening 5 and also has connected thereto the hopper 6, which may be supported at its other end from a suitable or desired point on the separator. Also connected to the casing of the fan-chamber is the spout extension 7, communicating with the fan-chamber at its inner end and at its outer end having reinforcement-wings 8, adapted to be engaged by the adjoining section of the spout in order to effect a rigid joint when the spout is extended. This spout is formed in two or more sections—namely, the

spout extension 7, a section 9, hinged, as at 10, thereto and to the said section 9, and a section 11. This latter is preferably made round, as shown, and may also be made telescopic, as shown in dotted lines. This construction of the spout permits the folding of the same when not in use, as shown in dotted lines in Fig. 1 of the drawings. To the outer end of the section 11 is secured the adjustable cap, by means of which the exit of refuse from the spout may be controlled. This adjustable cap consists of a ferrule or sleeve 14, secured to the outer end of the section 11 and upon which is mounted and adapted to operate thereon the half-sleeve 15, which extends some distance beyond the outer end of the sleeve 14 and is provided on its two straight edges with cut-away portions 16 to permit a greater rotary movement of the half-sleeve, as will be hereinafter explained. Pivotal secured, as at 17, to the half-sleeve 15 is an auxiliary half-sleeve 18, having a bail 19 attached thereto, to which is attached a rope or cable for operating said half-sleeve 18.

Secured to the side of the sleeve 14 is a keeper 20, within which is journaled a double pulley 21 to receive the cords 22 and 23, the former being connected to one side of the half-sleeve 15 and the latter being connected to the opposite side thereof for operating the said half-sleeve in different directions, as will be readily apparent. The cut-away portions 16 are of a size sufficient to receive the keeper 20 as the half-sleeve 15 is turned in either direction, thereby permitting a greater rotary motion being imparted to this sleeve than would otherwise be obtained. For the purpose of supporting the spout when extended a cord or cable 24 may be attached to the spout at a suitable point and its other end fastened at a desired point upon the separator.

My improved fan is supported within the fan-chamber by means of bearings 25 26, connected to the frame of the separator, and in which the drive-shaft 27 of the fan is journaled. This drive-shaft 27 has mounted on its outer end the drive-pulley 28 and on its inner end a disk 29, which is adjacent to the opening 5 in the fan-chamber and of a diameter about equal to said opening.

Rigidly mounted on the drive-shaft is a

series of hubs 30, having sockets 31 to receive the inner ends of the spokes 32, to which are rigidly connected the fan-blades 33.

The blower may be held rigidly in position 5 by means of a pair of braces 34 and 35, secured to each side of the blower and to the separator, as shown in Fig. 1 of the drawings.

It will be noted that various changes may 10 be made in the details of the drawings without departing from the general spirit of my invention.

I do not herein claim specifically the construction and mechanism of the blower, fan, 15 and fan-chamber, as the same are expressly claimed in my application for patent upon "pneumatic stackers," Serial No. 11,109, filed April 2, 1900.

Having fully described my invention, what 20 I claim as new, and desire to secure by Letters Patent, is—

In a combined straw blower and spout, the combination with the fan-chamber thereof having a fan suitably arranged therein, of a 25 spout connected at one end to the said cham-

ber and comprising a series of hinged sections, a cylindrical sleeve 14 secured to the outer section of the said spout, a half-sleeve 15 rotatably mounted on the end of the spout and adapted to partly surround and extend 30 beyond the said sleeve 14 and cut away at its side edges for obtaining a greater rotary movement, a keeper secured to the periphery of the said sleeve 14, a pulley suitably connected to the said keeper, means connected 35 to the said half-sleeve 15 and passing over the said pulley for rotating the half-sleeve 15 in opposite directions, an auxiliary half-sleeve 18 pivotally connected to the said half-sleeve 15 and extending above the same and 40 adapted to rotate therewith, and means connected to the said half-sleeve 18 for operating the same, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

OLE A. MICKELSON.

Witnesses:

JOHN VIG,

M. N. ESLYOMSSON.