(No Model.)

O. H. ANDERSON.

COMBINED STRAW CARRIER AND GRAIN SEPARATOR.

No. 560,768. Patented May 26, 1896.

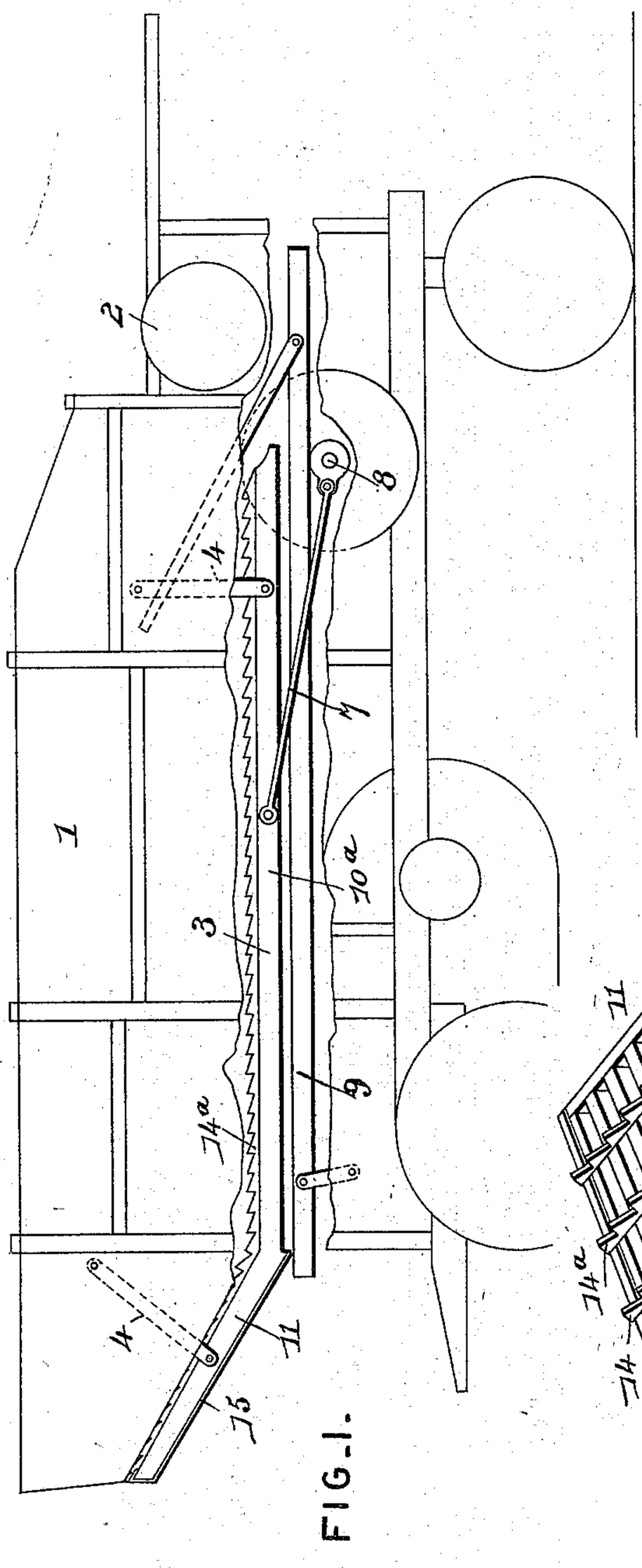

FIG. 1.

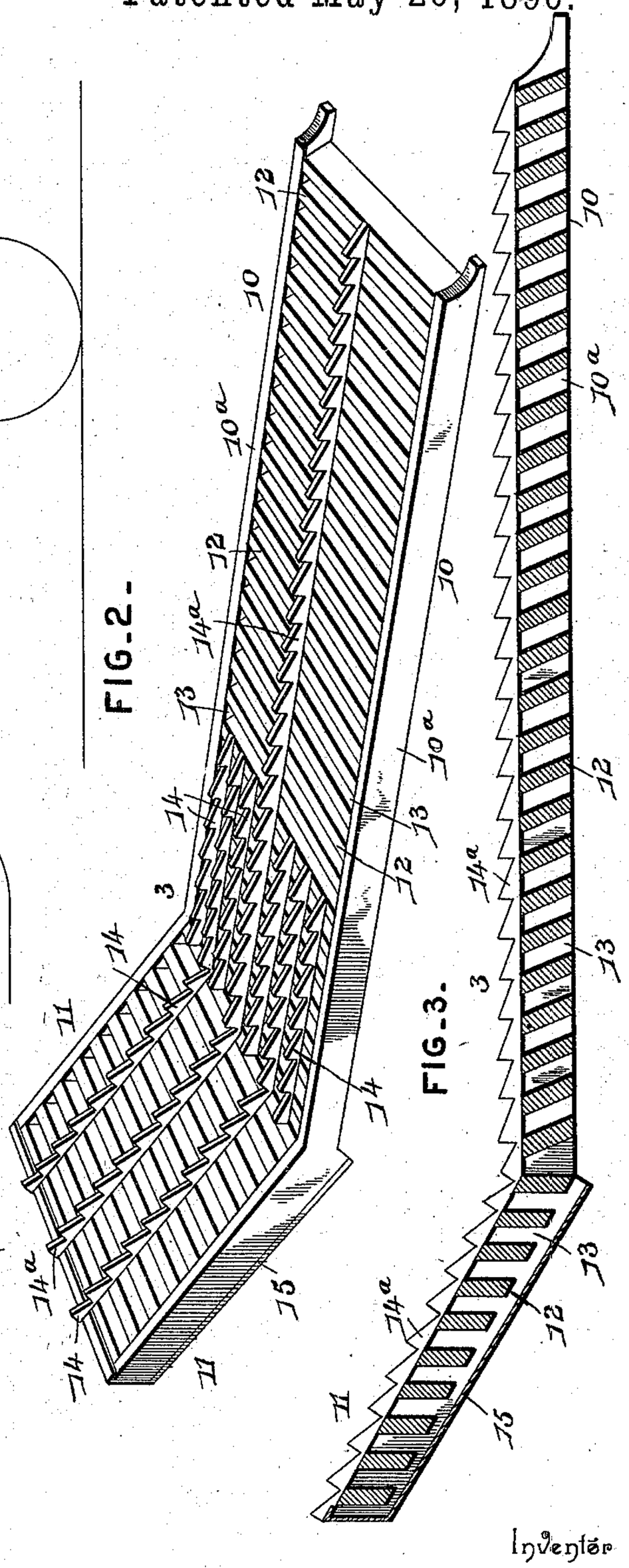

FIG. 2.

FIG. 3.

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OSMAN H. ANDERSON, OF GODDARD, KANSAS.

COMBINED STRAW-CARRIER AND GRAIN-SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 560,768, dated May 26, 1896.

Application filed December 18, 1894. Serial No. 532,206. (No model.)

To all whom it may concern:

Be it known that I, OSMAN H. ANDERSON, a citizen of the United States, residing at Goddard, in the county of Sedgwick and State of Kansas, have invented a new and useful Combined Straw-Carrier and Grain-Separator, of which the following is a specification.

This invention relates to combined straw-carriers and grain-separators for threshing-machines; and it has for its object to provide a new and useful device of this character that is adapted to be arranged within an ordinary threshing-machine in place of the straw-carriers in common use in threshers, and directly above the usual cleaning devices, to provide simple and positive means for carrying the straw from one end of the machine to the other, and also to insure the complete separation of the grain from the straw.

To this end the main and primary object of the present invention is to provide a strong and durable combined straw-carrier and separator for threshers that shall be so constructed as to positively feed the straw out at one end of the machine and thoroughly and completely separate the grain from the straw.

With these and other objects in view, which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the drawings, Figure 1 is a diagrammatic sectional view of a portion of an ordinary grain-threshing machine, showing the improved combined straw-carrier and separator arranged therein. Fig. 2 is a detail in perspective of the combined straw-carrier and separator removed from the threshing-machine. Fig. 3 is a central longitudinal sectional view of the construction shown in Fig. 2.

Referring to the accompanying drawings, 1 designates the casing of an ordinary threshing-machine, at one end of which is arranged the usual threshing-cylinder 2, and adapted to be arranged within the casing 1 in place of the straw-carriers commonly employed is the horizontally-vibrating combined straw-carrier and grain-separator 3. The horizontally-vibrating combined straw-carrier and grain-separator 3 is preferably suspended for vibration within the casing 1 of the threshing-machine by means of suitably-arranged pivoted hanger-links 4, and at a suitable point the said carrier and separator is adapted to have connected thereto one end of an operating-pitman 7, driven from a crank-shaft 8 in the usual way, to provide for transmitting a longitudinal or horizontal vibration to the combined carrier and separator, and in the present invention the said combined carrier and separator is adapted to be arranged directly above an ordinary alternately-vibrating grain-pan 9, that is suitably supported within the casing for an alternate vibration or reciprocation with respect to the combined carrier and separator, and the said grain-pan is designed to feed the grain to the cleaning devices (not shown) of the threshing-machine in the usual way.

The grain-pan 9 of the threshing-machine extends the entire length of the casing and under the horizontal portion of the combined carrier and separator 3. The combined carrier and separator 3 consists of a substantially rectangular frame 10, comprising opposite parallel connected side bars 10^a, and at one end the said frame 10 is provided with an upwardly-inclined end portion 11, that projects beyond one end of the grain-pan 9, over which the carrier and separator works, and is located or disposed at the discharging end of the threshing-machine, where the straw is delivered to the stacker. The opposite parallel side bars 10^a of the frame 10 are connected from end to end thereof by a series of parallel cross-slats 12. The cross-slats 12 are arranged at regularly-spaced distances apart to leave grain-spaces 13 therebetween, and the said parallel slats are arranged at an angle or disposed in oblique planes to provide for forcing or moving the straw toward and over the inclined end portion of the frame and also for directing the loose grain through the grain-spaces 13 and into the grain-pan 9 therebelow.

The flat upper edges of the oblique cross-slats 12 present an edged or notched surface to the straw to insure the positive feeding thereof out to and over the inclined discharging end portion of the frame 10. The positive feeding of the straw may be assisted by attaching to the flat upper edges of the slats of the combined carrier and separator a series

of parallel notched or toothed feed-strips 14. A number of the feed-strips 14 are grouped closely together at one end of the horizontal portion of the combined carrier and separator, and a less number are placed on the upwardly-inclined end portion thereof to prevent the straw from falling back onto the horizontal portion of the carrier and separator, and to cause the same to be discharged up and over said inclined portion, while a single notched or toothed feed-strip 14ª is preferably arranged to extend centrally and longitudinally the entire length of the carrier and separator. The said notched or toothed feed-strips principally serve to separate the bunches of straw to relieve the same of the loose grain which falls through the spaces between the slats.

In connection with the function of the notched or toothed feed-strips referred to it will be noted that the straw in going over the horizontal portion of the combined carrier and separator tends to accumulate at the foot or lower end of the inclined portion, and therefore the said notched or toothed feed-strips are grouped in an increased number and set closer together at one end of the horizontal portion of the combined carrier and separator, so as to obtain a better hold upon the straw and more effectively start it up said inclined portion.

The upwardly-inclined end portion of the frame 10 has attached to the under side thereof a grain plate or board 15, that forms a chute to catch the grain that falls between the slats of the inclined end portion of the carrier and separator and to direct the same back onto the grain-pan.

From the above it is thought that the construction, operation, and many advantages of the herein-described combined straw-carrier and separator will be apparent without further description, and it will be understood that changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

A combined straw-carrier and separator consisting of a rectangular frame adapted to be supported for horizontal vibration within a threshing-machine and having an upwardly-inclined end portion formed by angled extensions of the side bars of the frame, a series of parallel obliquely-disposed cross-slats connecting the side bars of the frame from end to end thereof and having flat upper edges, a series of parallel notched feed-strips disposed longitudinally of the frame and secured directly on the flat upper edges of the slat, a number of said feed-strips being closely grouped together at one end of the horizontal portion of the frame, and a single one of said strips being arranged to extend centrally and longitudinally the entire length of the frame, substantially as set forth.

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

OSMAN H. ANDERSON.

Witnesses:
JESSIE F. ANDERSON,
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