

No. 754,394.

PATENTED MAR. 8, 1904.

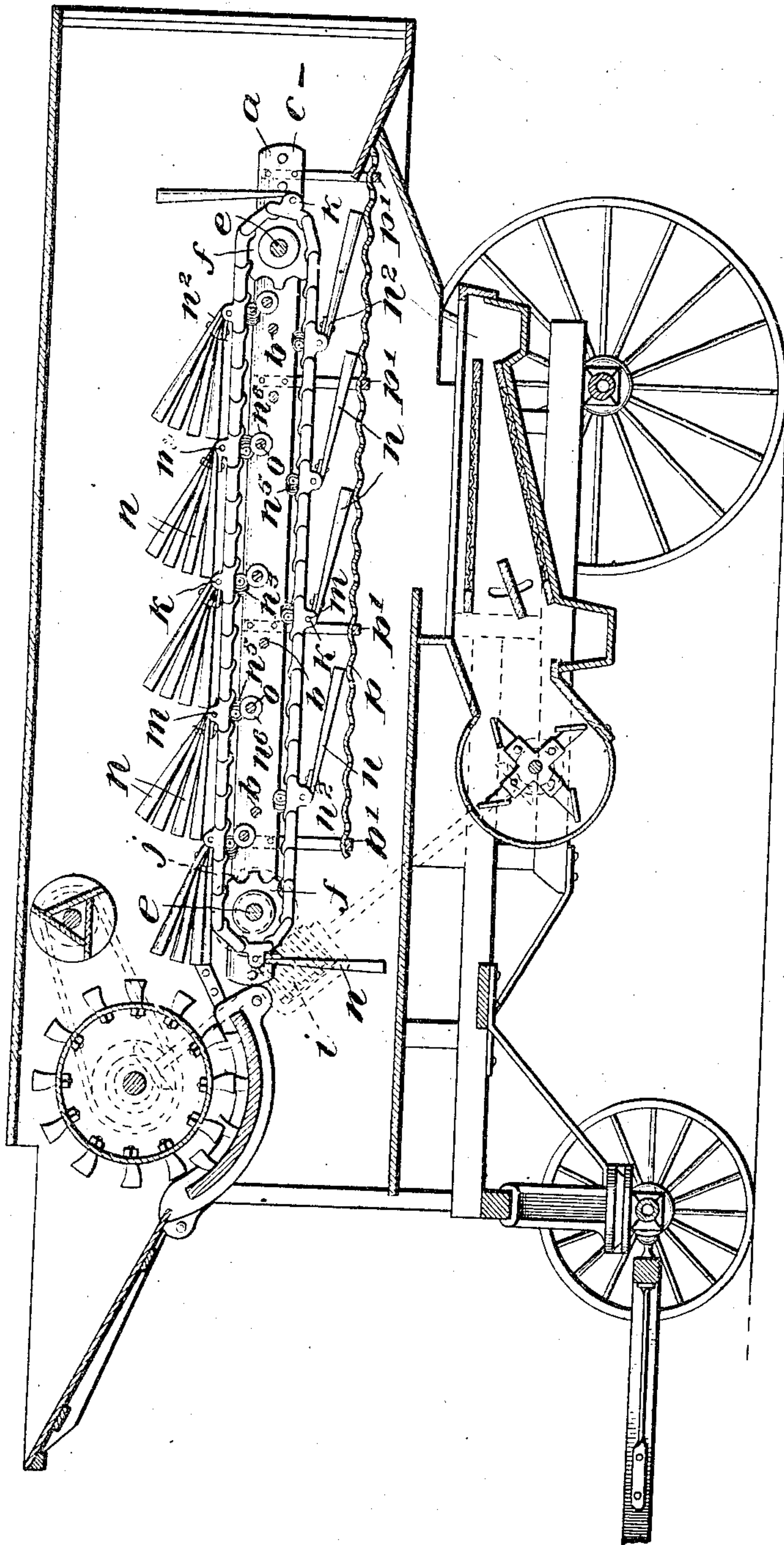
H. J. SILVIS.  
SEPARATOR.

APPLICATION FILED DEC. 24, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses

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No. 754,394.

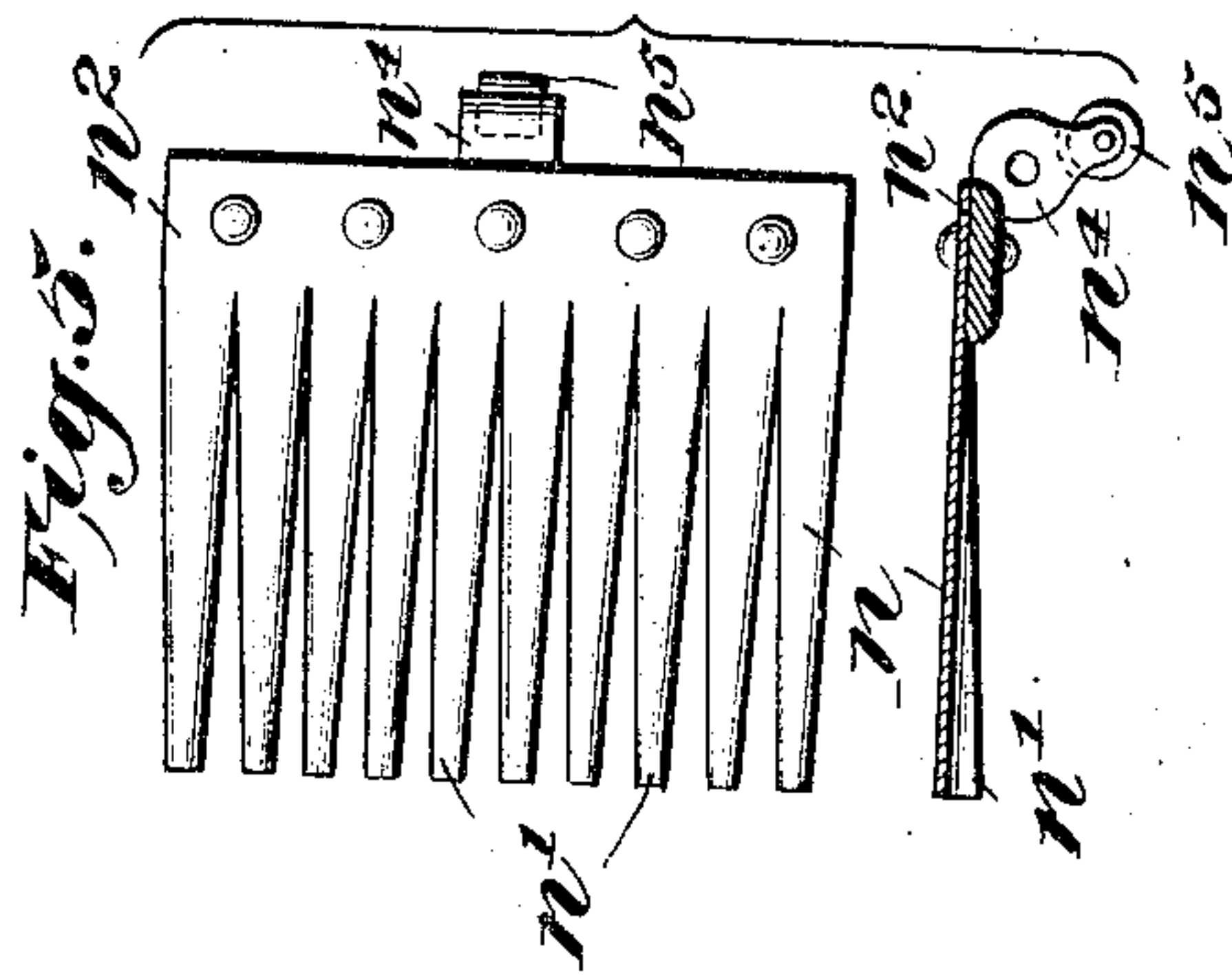
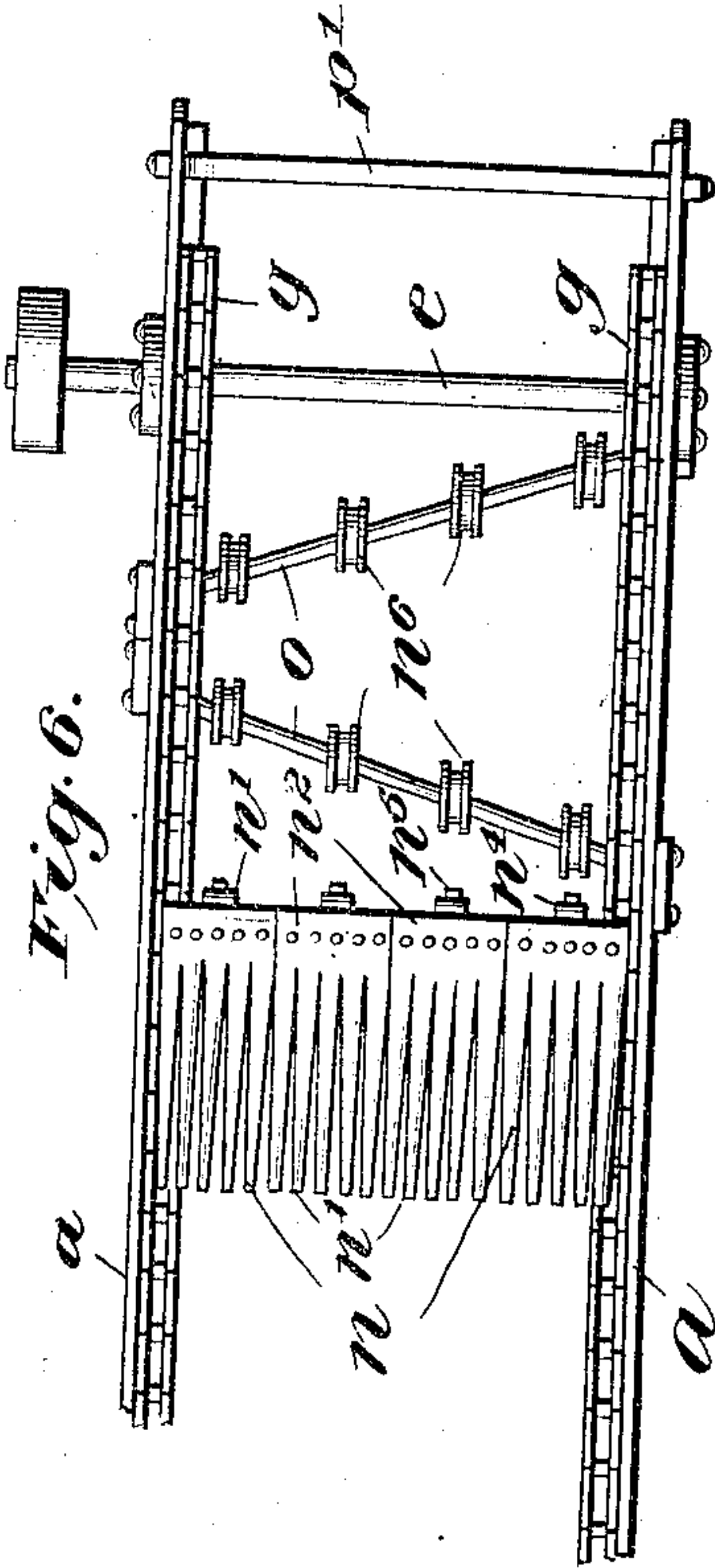
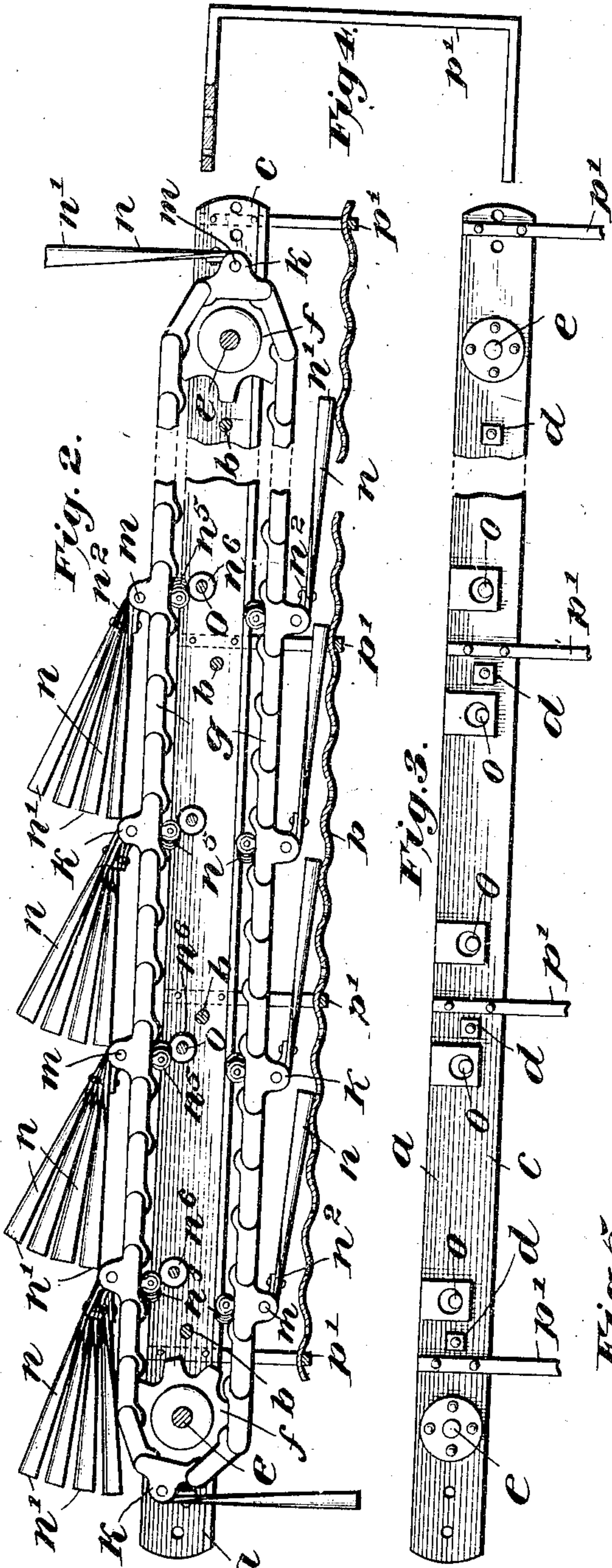
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SEPARATOR.

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NO MODEL.

2 SHEETS—SHEET 2.



Witnesses

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# UNITED STATES PATENT OFFICE.

HARRY J. SILVIS, OF GREENSBURG, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO Z. T. SILVIS, OF GREENSBURG, PENNSYLVANIA.

## SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 754,394, dated March 8, 1904.

Application filed December 24, 1902. Serial No. 136,491. (No model.)

*To all whom it may concern:*

Be it known that I, HARRY J. SILVIS, a citizen of the United States of America, and a resident of Greensburg, in the county of Westmoreland and State of Pennsylvania, have invented certain new and useful Improvements in Separators, of which the following is a specification.

My invention relates to an improvement in grain-separators; and it consists, primarily, in the provision of a separating means which can be placed in any of the threshing-machines now in use and is simple, cheap, easily operated and compact, besides being efficient in operation.

A further object is to provide a means whereby a continuous and positive feeding and separation of the grain is effected without the use of crank-shafts, thereby reducing the vibration of the separator to a minimum.

This invention is designed as an improvement upon a portion of the structure set forth in the application filed July 20, 1901, Serial No. 69,142, of which Henry White and myself are joint inventors, and I am aware that the present structure resembles that shown in the prior application above referred to; but I wish it understood that I do not wish to claim any of the subject-matter shown therein, but to confine myself to the novel features disclosed for the first time in this present application.

In the accompanying drawings, Figure 1 is a view in side elevation of my invention, showing it attached to a separator. Fig. 2 is a side elevation detached from the separator. Fig. 3 is a side view of one of the bars to which my improvement is attached. Fig. 4 is a detail view of one of the hangers which support the table. Fig. 5 is a top view of one section of the traveling beaters. Fig. 6 is a detail in top plan view of my improvement.

Similar characters refer to similar parts throughout the several views.

In applying my improvement to the ordinary type of grain-separators I provide angle-bars  $a$ , which are secured to the casing of the separator (not shown on the drawings) by bolts  $b$ , which pass through the downwardly-depending portion  $c$  of the angle-bars and the

casing. Both ends of the bolts are threaded and adapted to receive the nuts  $d$ , which are brought in contact with the depending portion of the angle-iron and the exterior surface of the casing, securely bracing the frame of the separator and supporting the bars.

Shafts  $e$ , having sprocket-wheels  $f$  fitted upon each end, are journaled in the sides of the casing transversely therewith.

Sprocket-chains  $g$  are mounted upon the sprocket-wheels  $f$  and are adapted to rotate thereon continuously when motion is imparted through the medium of the shaft  $l$ , upon which a worm-gear  $i$  is mounted, meshing with gear  $j$ , mounted on the sprocket-shaft.

In constructing the sprocket-chain a number of the links are provided with lugs  $k$ , having suitable apertures provided therein, forming bearings for shafts  $m$ , upon which are mounted a series of traveling beaters  $n$ . The traveling beaters are composed of sheet metal blanked out, leaving the aprons  $n'$ , which forms a series of fingers. The fingers merge into a blank portion  $n''$ , which is attached to a plate or bracket 2, having a downwardly-projecting lug  $n^4$ , made integral with the plate 2, which lug carries a roller  $n^5$ . One or more sections of the traveling beaters are mounted upon the shafts, and as motion is imparted to the sprocket-chains the rollers  $n^5$  are brought in contact with similar rollers  $n^6$ , mounted upon shafts  $o$ , journaled in the casing at an angle with the travel of the beaters. This arrangement provides a means of imparting motion to the beaters alternately, as shown in the drawings, giving a continuous oscillating motion in the arc of a circle, thereby thoroughly agitating the grain and separating it from the chaff. A corrugated and perforated table  $p$  is supported by the depending hangers  $p'$ , which are attached to the angle-bars, and when the beaters are on their return travel they drop by gravity onto the table, distributing the grain over the surface of the table.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. An attachment for grain-separators comprising a pair of bars attachable interiorly of the separator, rotatable shafts journaled in the



bars, traveling means carried by the shafts, beaters carried by the traveling means, and means for causing an oscillation of the beaters.

2. An attachment for grain-separators, comprising a pair of bars detachably secured interiorly of the separator, shafts journaled in the bars, traveling belts passing over the shafts, beaters carried by the belts, means for oscillating the beaters, hangers depending from the bars, and a screen supported by the hangers beneath the beaters, the latter adapted to drag over the screen on their return movement.

3. As an article of manufacture, an attachment for separators comprising a pair of bars attachable to the separator, traveling beaters supported by the shafts, hangers depending from the shafts and a screen carried by the hangers beneath the beaters, the mechanism in its entirety being bodily removable from the separator.

4. An attachment for separators comprising a pair of bars attachable to the separator, traveling means carried thereby, beaters supported by the traveling means, each beater com-

prising a series of fingers, a blank portion into which the fingers merge, a plate to which the blank portion is secured and a lug extending from the plate, each finger gradually tapering from the blank portion to the free end, and aprons carried by each finger, the aprons tapering from the ends of the fingers to the blank portion, the fingers separated by tapering interstices.

5. As an article of manufacture, an attachment for separators comprising a pair of bars removably secured to the walls of the separator, bearings formed in and carried by the bars, shafts received in the bearings, traveling beaters carried by the shafts, and rods received in the bearings in the bars, the traveling beaters adapted to impinge against the rods.

Signed at Mansfield this 27th day of October, 1902.

HARRY J. SILVIS.

Witnesses:

JOHN H. COSS,  
EDITH CLINE.