

No. 613,654.

Patented Nov. 8, 1898.

J. A. ANDERSON.
THRESHING MACHINE CYLINDER.

(Application filed Nov. 11, 1897.)

(No Model.)

FIG. 1.

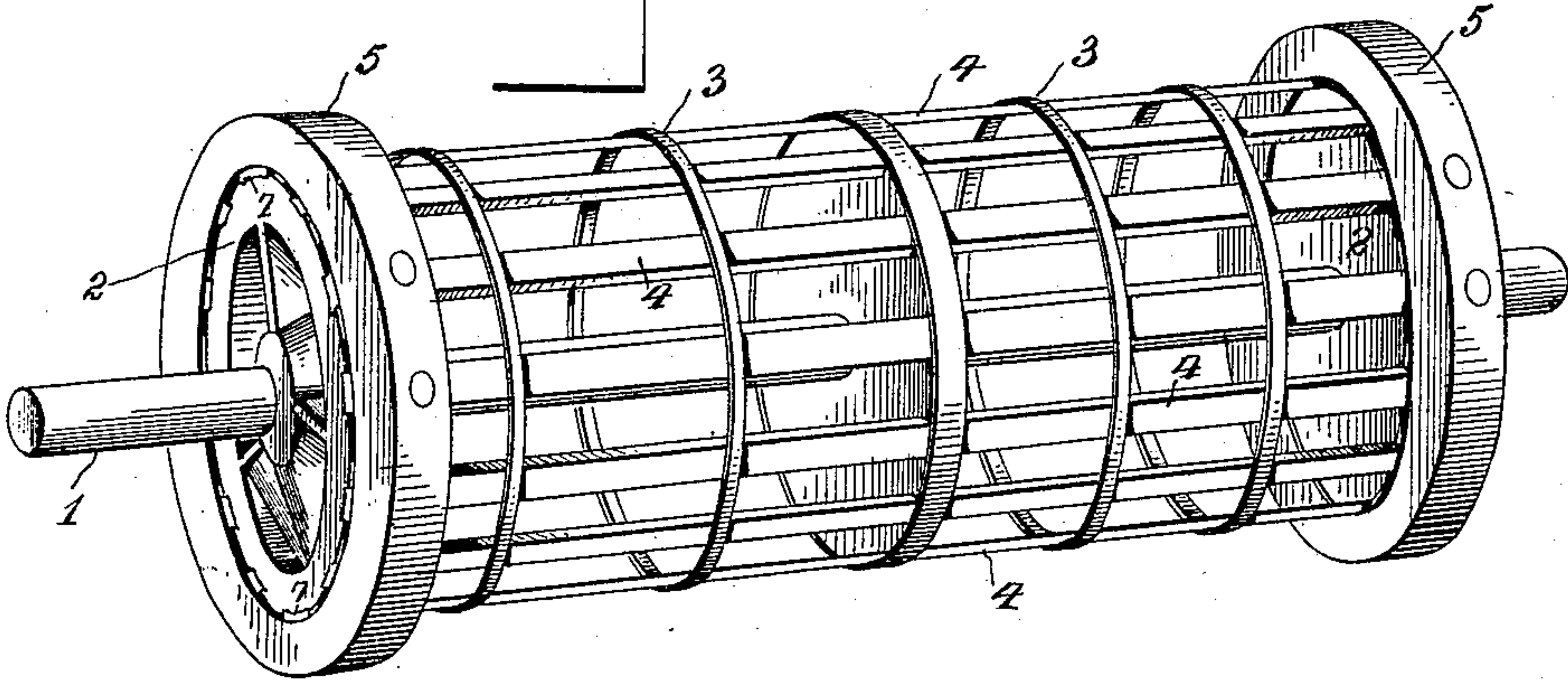


FIG. 2.

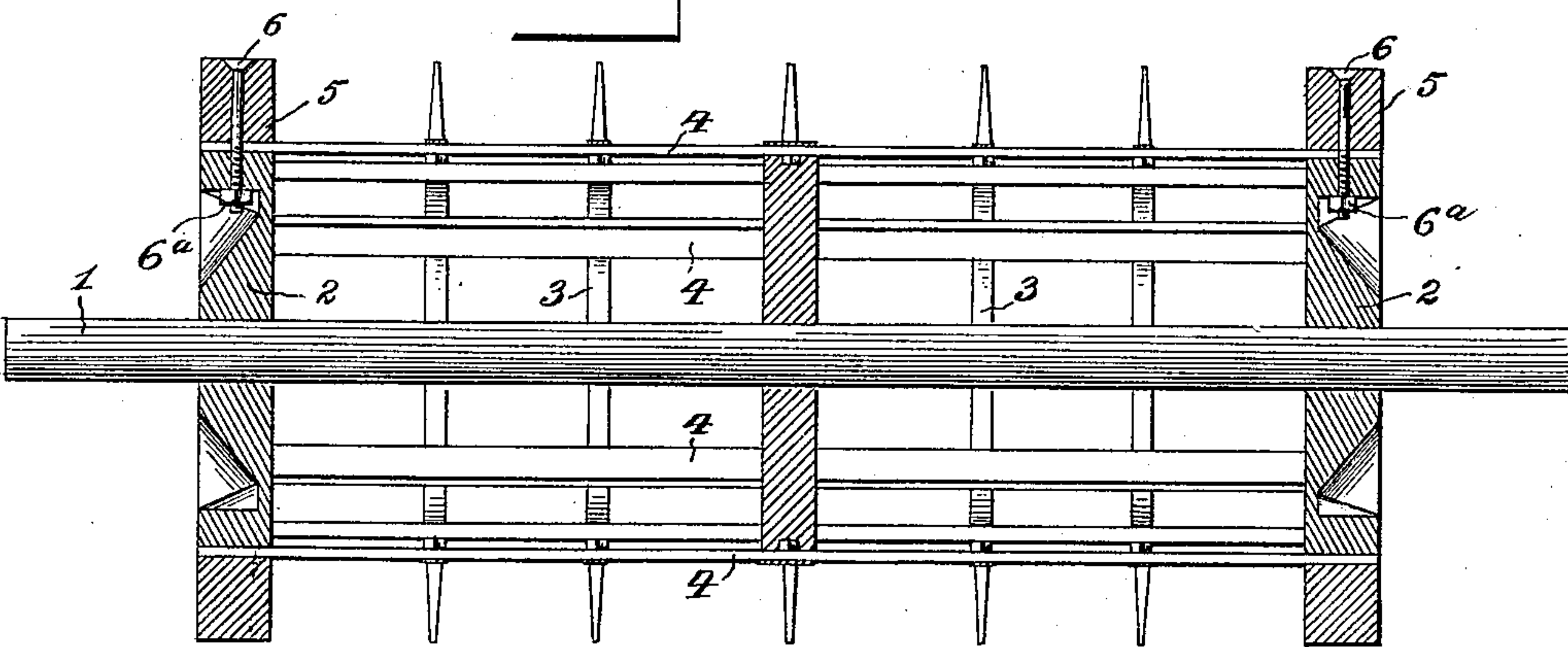


FIG. 3.

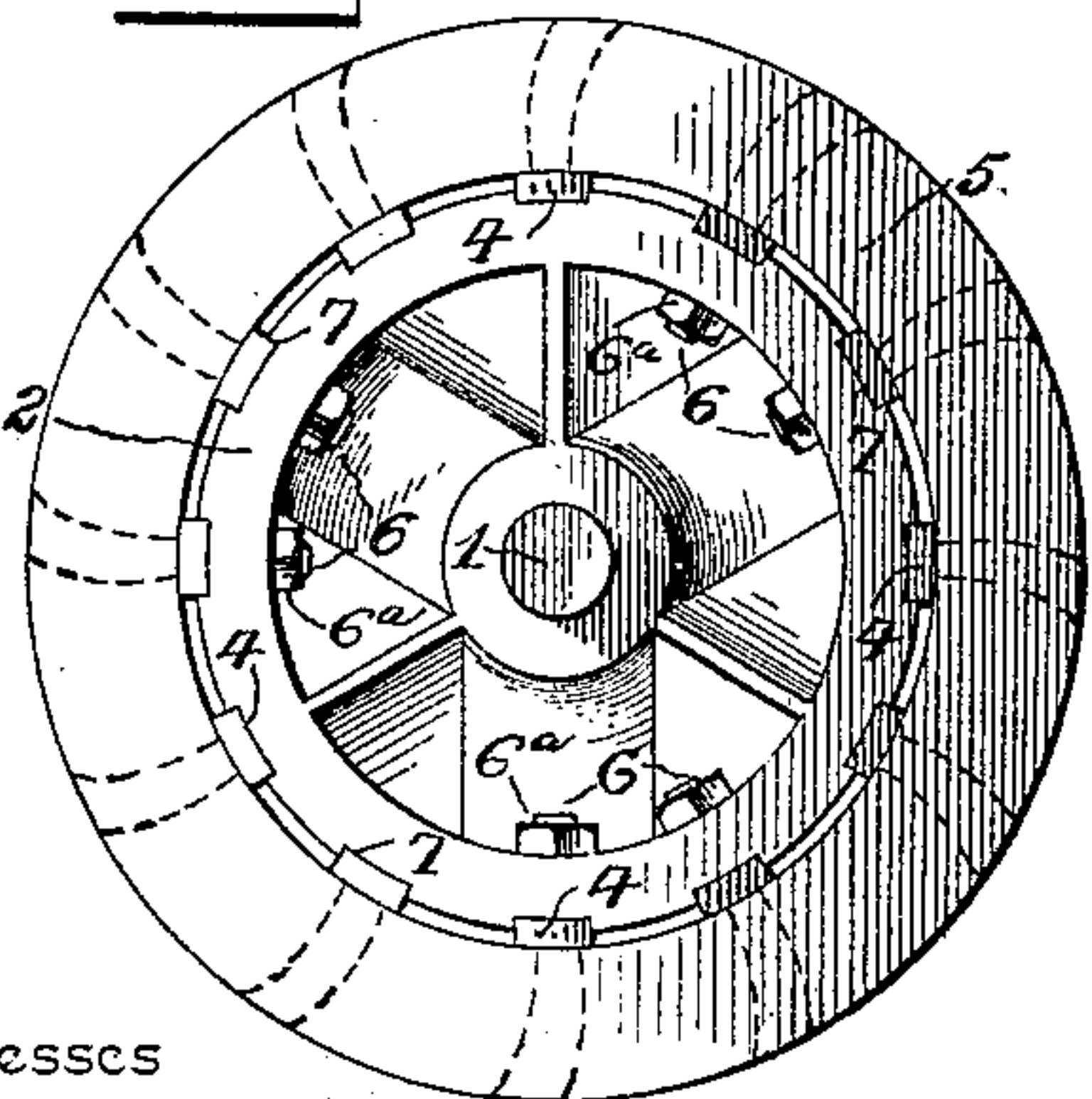
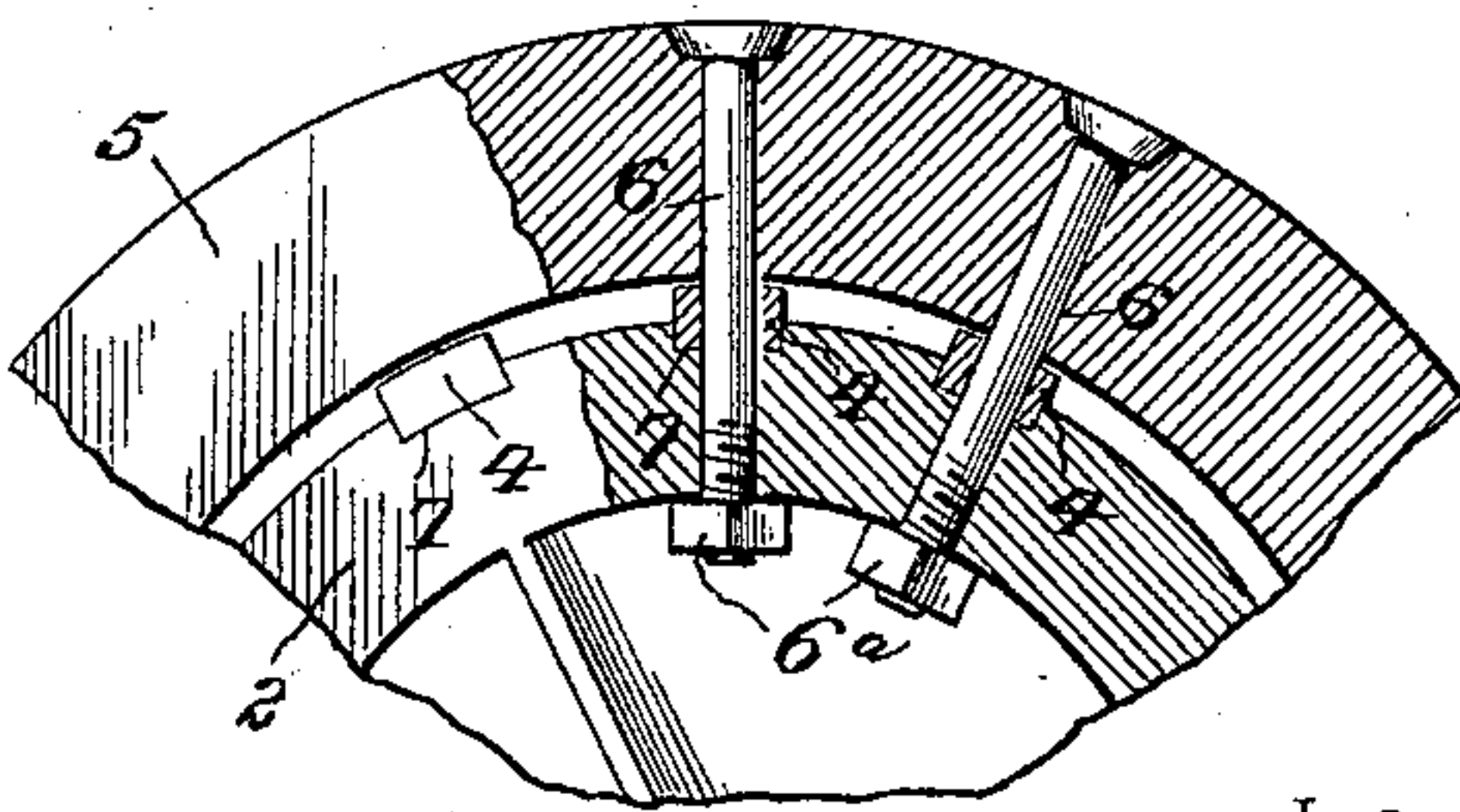


FIG. 4.



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Witnesses

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UNITED STATES PATENT OFFICE.

JOHN ALFRED ANDERSON, OF SIOUX CITY, IOWA.

THRESHING-MACHINE CYLINDER.

SPECIFICATION forming part of Letters Patent No. 613,654, dated November 8, 1898.

Application filed November 11, 1897. Serial No. 658,145. (No model.)

To all whom it may concern:

Be it known that I, JOHN ALFRED ANDERSON, a citizen of the United States, residing at Sioux City, in the county of Woodbury and State of Iowa, have invented a new and useful Threshing-Machine Cylinder, of which the following is a specification.

My invention relates to improvements in the cylinders of threshing-machines; and the object that I have in view is to provide an improved construction of the cylinder by which it is caused to rotate at a uniform regular speed and in a manner to reduce the power required for the proper operation of the cylinder.

A further object that I have in view is to provide a construction by which the parts may be assembled readily together and in a manner to brace and reinforce the longitudinal bars or lags of the cylinder.

To the accomplishment of these ends my invention consists in a cylinder comprising the heads, a series of lags or bars, and weighted rims united to the heads and upon the lags or bars to serve as balance-wheels by which the cylinder may be caused to rotate steadily with a smaller expenditure of power than is required with a cylinder of ordinary construction; and the invention further consists in the peculiar construction and arrangement of parts which will be hereinafter fully described and claimed.

To enable others to understand my invention, I have illustrated the same in the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a perspective view of a threshing-machine cylinder embodying my invention. Fig. 2 is a vertical longitudinal sectional view thereof. Fig. 3 is an end elevation of the cylinder; and Fig. 4 is an enlarged detail sectional view through the balance-rim, a head, two of the bars or lags, and the securing-bolts.

Like numerals of reference denote corresponding parts in all the figures of the drawings.

In the preferred embodiment of the invention illustrated by the drawings the cylinder consists of a shaft 1, the heads 2 2, a series of annular rings 3, arranged between the heads, a series of bars or lags 4, and the balance-

rims 5. I construct these balance-rims of heavy cast metal and provide a plurality of bolts 6, by which the balance-rims are secured rigidly to the heads of the cylinder in order to unite the parts solidly together and to insure rotation of the rims with the cylinder in a manner to secure uniformity in the running of the cylinder and a reduction in the power required for its operation.

The heads 2 are fastened to the shaft 1 in any suitable or appropriate manner, and in the peripheral edge of each head is formed a series of notches 7, which extend transversely across the head and which form seats in which are fitted the ends of the bars or lags 4. The counterbalance-rims 5 are arranged to fit snugly to the ends of the bars or lags where the latter are seated in the notches of the heads, and the rims are thus seated upon the bars or lags to assist in holding the latter securely in place in their seats in the heads. I prefer to construct the heads in the skeleton form shown by Fig. 3 of the drawings. In this embodiment of the invention the head is in the form of a spoke-wheel, with a hub and rim and a series of substantially radial spokes arranged to provide openings between the spokes. This construction of each head in skeleton form, as shown, provides for the attachment of the radial bolts 6. I arrange the bolts at suitable intervals around the periphery of the cylinder, and each bolt 6 passes through aligned openings provided in the balance-rim, one of the lags or bars, and the periphery of the skeleton-like head. Each bolt has its head countersunk in the periphery of the balance-rim, and the threaded end of the bolt projects into the head to lie between the spokes, a nut 6^a being screwed on said inner threaded end of the bolt to find a seat against the periphery of the head.

The rings 3 of the cylinder are shown as arranged exteriorly to the lags or bars 4 and at suitable intervals from each other, and through the rings and the bars at the points where they lap are passed the shanks of the teeth. These teeth may be of any suitable construction, and they are fastened to the cylinder, so as to be held rigidly in place thereon.

I attach especial importance to the employment of the heavy weighted rims at the

ends of the cylinder, because such arrangement of the weighted rims wholly avoids interference with the proper operation of the toothed working surface of the cylinder. The
5 weighted rims serve the purpose of fly or balance wheels to insure steadiness and uniformity to the rotation of the cylinder. A cylinder constructed in accordance with my invention does not require the expenditure
10 of so great an amount of power for the operation of the cylinder, because the weighted rims impart momentum to the cylinder when it is in motion.

While I prefer to employ the weighted rims
15 as an integral part of the cylinder structure and to assist in holding the lags or bars in position on the notched heads of the cylinder, I am aware that the object of my invention may be attained in part by the provision of
20 balance-rims on the cylinder-shaft, outside of the heads of the cylinder, and I would have it understood that such arrangement is contemplated by my invention.

It is evident that changes in the form and
25 proportion of parts and in the details of construction may be made without departing from the spirit or sacrificing the advantages of the invention. I therefore reserve the right to make such modifications as fairly fall
30 within the scope of the invention.

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

1. A threshing-cylinder comprising a shaft,

the heads, a series of longitudinal bars at- 35
tached to said heads and provided with radial teeth, the heavy balance-rims fitted to the ends of the bars and seated circumferentially upon the heads, each balance-rim be- 40
ing of enlarged cross-sectional area and extending outwardly from the bars in planes parallel to the teeth, and bolts which clamp the balance-rims to the bars and the heads, whereby the balance-rims are disposed com- 45
pactly to the heads and insure steadiness and prolonged rotation to the cylinder with a reduced expenditure of power, substantially as described.

2. A threshing-cylinder comprising a shaft, the heads each provided with transverse 50
notches in its circumference and with the radial openings which open into said notches, the toothed bars seated at their ends in said notches of the heads, the heavy balance-rims fitted circumferentially on the heads and the 55
bars and extending outwardly in the planes of the heads parallel to the teeth, and the bolts which pass through the balance-rims, the bars, and the openings in the heads, substantially as described. 60

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

JOHN ALFRED ANDERSON.

Witnesses:

A. I. ANDERSON,
T. C. PRESCOTT.