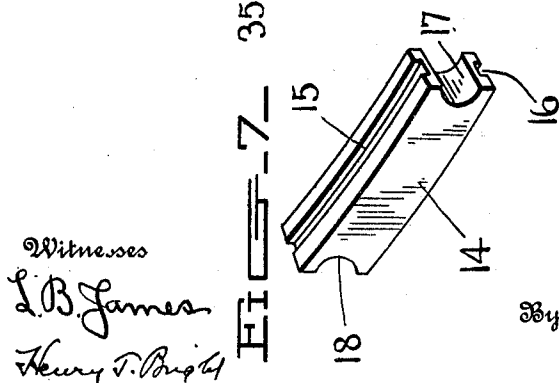
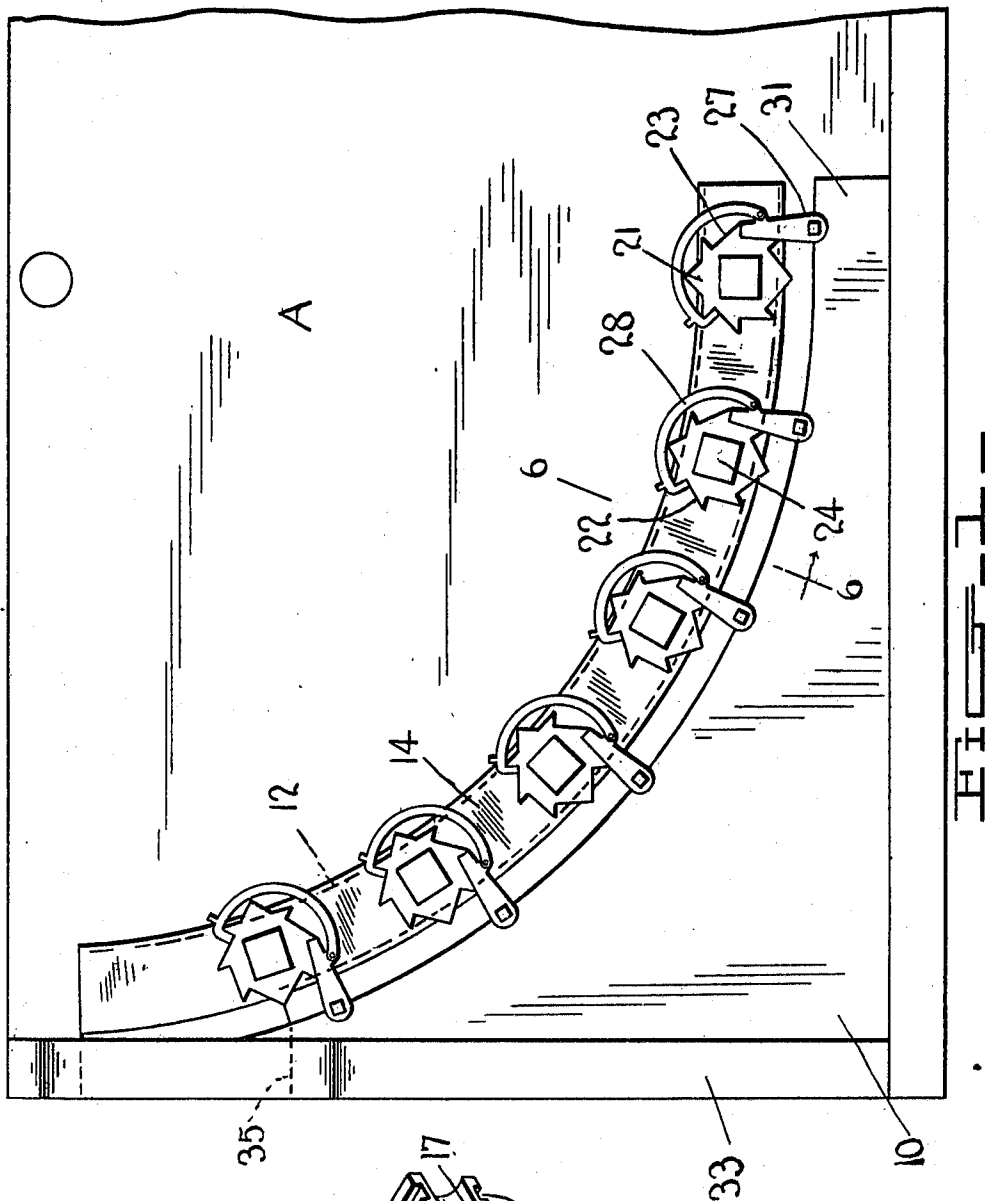


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J. PELICAN.
THRESHER CONCAVE.
APPLICATION FILED SEPT. 20, 1910.

Patented May 23, 1911.

3 SHEETS-SHEET 1.



Witnesses
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Henry T. Bright

Inventor
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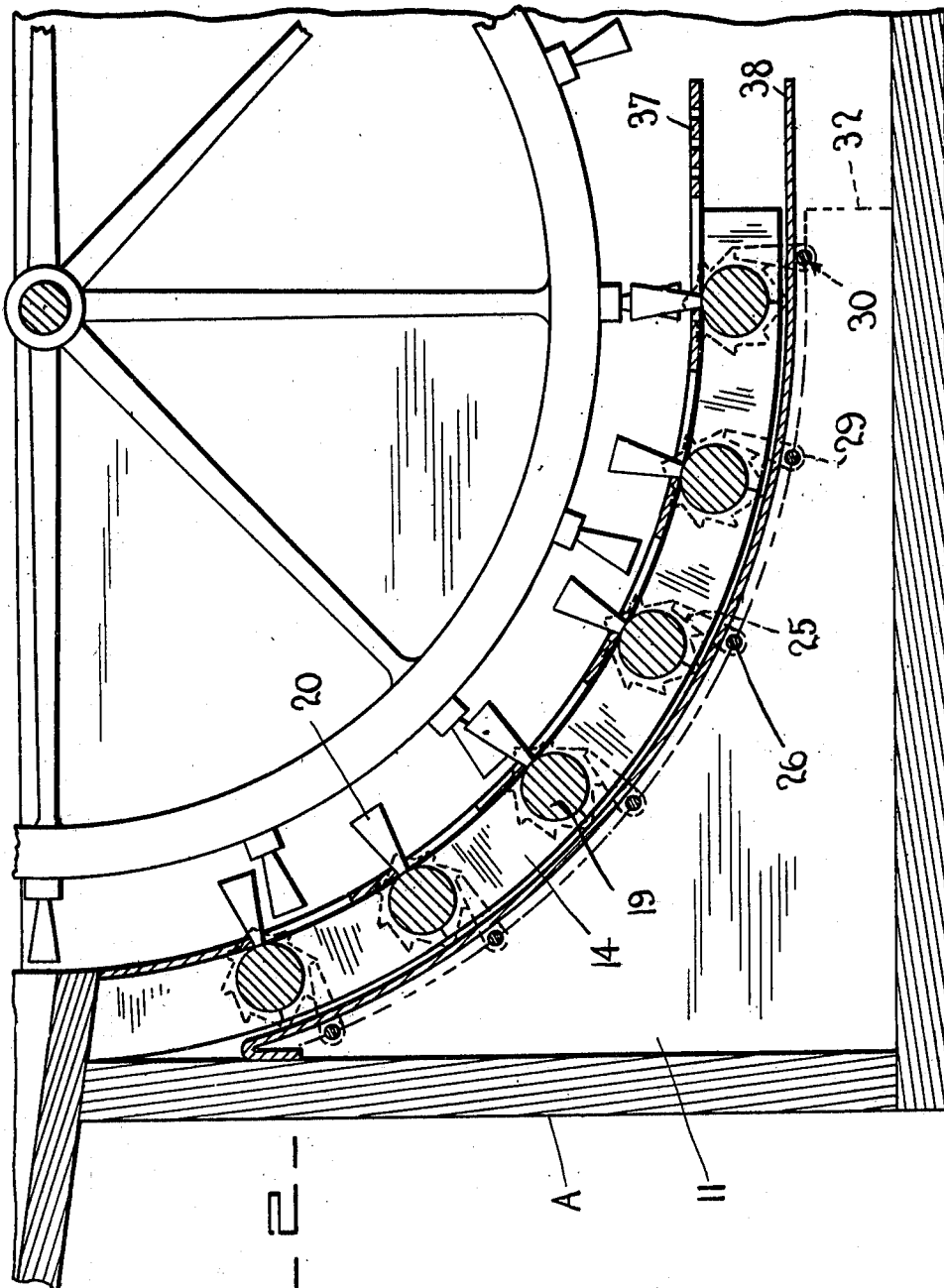
By *[Signature]*
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3 SHEETS-SHEET 2.



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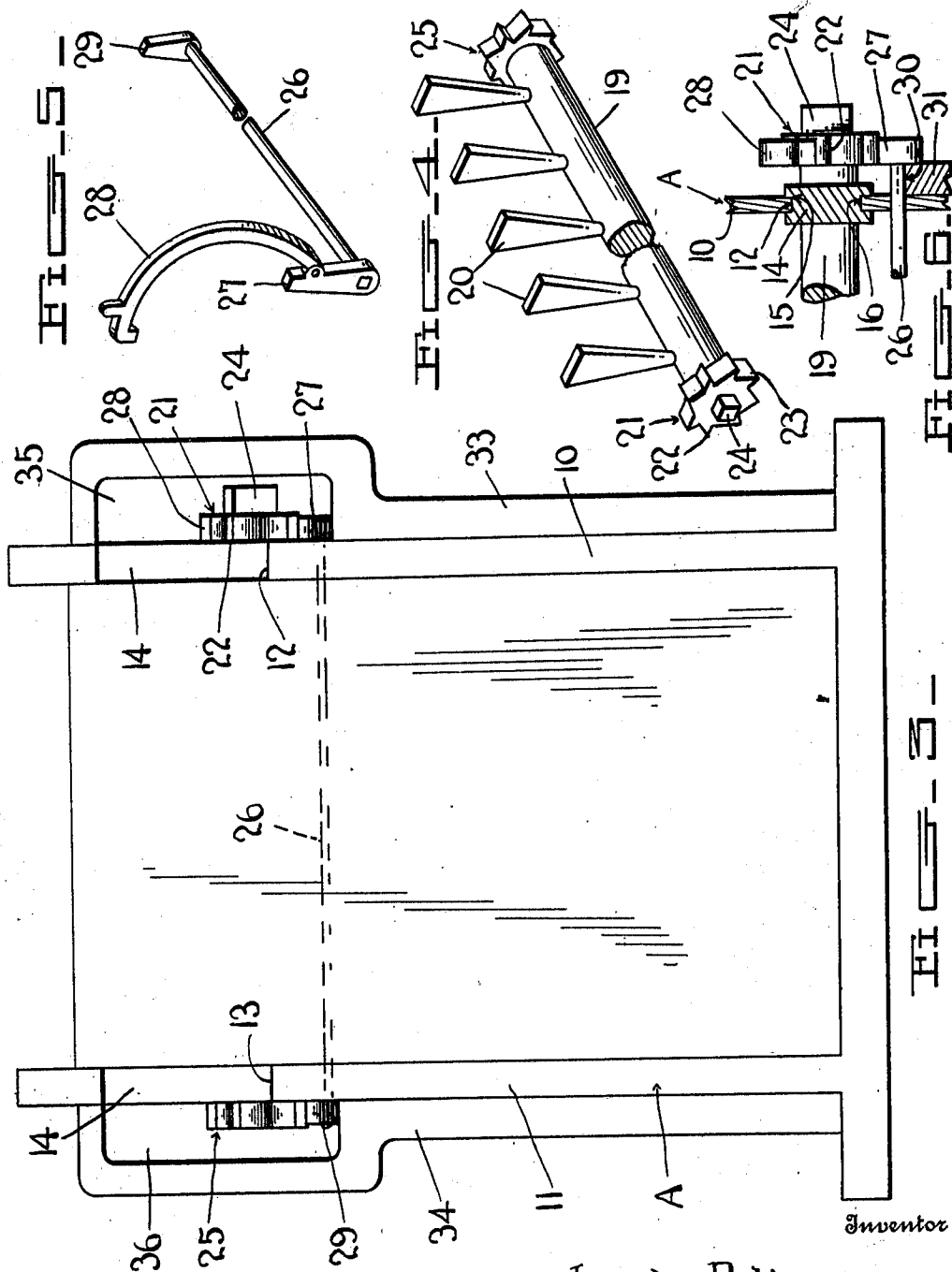
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3 SHEETS—SHEET 3.



Witnesses

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UNITED STATES PATENT OFFICE.

JOSEPH PELICAN, OF ADDINGTON, OKLAHOMA.

THRESHER-CONCAVE.

993,193.

Specification of Letters Patent.

Patented May 23, 1911.

Application filed September 20, 1910. Serial No. 582,849.

To all whom it may concern:

Be it known that I, JOSEPH PELICAN, a citizen of the United States, residing at Addington, in the county of Jefferson, State of Oklahoma, have invented certain new and useful Improvements in Thresher-Concaves; 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 thresher-concaves.

The object of the invention resides in the construction of a concave in which the teeth may be adjusted so as to be disposed at various desired inclinations to suit the character of the grain being threshed.

With the above and other objects in view the invention consists in the details of construction and in the arrangement and combination of parts as will be hereinafter more fully described and particularly pointed out in the appended claims.

In describing the invention in detail reference will be had to the accompanying drawings wherein like characters of reference denote corresponding parts in the several views; and in which,

Figure 1 is an end view of a thresher-concave constructed in accordance with the invention; Fig. 2, a vertical longitudinal section of the concave; Fig. 3, an end view of the concave; Fig. 4, a detail perspective view of one of the rotatable shafts included in the concave and which carry the concave teeth; Fig. 5, a detail perspective view of the pawls which serve to lock the rotatable shafts of the concave against rotation in either direction; Fig. 6, a fragmentary section on the line 6—6 of Fig. 1; and Fig. 7, a detail perspective view of one of the journal blocks.

Referring to the drawings, A indicates the usual concave frame which includes side members 10 and 11. Said side members 10 and 11 are provided respectively with corresponding curved slots 12 and 13 opening through one end thereof. Detachably and

slidably mounted in the slots 12 and 13 is a plurality of journal blocks 14, each of which have their upper and lower sides provided with grooves 15 and 16 respectively adapted to receive the upper and lower edges of the side member which limit the slot in which said blocks are mounted. The blocks 14 have their ends provided with concave recesses 17 and 18, said recesses cooperating when the blocks are disposed in the slots 12 and 13 to form bearing openings. Journalled in the bearing openings formed by the recesses in the ends of the journal blocks is a plurality of shafts 19 all of similar size and formation. Detachably connected with and projecting laterally from each shaft 19 is a plurality of concave teeth 20. Mounted on each shaft 19 exteriorly of the side member 10 is a ratchet wheel 21 provided with a plurality of teeth 22 disposed in one direction and a plurality of teeth 23 disposed oppositely to the teeth 22. The end of each shaft 19 upon which the ratchet wheel 21 is mounted is provided with a squared extension 24 for cooperation with a suitable wrench whereby each shaft may be independently rotated. Another ratchet wheel 25 is fixed on the end of each shaft 19 and is disposed exteriorly of the side member 11, the teeth of said ratchet wheel 25 being all disposed in a common direction. Rotatably mounted between the side members 10 and 11, adjacent each shaft 19 is a rod 26. Mounted on said rod 26 exteriorly of the side member 10 and adapted for rotation with said rod is a pawl 27 arranged for engagement with the teeth 23 of the ratchet wheel 21 to lock the shaft 19 against rotation in one direction. Another pawl 28 of arcuate formation is pivoted to the pawl 27 and has its free end arranged for engagement with the teeth 22 of the ratchet wheel 21 to lock the shaft 19 against rotation in the opposite direction. From the construction so far described it will be apparent that the pawl 27 can be moved toward the base of the tooth which it engages and such movement of the pawl 27 will enable the pawl 28 to be detached from

engagement with the teeth 22 by reason of the fact that the movement of the pawl 27 releases the frictional engagement between the pawl 28 and the tooth engaged thereby.

5 When said pawls are so released the shaft 19 can be rotated so as to bring the teeth 20 to the desired inclination and the pawls 27 and 28 again brought into engagement with the ratchet wheel 21 to lock the shafts 19 in
10 the desired adjustment. Mounted on the other end of the rod 26 exteriorly of the end member 11 is a pawl 29, said pawl being fixed to the rod and adapted for rotation therewith so that when the pawl 27 is oper-
15 ated the pawl 29 will be similarly and simultaneously operated. Said pawl 29 is adapted for engagement with the teeth of the ratchet wheel 25 so as to assist the pawl 27 in locking the shaft 19 against rotation
20 in one direction. As the tendency of the shaft 17 to rotate against the pawl 28 is very slight, it has only been necessary to provide such a pawl at one end of said shaft.

25 Mounted exteriorly of the side member 10 and having a curved upper edge provided with a plurality of concaved recesses 30 is a supporting block 31. The recesses 30 in said supporting block are so arranged and
30 positioned as to form sockets in which the base of the pawls 27 are respectively disposed. From this construction it will be apparent that when an excessive strain is brought to bear upon the pawls 27 it will
35 be sustained by the block 31 and the rod 26 thereby relieved and possible breaking of same prevented. Mounted exteriorly of the end member 11 is another supporting block 32 identical in every respect with the sup-
40 porting block 31 and cooperating with the pawl 29 in exactly the same manner and for the same purposes as are served by the support 31 with respect to the pawls 27.

The side members 10 and 11 are provided
45 at corresponding ends with outwardly extending wings 33 and 34 respectively; said wings being provided with openings 35 and 36 communicating with the mouth of the slots 12 and 13 respectively. When the
50 shafts 19 are removed from the slots 12 and 13 the openings 35 and 36 serve to permit the passage of the ratchet wheels 21 and 25 therethrough respectively, while the wings 33 and 34 act to brace the side members 10
55 and 11 respectively. The concave is provided with the usual grate 37 disposed above the shaft 19 and penetrated by the teeth 20, while the usual grain pan 38 is mounted between the side members 10 and 11 beneath
60 the shafts 19.

From the foregoing description, taken in connection with the accompanying drawings the construction and mode of operation will be readily understood and it will be seen

that there is provided a concave having a 65 maximum range of adjustment and in which the adjustment of the sections thereof may be effected without stopping the threshing machine.

What is claimed is:

1. A concave for threshing machines comprising a pair of spaced side members having corresponding curved slots therein, a plurality of rotatable shafts having their ends respectively supported in said slots, 75 concave teeth projecting laterally from said shafts, means for rotating said shafts to dispose the teeth carried thereby in various adjustments, a ratchet wheel on corresponding ends of each shaft having oppositely dis- 80 posed teeth and pivotally mounted pawls engaging oppositely disposed teeth of each ratchet wheel respectively whereby said shaft is locked against rotation in either direction and the teeth carried thereby main- 85 tained in a desired adjustment.

2. A concave for threshing machines comprising a pair of spaced side members having corresponding curved slots therein, a plurality of rotatable shafts having their 90 ends respectively supported in said slots, concave teeth projecting laterally from said shafts, means for rotating said shafts to dispose the teeth carried thereby in various ad- 95 justments, a ratchet wheel on corresponding ends of each shaft having oppositely disposed teeth and pivotally mounted pawls for simultaneously engaging the oppositely disposed teeth of each ratchet wheel respec- 100 tively whereby said shaft is locked against rotation in either direction and the teeth carried thereby maintained in a desired adjustment.

3. A concave for threshing machines comprising a pair of spaced side members hav- 105 ing corresponding curved slots therein, a plurality of rotatable shafts having their ends respectively supported in said slots, concave teeth projecting laterally from said shaft, means for rotating said shaft to dispose the 110 teeth carried thereby in various adjustments, a ratchet wheel mounted on one end of each shaft and having oppositely disposed teeth, a pawl for engaging the teeth of each ratchet wheel disposed in one direc- 115 tion, and a second pawl pivoted to the first named pawl for engaging the teeth of each ratchet wheel disposed in the opposite direction whereby said shaft is locked against rota- 120 tion in either direction and the teeth carried thereby maintained in a desired adjustment.

4. A concave for threshing machines comprising a pair of spaced side members hav- 125 ing corresponding curved slots therein, a plurality of rotatable shafts having their ends respectively supported in said slots, concave teeth projecting laterally from said shafts,

means for rotating said shafts to dispose the
teeth carried thereby in various adjustments,
ratchet wheels on the ends of each shaft, a
rod rotatably mounted in said side members
5 adjacent each shaft, a pawl fixed on the ends
of each rod adapted for engagement with
the adjacent ratchet wheel on the ends of
the shaft whereby said shaft is locked
against rotation in one direction, and means

for locking said shaft against rotation in the 10
opposite direction.

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

JOE. PELICAN.

Witnesses:

JOHN L. EVANS,
JENNIE E. EVANS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
