July 15, 1930. J. LIZAMORE 1,770,792

CORN OR MEALIE SHELLER

Original Filed Jan. 24, 1927 2 Sheets-Sheet 1

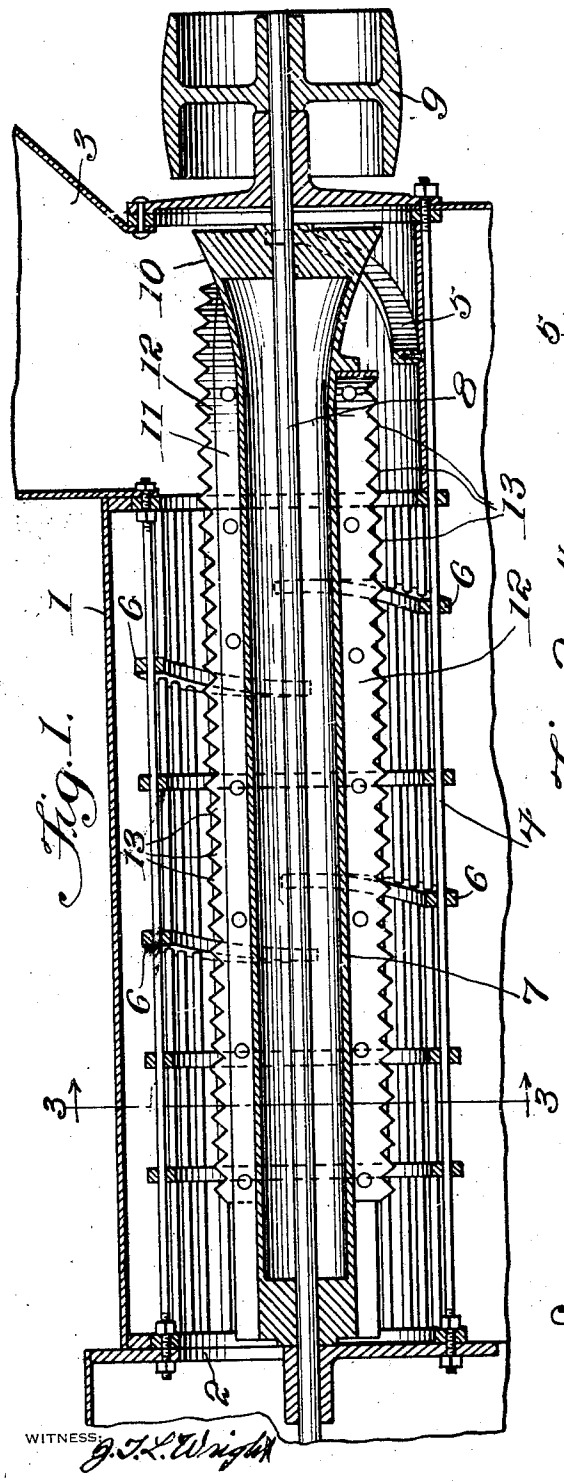


Fig. 1.

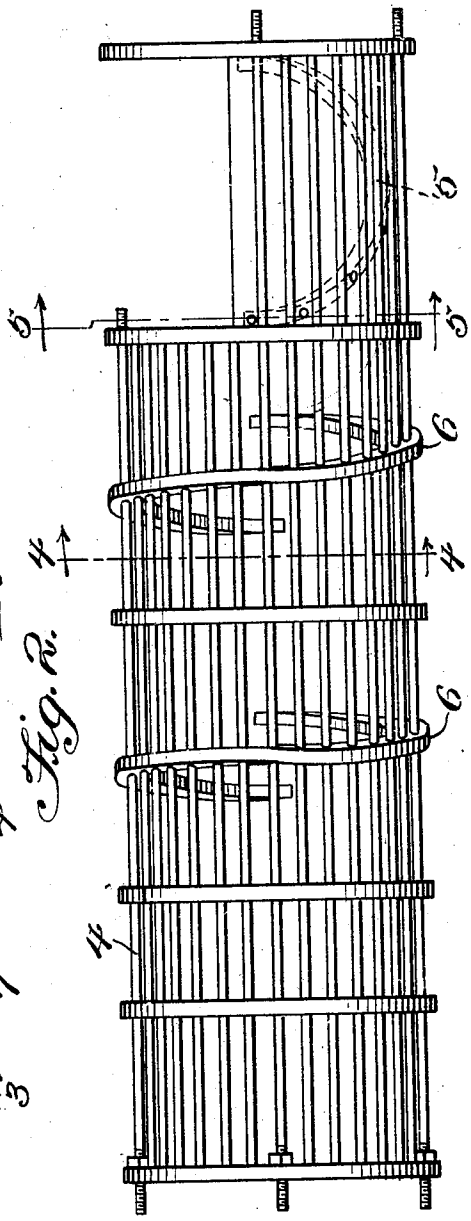


Fig. 2.

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Fig. 5.

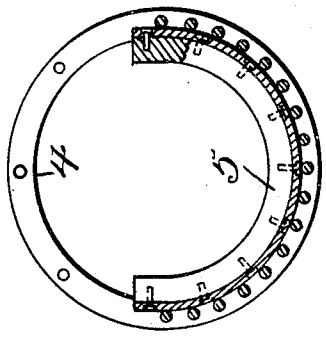


Fig. 4.

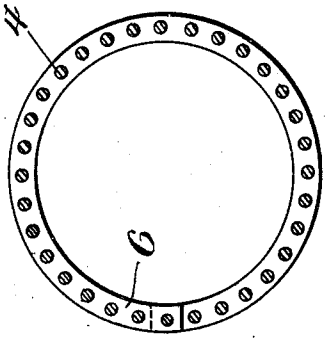


Fig. 3.

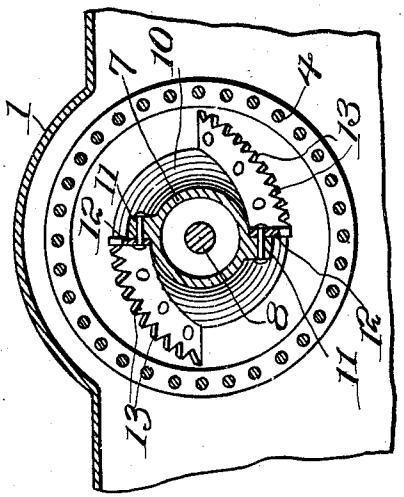
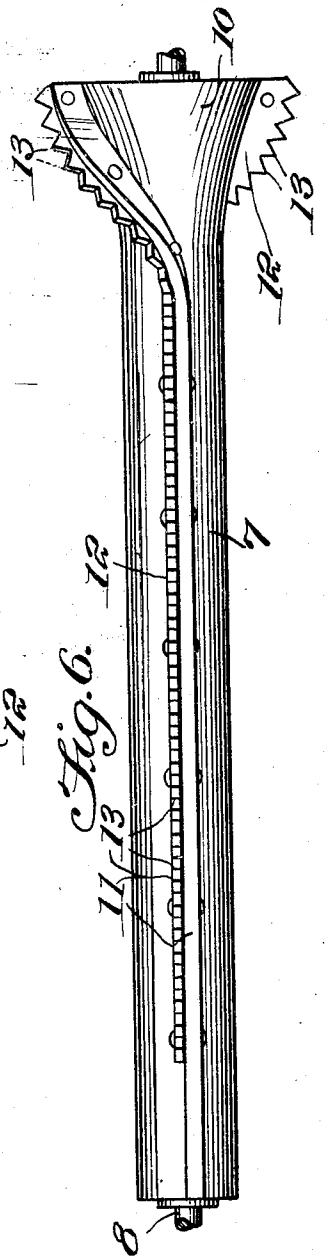


Fig. 7.



Fig. 6.



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1,770,792

UNITED STATES PATENT OFFICE

JOHN LIZAMORE, OF BRANDFORT, OF ORANGE FREE STATE, SOUTH AFRICA

CORN OR MEALIE SHELLER

Application filed January 24, 1927, Serial No. 163,281. Renewed May 3, 1930.

This invention relates to a corn or mealie sheller, the general object of the invention being to so form the machine that the maximum amount of material can be treated in the minimum amount of time.

Another object of the invention is to provide the rotating member with teeth which will increase the shelling action of the device.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claim.

In describing my invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is a longitudinal sectional view through a portion of a sheller constructed in accordance with this invention.

Figure 2 is an elevation of the barrel or cylinder.

Figure 3 is a section on line 3—3 of Figure 1.

Figure 4 is a section on line 4—4 of Figure 2.

Figure 5 is a section on line 5—5 of Figure 2.

Figure 6 is a view of the rotary member.

Figure 7 is a fragmentary view of one of the toothed strips carried by said rotary member.

In these drawings, 1 indicates the casing which is provided with an outlet 2 and the hopper 3 and 4 indicates the cage-like cylinder or barrel located in the casing and held against rotary movement therein. At the front end, the cylinder or barrel has its upper part omitted so that material can pass from the hopper into the barrel.

A single semi-circular member 5 of semi-spiral shape is arranged in the reduced part of the barrel and a pair of ring members 6 of spiral shape is arranged in the circular portion of the barrel. These spiral rings 6 are of different pitch, as will be seen from Figures 1 and 2.

A cylinder member 7 is rotatably supported in the casing and within the barrel by means of the shaft 8 which has its ends journaled in the ends of the casing, with its front end extending through the casing where it is provided with a pulley 9. The front end of the member 7 is of conical shape, as shown at 10, and the said member is provided with a pair of ribs 11 which extend longitudinally over the cylindrical part of the member, but are spirally arranged on the conical part thereof. A strip or plate 12 is fastened to each rib, the projecting part of the said strip being toothed, as shown at 13.

From the foregoing, it will be seen that the material placed in the hopper 3 will be fed into the circular part of the barrel or cage by the helical parts of the ribs on the conical part of the member 7, as said member rotates and this feeding action is facilitated by the member 5. The passage of the material through the cage is quickened by the spiral 6 and the teeth 13 of the plates carried by the ribs, acting on the material passing through the device, will quickly remove the grains from the cobs so that by the time the cobs reach the outlet opening 2, the grains will have been removed therefrom. The grains drop through the spaces within the bars of the cage or barrel into the lower part of the casing 1 where they are acted upon in a well known manner.

The teeth on the ribs will remove husks from the ears of corn so that the grains can be removed from the cobs when unhusked ears are fed to the machine.

It is thought from the foregoing description that the advantages and novel features of my invention will be readily apparent.

I desire it to be understood that I may make changes in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claim.

What I claim is:—

A sheller of the class described comprising a casing having an outlet at one end and a hopper at its other end, a cage or barrel fastened in the casing and having the upper part of its front end removed, leaving a semi-

circular lower part which is placed under the hopper so that material entering the hopper will pass into the cage, the other end of the cage surrounding the outlet, a semi-spiral member in the semi-circular front part of the cage and extending from one end to the other of said semi-circular part, spiral members in the circular part of the cage, said members being of different pitch, with one end of each member extending beyond the plane of the other end thereof and a revolving member in the barrel.

In testimony whereof I affix my signature.

JOHN LIZAMORE.