(No Model.)

# A. V. & M. H. PITTS.

## CORN SHELLER.

No. 322,964. Patented July 28, 1885.

Fig. 1.

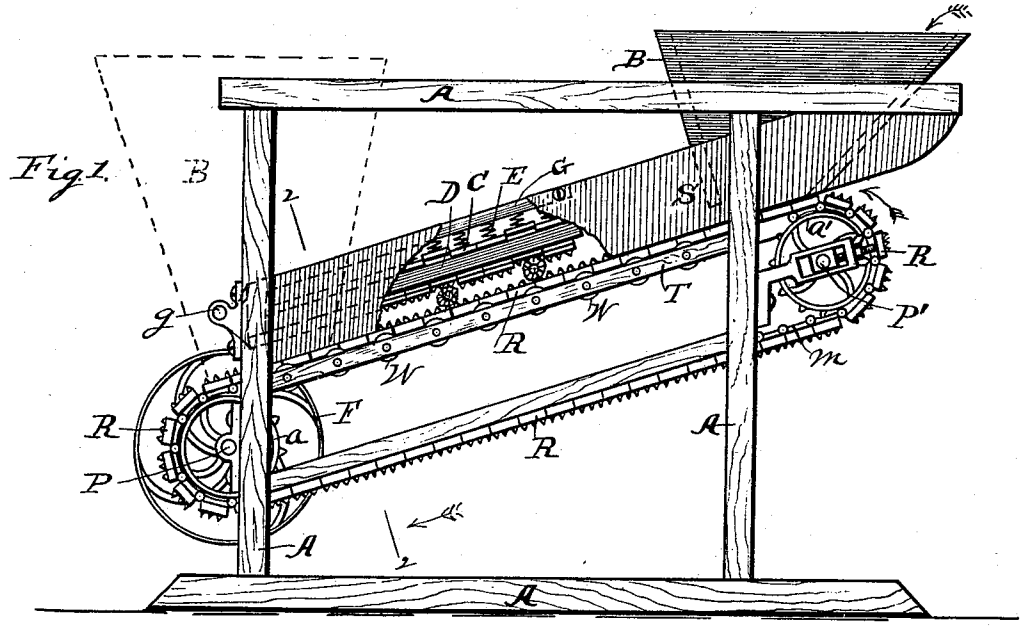



Fig. 2.

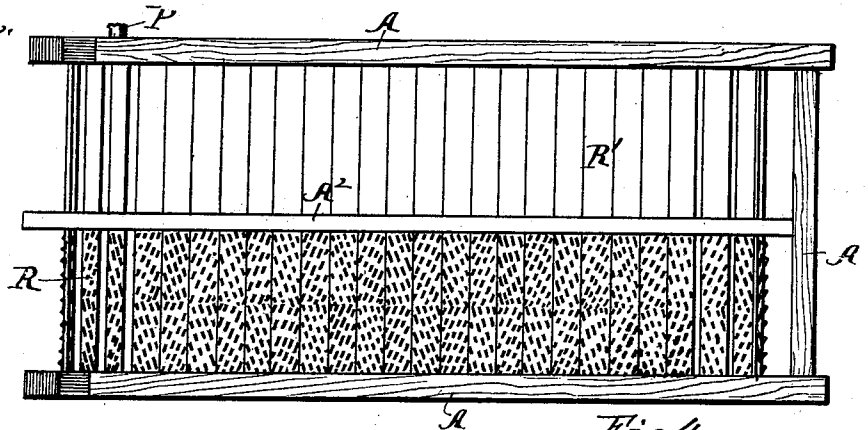



Fig. 3.

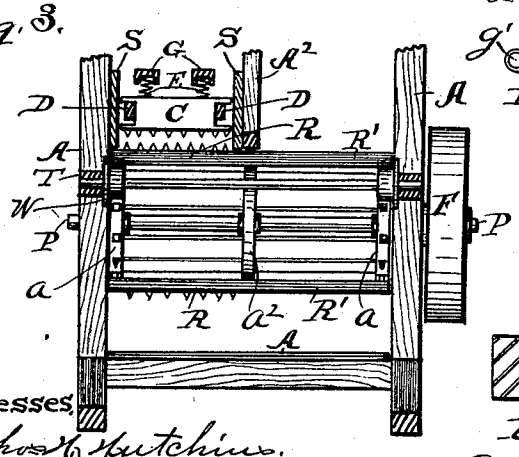



Fig. 4.

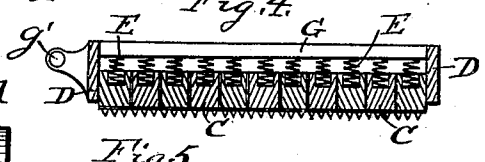


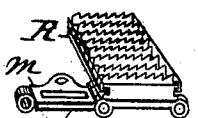

Fig. 5.




Fig. 6.




Fig. 7.




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# UNITED STATES PATENT OFFICE.

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## CORN-SHELLER.

SPECIFICATION forming part of Letters Patent No. 322,964, dated July 28, 1885.

Application filed April 2, 1885. (No model.)

*To all whom it may concern:*

Be it known that we, AURELIUS V. PITTS and MARCELLUS H. PITTS, citizens of the United States of America, residing at Marseilles, in the county of La Salle and State of Illinois, have invented certain new and useful Improvements in Corn-Shellers, of which the following is a specification, reference being had therein to the accompanying drawings.

Figure 1 is a side elevation of the machine, having a portion broken away to show the interior construction. Fig. 2 is a top plan view of the machine, having its breast-plate, hopper, and fly-wheel removed. Fig. 3 is a cross-sectional view of the machine on line 2 2 of Fig. 1, looking in the direction of the arrow, and having the upper part of the frame broken away. Fig. 4 is a vertical longitudinal sectional view of the breast-plate of the machine. Fig. 5 is a perspective view of a single section of the toothed endless apron of the machine. Fig. 6 is a plan view of a single section of the endless apron of the machine, having serrations or ribs formed on its face; and Fig. 7 is a perspective view showing in detail a portion of the endless belt R.

This invention relates to certain improvements in corn-shellers, the construction and operation of which are fully set forth in the following specification and claims.

Referring to the drawings, A represents the frame of the machine, arranged to support a pair of shafts, P and P′, one at either end of the machine, in suitable boxes. Upon these shafts, and between the sides of frame A, are placed chain or belt wheels *a* and *a′*, a pair being placed on each of said shafts. These wheels bear a pair of endless sectional chain-belts, *m*, one at either side of the machine, to which are attached the sections of the endless apron R R′ of the machine, as shown in Figs. 1, 3, and 7. Intermediate wheels, $a^2$, may be placed on shafts *a a′*, between their chain or belt wheels, for additional support for the endless apron when occasion may require.

At either side of the machine, supported on suitable shafts or studs, which are either journaled or rigidly attached to side beams T, are a series of flanged friction-wheels, *w*, for the support of the upper and engaging surface of the endless apron, which relieve said apron from frictional contact with the frame of the machine.

Figs. 2 and 3 represent the endless apron divided into two parts by means of a partition, $A^2$, which parts are shown at R and R′. Upon the face of each of the sections of the endless apron exposed at one side of the partition $A^2$ at R are series of teeth or ribs, while the opposite portion of said endless apron (shown at R′) is free from teeth or ribs, and may be used as a tread-power to propel the toothed portion of said apron by placing a horse or other animal upon said untoothed portion, similar to an ordinary tread-power, and wheel F would, in such instance, act as a fly-wheel. Power may, however, be applied to the machine by a belt on wheel F, and when the power is thus applied the entire surface of the endless apron may be toothed or ribbed, and arranged either in a single compartment or partitioned into two or more compartments.

In Fig. 1 the endless apron is represented as having one end lower than the other, with its toothed surface traveling in the direction of the arrow. At the lower end, and at a short distance above the toothed endless apron, is a toothed breast-plate. This breast-plate consists of a rectangular frame, D, having a pair of recessed bars, G, arranged lengthwise along its upper part. Within frame D are arranged a series of cross-sections, C, which are recessed at their ends to receive the side bars of frame D, as shown in Figs. 1 and 3.

The sections C have a series of teeth or ribs placed on their lower and engaging faces, and in their upper faces shallow holes or recesses for the reception of the lower ends of the coil-springs E, while the upper ends of said springs rest in recesses in bars G. The springs E thus arranged give downward pressure to the sections C, each acting independently of the other, and, as the recesses in the ends of said sections are wider than the side bars of frame D, the said sections are supported yieldingly. The lower end of frame D is held in proper position a short distance above apron R by means of a rod passed through eyes in brackets *g′* of frame D (see Fig. 1) and eyes in brackets *g* of frame A, (see Fig. 1,) which form hinges to turn said breast-plate back upon. The upper end of

frame D is held by suitable bolts or screws. Immediately above the endless apron R, and at either side of the breast-plate, are arranged side boards, S S, to prevent egress of grain from the sides of said apron. At the upper end of the endless apron R, and between the sides of the frame, is arranged a hopper B, opening at its bottom directly over the said toothed endless apron R. Corn to be shelled is placed in said hopper, is discharged upon said traveling endless apron on the section having teeth, is carried forward by said teeth under the toothed breast-plates, and between said toothed endless apron and the breast-plates is shelled, the shelled corn and cobs being discharged at the lower end of the machine.

The yielding sections of the breast-plate render it capable of operating alike upon large or small objects that may pass under it, as it will adapt itself to their respective sizes as they pass from section to section.

If desired, the hopper B may be placed at the lower end of the machine, as indicated by dotted lines in Fig. 1, and the breast-plate placed at the upper end of the machine, and the movement of the endless apron reversed, when such arrangement shall be considered best for the kind of grain or seed which is to be operated upon. The endless apron may be long and a series of such breast-plates used in a train where desired.

The teeth of the sections of the endless apron and of the breast-plate may be of the form shown in Figs. 1, 5, and 7, or ribs used in their place, such as are shown in Fig. 6, as occasion may require.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is as follows, to wit—

1. In a corn-sheller, the combination of the frame A, the sides S S, the endless traveling apron R, made in jointed sections, with teeth on their engaging-faces, wheels *a a'*, shafts P P', frame D, the recessed longitudinal bars G, springs E, and yielding breast formed of the independent cross-bars C, having their engaging contiguous faces toothed, and recessed in each end to receive the frame D, as and for the purpose set forth.

2. In a corn-sheller, the breast consisting of the independent contiguous cross-bars C, having their engaging-faces toothed and recessed in each end, in combination with the frame D, longitudinally-recessed bars G, and coil-springs E, as and for the purpose set forth.

3. In a corn-sheller, the endless jointed apron R R', and the partition $A^2$, said apron being provided with teeth on one side of the partition for assisting in the shelling operation, and being without teeth on the other side thereof, and forming a tread-power for driving the toothed portion, in combination with the yielding breast constructed as described and shown, all as and for the purpose set forth.

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