

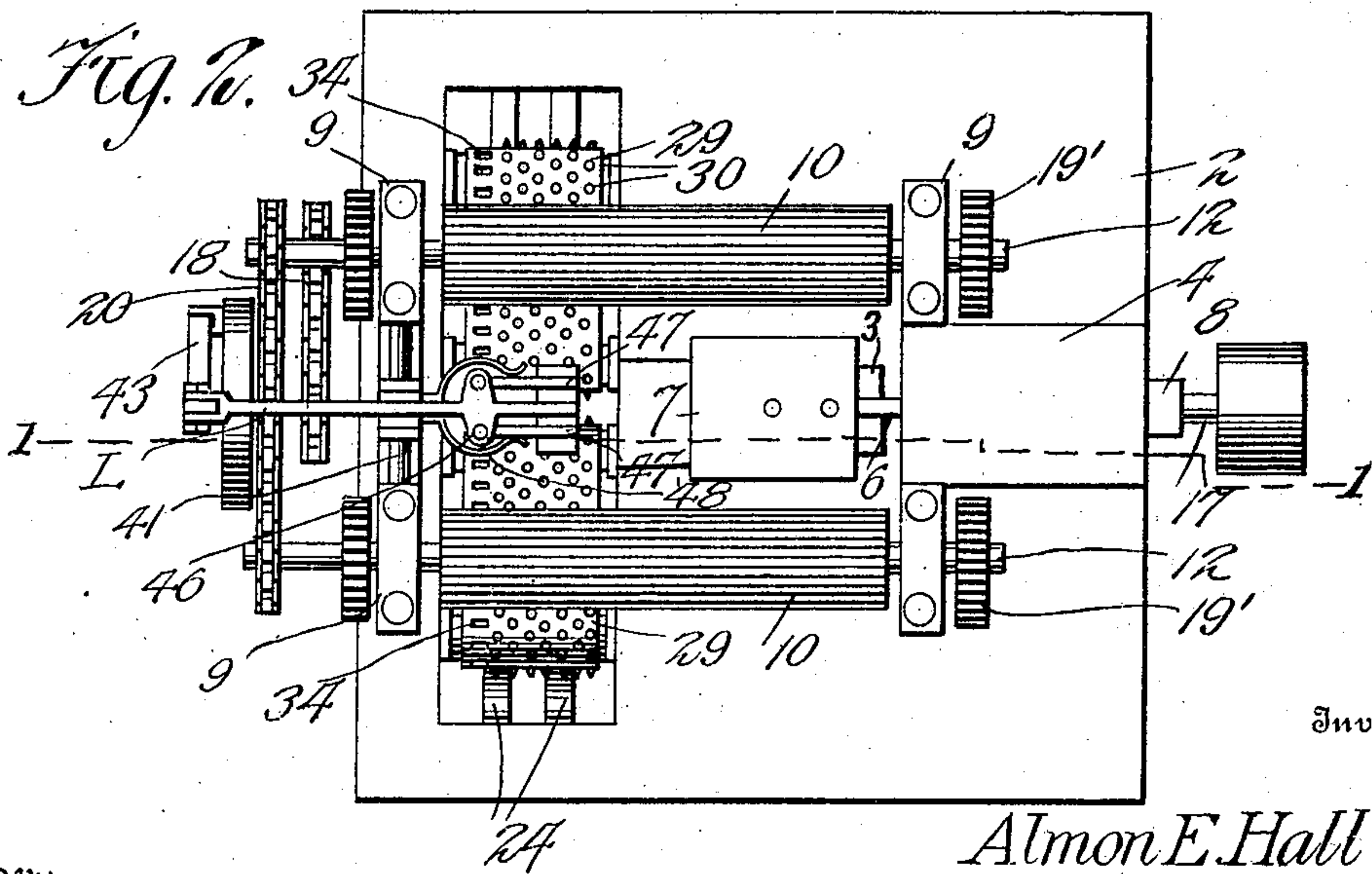
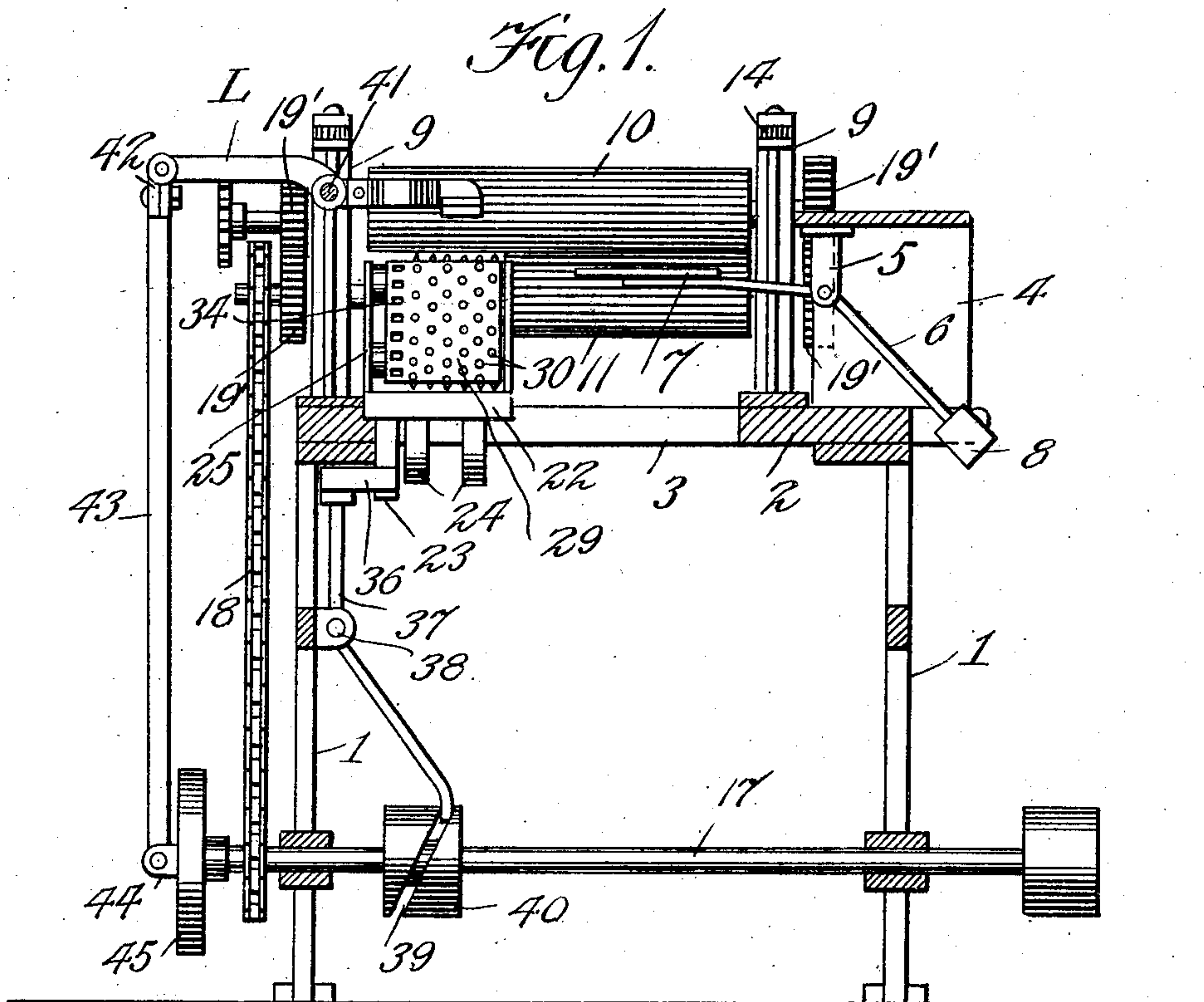
No. 877,461

PATENTED JAN. 21, 1908.

A. E. HALL.
CORN HUSKING DEVICE.

APPLICATION FILED MAR. 8, 1907.

2 SHEETS—SHEET 1.



Inventor

Almon E. Hall

Witnesses

W. A. Schuman
Wm. Bagger

By *Victor J. Evans*

Attorney

No. 877,461.

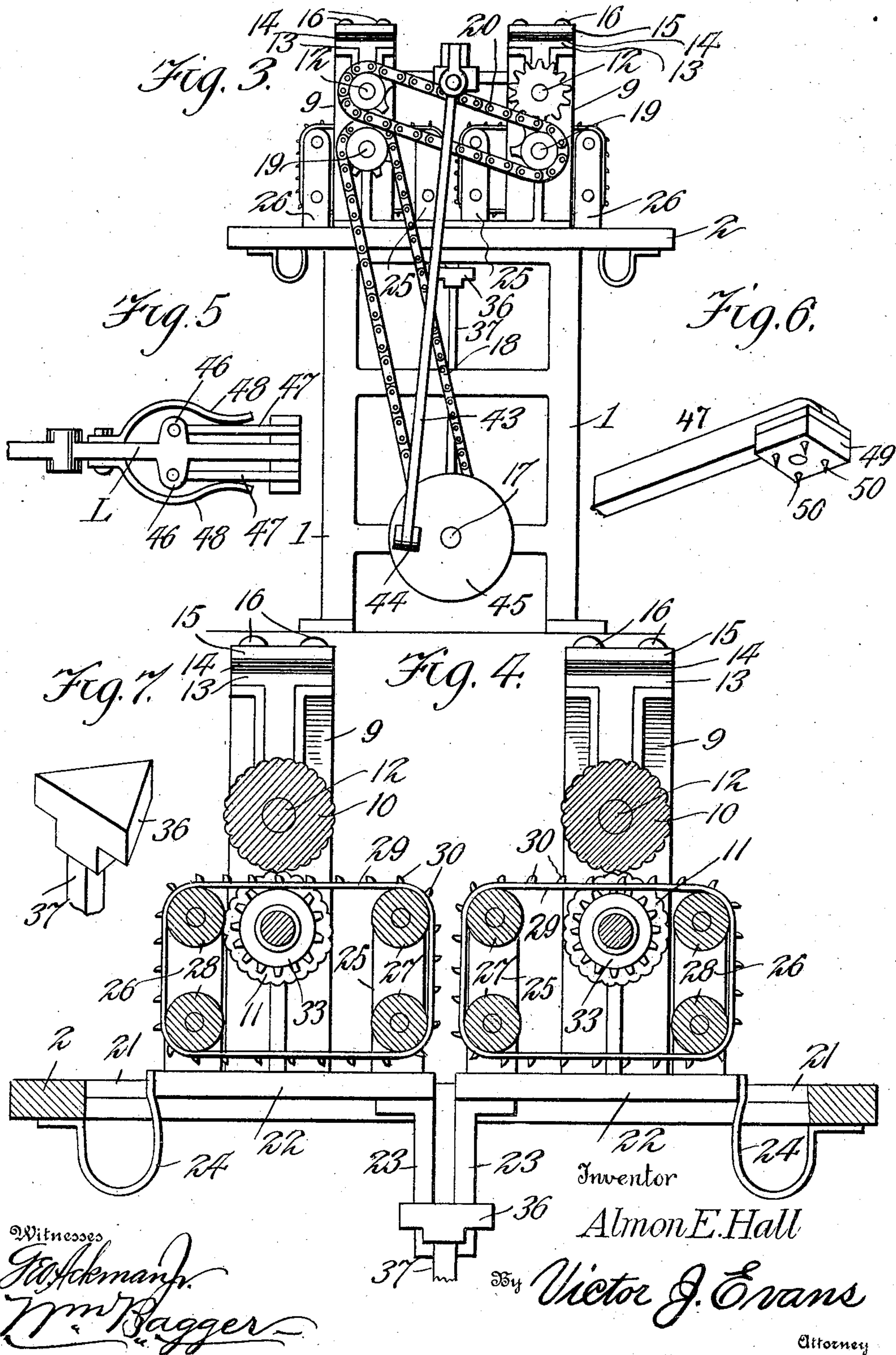
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UNITED STATES PATENT OFFICE.

ALMON E. HALL, OF WILLIAMSTOWN, MASSACHUSETTS.

CORN-HUSKING DEVICE.

No. 877,461.

Specification of Letters Patent.

Patented Jan. 21, 1908.

Application filed March 8, 1907. Serial No. 361,322.

To all whom it may concern:

Be it known that I, ALMON E. HALL, a citizen of the United States, residing at Williamstown, in the county of Berkshire and State of Massachusetts, have invented new and useful Improvements in Corn-Husking Devices, of which the following is a specification.

This invention relates to corn husking machines for stripping the husks from ears of corn; and it has for its object to present a machine of this class which shall possess superior advantages in point of simplicity, durability, ease and certainty of operation, and general efficiency.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention; it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the invention may be resorted to when desired.

In the drawings, Figure 1 is a sectional elevation of a machine constructed in accordance with the principles of the invention, the section being taken on the plane indicated by the line 1—1 in Fig. 2. Fig. 2 is a top plan view. Fig. 3 is an end elevation. Fig. 4 is a sectional detail view taken transversely through the pairs of husking rolls and related parts. Fig. 5 is a detail plan view of the presser lever. Fig. 6 is a perspective detail view of one of the arms or movable members of the presser lever. Fig. 7 is a perspective detail view of the spacing wedge.

Corresponding parts in the several figures are denoted by like characters of reference.

The frame of the improved machine comprises legs or supporting members 1—1 supporting a table or bed piece 2 having an aperture 3. The bed plate 2 supports a hood or casing 4 having a depending bracket 5 upon which is pivoted a lever 6, one end of which carries a plate 7 that is disposed above the aperture 3 in the bed plate; the plate 7 is counterbalanced by a weight 8 carried by the opposite end of the lever 6 and serving to support the plate 7 normally in an approximately horizontal position as shown in

Fig. 1. The plate 7 is intended to temporarily support the ears of corn that are to be operated upon, as will be hereinafter more fully described, but this plate and its supporting means may be dispensed with, if desired, in the discretion of the manufacturer of the machine.

The bed plate 2 supports pairs of uprights 9—9 disposed adjacent to the aperture 3, and having bearings for the pairs of husking rolls 10 and 11. The shafts 12 of the upper husking rolls are vertically movable in their bearings; and are forced downwardly by means of blocks 13 above which washers 14 of rubber or other suitable resilient material are preferably arranged, said resilient washers being compressed by means of rigid washers 15 and fastening screws 16 so that the upper husking rolls will be held against the lower husking rolls with the desired degree of pressure. The husking rolls may be constructed of, or faced with, any suitable material, such as rubber, but they are preferably made of cast-iron and provided with longitudinally fluted or corrugated surfaces as shown in the drawings.

The frame of the machine is provided with bearings for a main shaft 17 which may be driven in any suitable manner from a convenient source of power; motion is transmitted from the shaft 17 by a link belt 18 to the shaft 19 of one of the lower husking rolls. The upper husking roll adjacent to the lower one which is thus positively driven, is driven by intermeshing pinions 19' at the ends of the shafts of said rolls, and a link belt 20 serves to transmit motion from the upper husking roll of one of the pairs to the lower roll of the other pair; the two pairs of rolls will thus be driven simultaneously in the proper directions.

The table or bed plate 2 is provided intermediate the uprights 9—9 with guides 21 for a pair of transversely movable slides 22 having brackets 23 that extend downwardly through the aperture in the table; said slides are forced toward each other by means of suitably arranged springs 24. Each of the slides 22 carries pairs of uprights 25 and 26 in each of which are journaled pairs of rollers 27 and 28, over which are guided endless belts 29, the outer faces of which are provided with barbs or prongs 30. The lower husking rolls 11 have reduced portions 31, that extend through the endless belts 29 and are provided with sprocket wheels 33 engaging in the slots or apertures 34 in said endless

belts; the endless belts 29 will thus be driven in the same direction as said lower husking rolls. It will be seen that by the construction which has been described, the slides 22

5 carrying the uprights supporting the endless belts are capable of transverse movement upon the table or bed plate of the machine without interrupting or interfering with the operation of the endless belts.

10 For the purpose of forcing the slides 22 apart from each other against the tension of the springs 24 there is employed a wedge 36 supported at the upper end of a lever 37 which is fulcrumed at 38 upon the frame of

15 the machine, the lower end of said lever 37 being guided in a peripheral cam groove 39 formed in a disk or pulley 40 upon the main driving shaft. It will be seen that when the machine is in operation, the lever 37 will be

20 rocked by engagement with the cam groove 39, thus reciprocating the wedge 36 which alternately enters between and is withdrawn from the depending brackets 23 of the slides 22; when the wedge enters between the de-

25 pending brackets, the slides will be forced apart against the tension of the springs 24; when on the other hand, the wedge is withdrawn, the slides will be forced toward each other by the action of the said springs.

30 The uprights or standards 9 that support the rear ends of the husking rolls are connected by a shaft or cross-bar 41 upon which is pivoted or fulcrumed a member which I call the presser lever L, the rear end of which

35 is connected by a knuckle joint 42 with one end of a link or connecting rod 43, the other end of which is suitably connected with a wrist pin 44 upon a disk 45 mounted at one end of the driven shaft 17 so that by the ro-

40 tation of said shaft a rocking or vibratory motion will be imparted to the lever L. Said lever is provided, forwardly of its fulcrum, with laterally extending lugs 46 with which are hingedly connected a pair of for-

45 wardly extending laterally movable arms 47, the free ends of which are pressed in the direction of the forward end of the lever L by means of suitably disposed springs 48. The free ends of the arms 47 are provided on

50 their undersides with resilient cushion plates 49 having barbs or prongs 50.

The operations of the parts of the machine is to be so timed that when the slides 22 are forced toward each other by the action of the

55 springs 24, the forward end of the presser lever carrying the laterally movable arms 47 will at the same time descend. When an ear of corn is presented between the presser lever and the endless movable belts 29 carried by

60 the slides, the prongs or barbs 30 of the belts and the prongs 50 upon the resilient cushions carried by the arms 47 of the presser lever will engage the husk, and will rip or loosen the same upon the ear; as the slides are forced

65 apart by the action of the wedge 36, the loos-

ened husks will be carried by the toothed belts 29 in the direction of the husking rolls, and the loose ends of the husks will be seized by the latter and be carried between the husking rolls, being thus stripped from the ear, 70 and drop upon the ground adjacent to the sides of machine, or into receptacles provided for the purpose. The ear of corn, deprived of the husk, will drop through the aperture 3 in the table or bed plate of the machine be- 75 low which a suitable receptacle may be placed. If the supporting table 7 is used the weight of the ear of corn will overbalance the weight 8, thus causing the supporting plate to be tilted sufficiently to permit the ear to drop through 80 the aperture in the bed plate.

The ears are fed to the machine by hand by an operator who is stationed in front of the machine; experience has demonstrated that with this machine the ears may be fed and 85 husked with great rapidity and in a thoroughly efficient and satisfactory manner.

Having thus fully described the invention, what I claim as new is:—

1. In a corn husking machine, a pair of husking rolls, a slide supported for reciproca- 90 tion, an endless belt carried by the slide and traveling around one of the husking rolls, means for operating the slide, and a presser member pivoted adjacent to the slide carry- 95 ing the endless belt.

2. In a corn husking machine, a pair of husking rolls, a slide supported for reciproca- 100 tion, an endless belt movably supported upon the slide and having teeth or prongs, means for operating the slide, and a presser member pivoted adjacent to the slide; one of the husking rolls being extended between the leads of the endless belt supported upon the slide.

3. In a corn husking machine, a pair of husking rolls, a slide supported for reciproca- 105 tion, a driven shaft supported in stationary bearings adjacent to the slide, a bent engaging member upon said shaft, means for operating the slide, and a presser member pivoted 110 adjacent to the slide.

4. In a corn husking machine, pairs of husking rolls, a pair of slides supported for re- 115 ciprocation adjacent to the husking rolls and transversely thereof, endless belts carried by the slides, means for operating said belts in the direction of the lower husking rolls, and a presser member pivoted adjacent to and intermediate of the slides.

5. In a corn husking machine pairs of husking rolls, slides supported for reciprocation 120 in opposite directions between and transversely of the husking rolls, endless toothed belts carried by the slides, means for operating the belts in the same direction as the lower husking rolls, and a presser member pivoted 125 adjacent to and intermediate of the slides.

6. In a corn husking machine, pairs of husking rolls, a pair of slides supported for reciprocation in opposite directions intermediate 130

and transversely of the husking rolls, toothed endless belts carried by the slides, means for operating said belts in the same direction as the lower husking rolls and a presser member 5 pivoted adjacent to the slides and having laterally movable arms.

7. In a corn husking machine, a pair of slides, endless belts supported thereon and movable in opposite directions, and a presser 10 member pivoted intermediate of and adjacent to the slides.

8. In a corn husking machine, a pair of slides supported for reciprocation in opposite 15 directions, endless belts carried upon said slides, means for operating said belts in opposite directions, and a presser member pivoted adjacent to the slides and having laterally 20 movable arms.

9. In a corn husking machine, a pair of 25 slides supported for reciprocation in opposite directions, endless belts carried by the slides, means for operating said belts in opposite directions, and a presser member pivoted adjacent to the slides and having laterally 30 movable arms provided with resilient barbed cushions.

10. In a corn husking machine, a pivotally supported ear engaging presser member having 35 laterally movable arms; and means co-operating therewith for holding the ears of corn.

11. In a corn husking machine, a pivotally supported presser member having laterally 40 movable arms provided with barbed resilient cushions; and means coöperating therewith for holding the ears of corn.

12. In a corn husking machine, a pivotally supported ear engaging presser member, and 45 arms hingedly connected with said member, said arms being provided at their free ends

with barbed resilient cushions; and means coöperating therewith for holding the ears of corn.

13. In a corn husking machine, husk en- 45 gaging and loosening means consisting of endless belts, slides supporting said belts, means for reciprocating said slides in opposite directions, means for continuously operating the belts while the slides are being recip- 50 roated, and means for pressing an ear of corn in the direction of the endless belts.

14. In a corn husking machine husk loosen- ing means consisting of endless toothed belts, slides supporting said belts, means for recip- 55 roating said slides in opposite directions, means for continuously operating the endless belts while the slides are being reciprocated, a presser member pivoted adjacent to and in the direction of the endless belts carried by the slides, and laterally movable arms con- 60 nected with said presser member and having terminal resilient barbed cushions.

15. In a corn husking machine, pairs of husk stripping rolls, husk loosening means consisting of endless belts, slides supporting 65 said belts, means for reciprocating said slides in opposite directions transversely of the husk stripping rolls, means for continuously operating the endless belts while the slides are being reciprocated, a presser member 70 pivoted adjacent to the slides, a tiltingly mounted ear supporting table, and means for counterbalancing the latter.

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

ALMON E. HALL.

Witnesses:

A. E. SPENCER,

A. E. KEMP.