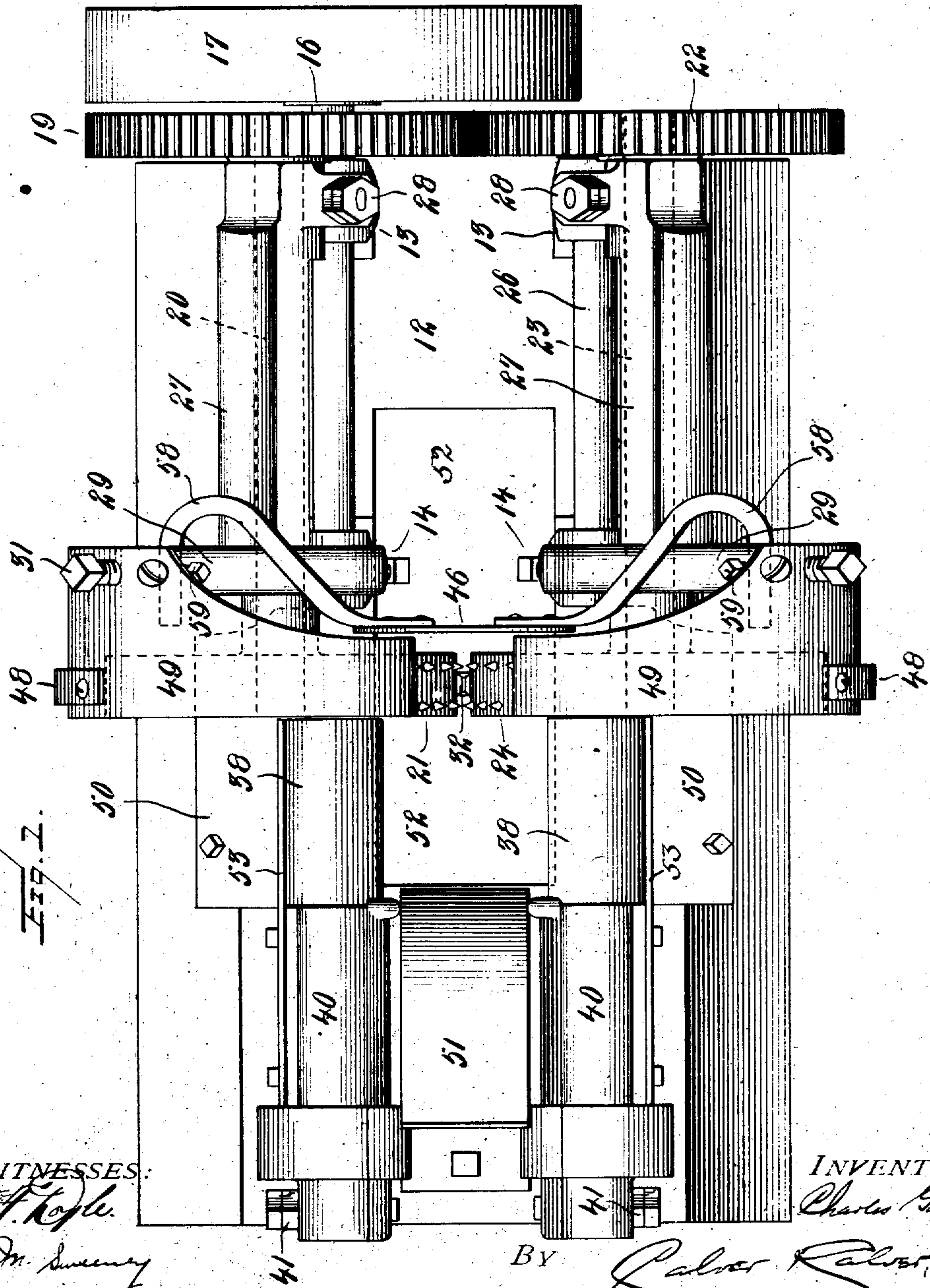


No. 879,538.

C. GORMLEY.
CORN HUSKING MACHINE.
APPLICATION FILED APR. 15, 1907.

PATENTED FEB. 18, 1908.

4 SHEETS—SHEET 1.



WITNESSES:
W. F. Kople
C. M. Sweeney

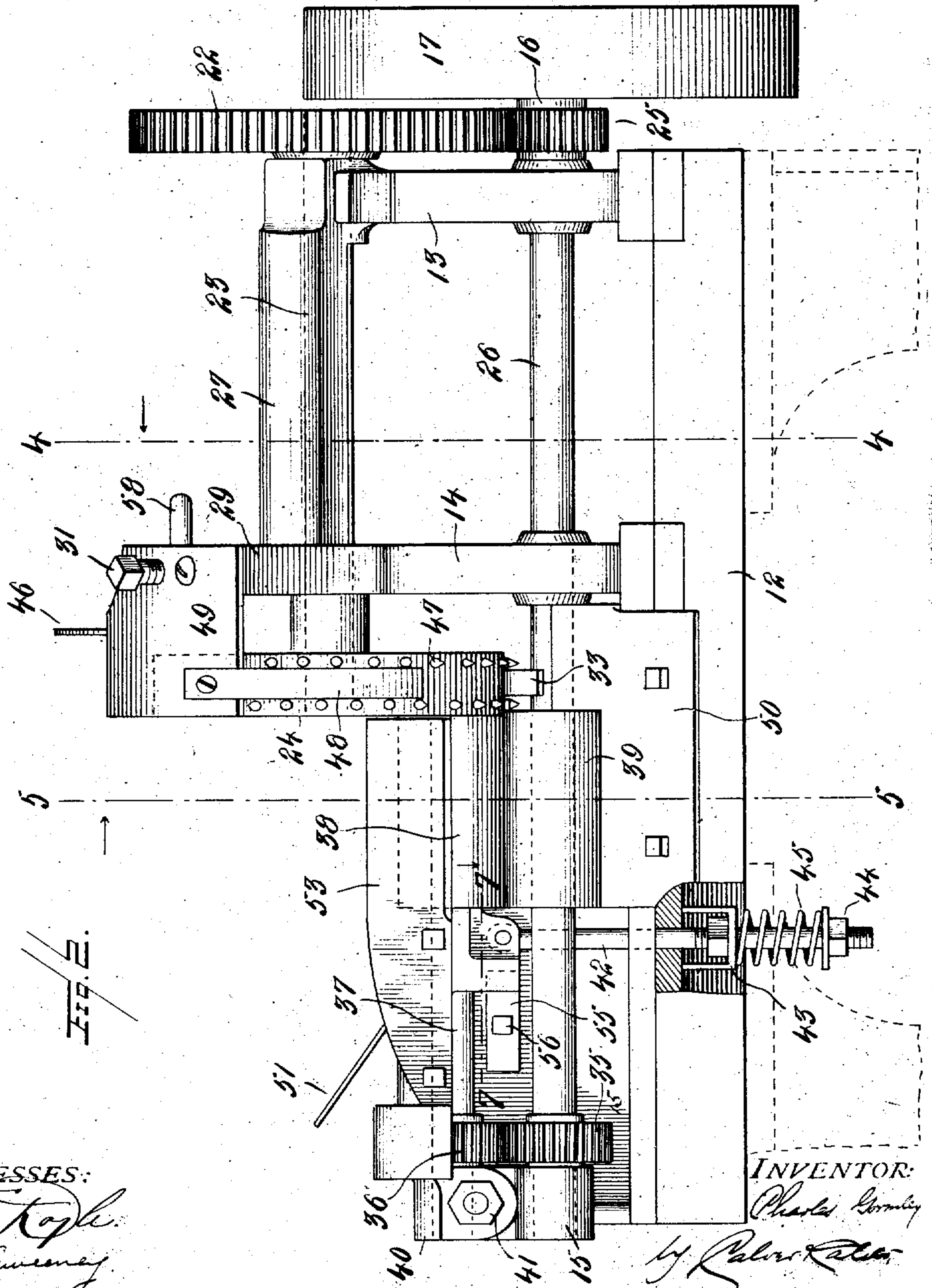
INVENTOR:
Charles Gormley
BY *Robert Ralston*
Attorneys,

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4 SHEETS—SHEET 2.



WITNESSES:

Wm. F. Kople
C. H. Sweeney

INVENTOR:

Charles Gormley

by Robert K. Ketchum

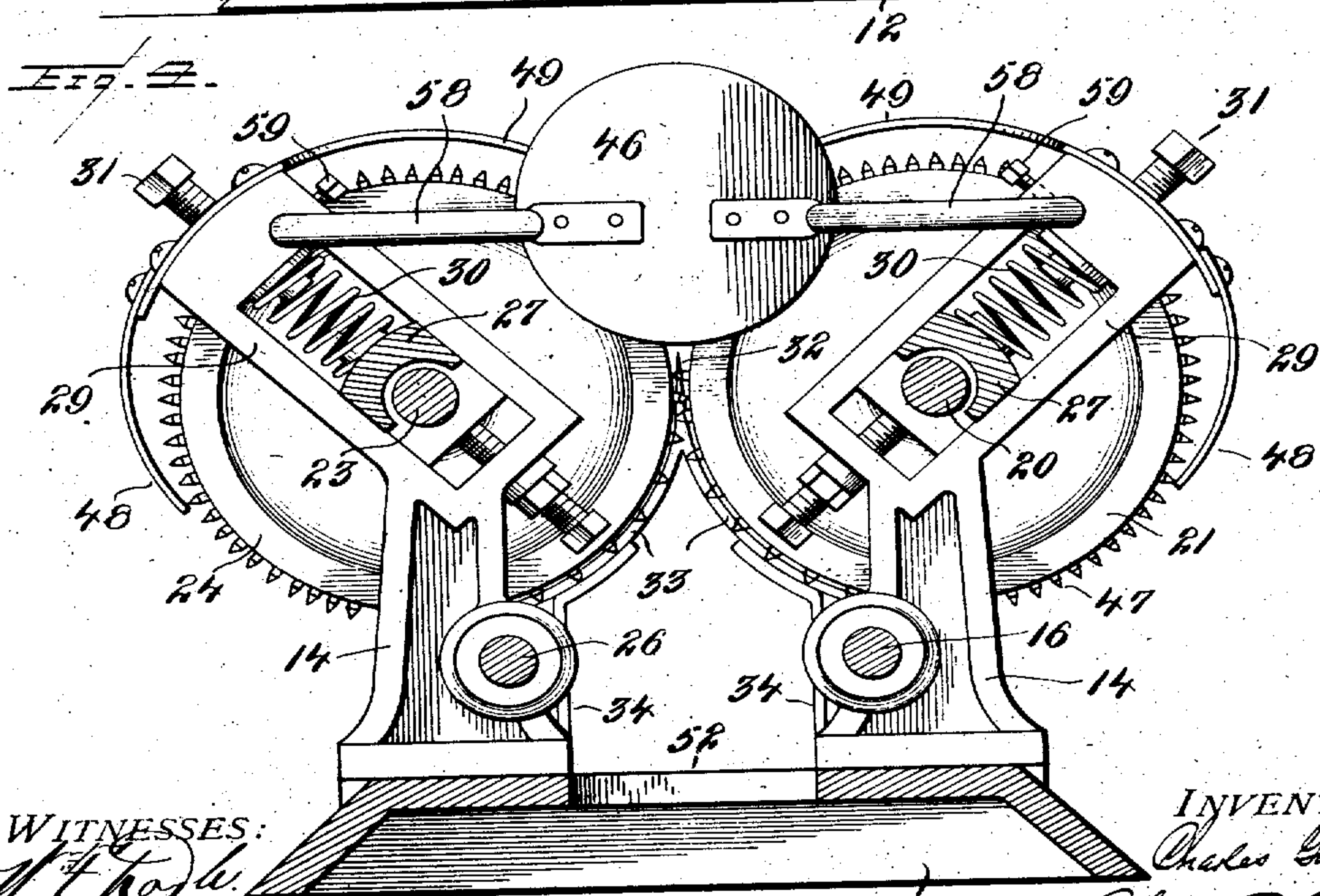
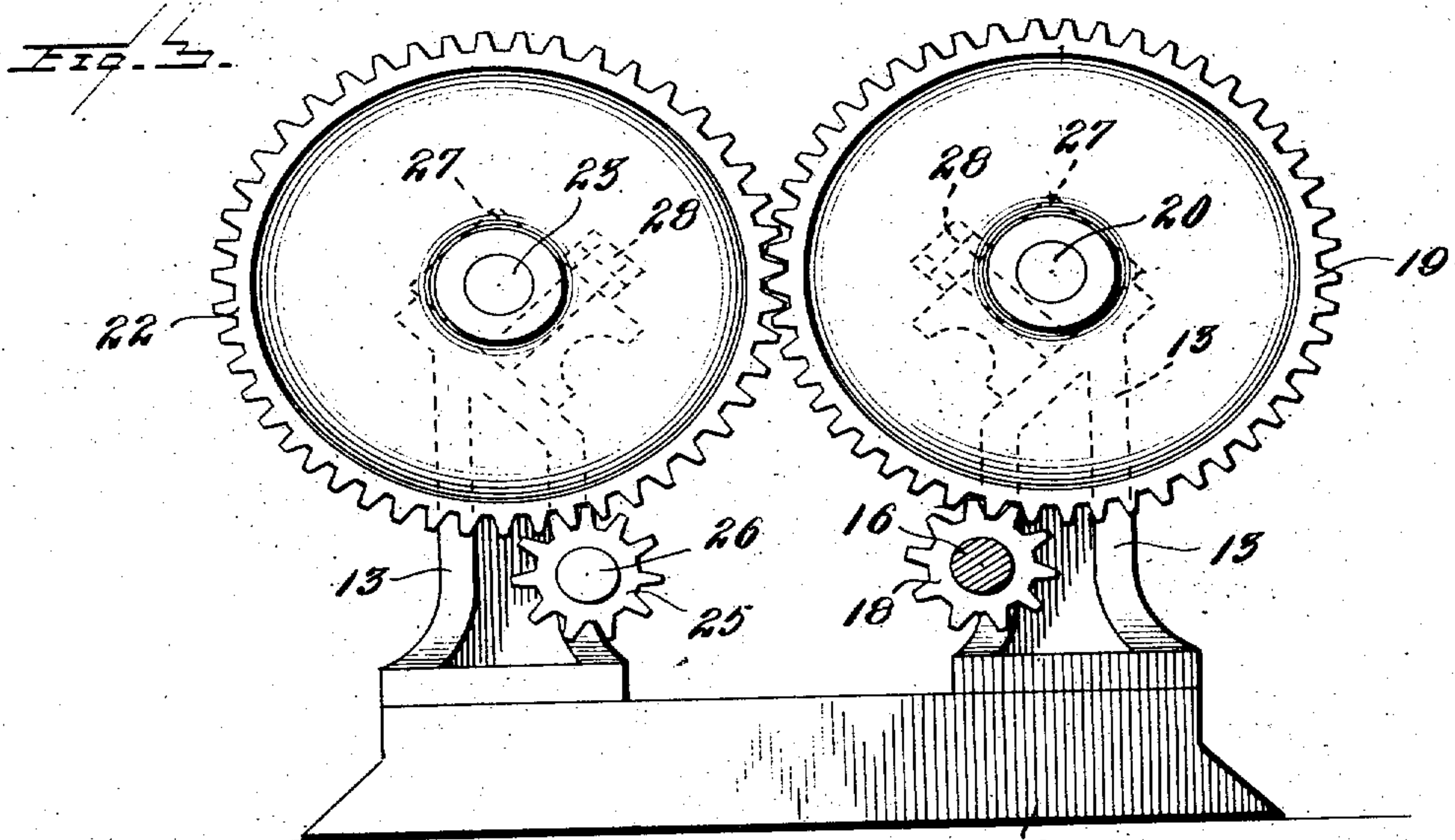
Attorneys

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4 SHEETS—SHEET 3.



WITNESSES:
W. F. Kopl.
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INVENTOR:
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12 by Robert K. Salter

Attorneys.

No. 879,538.

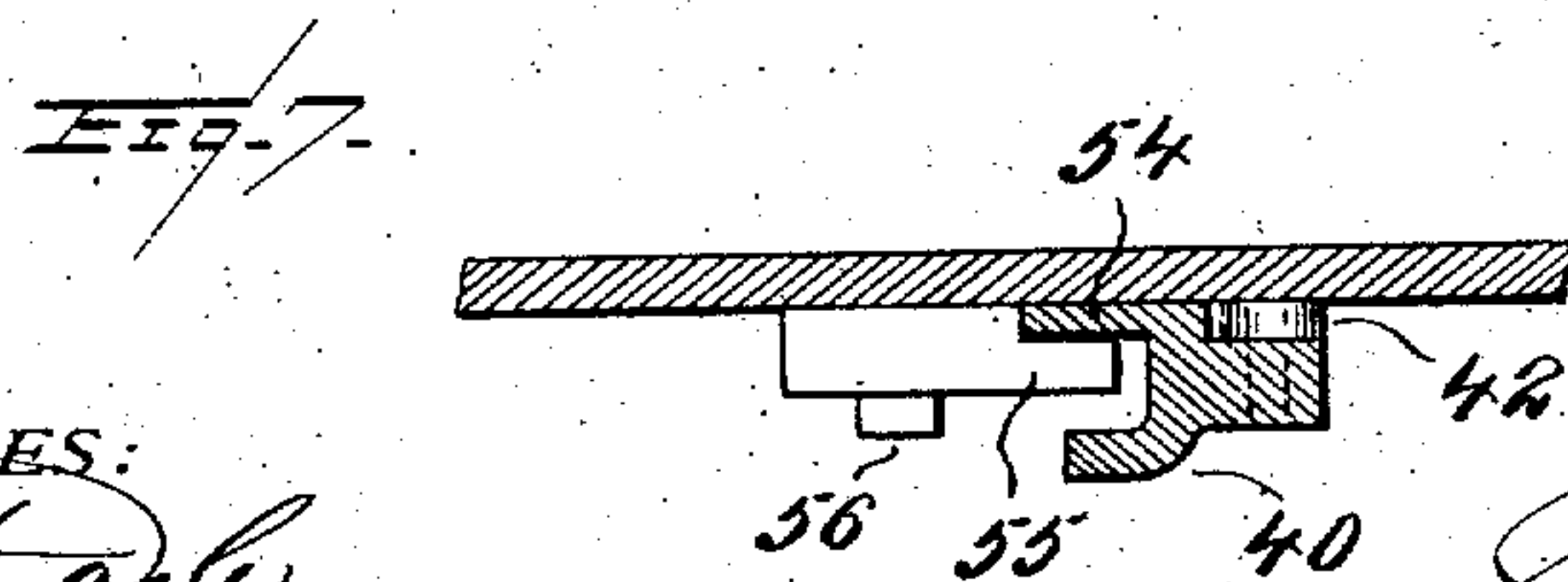
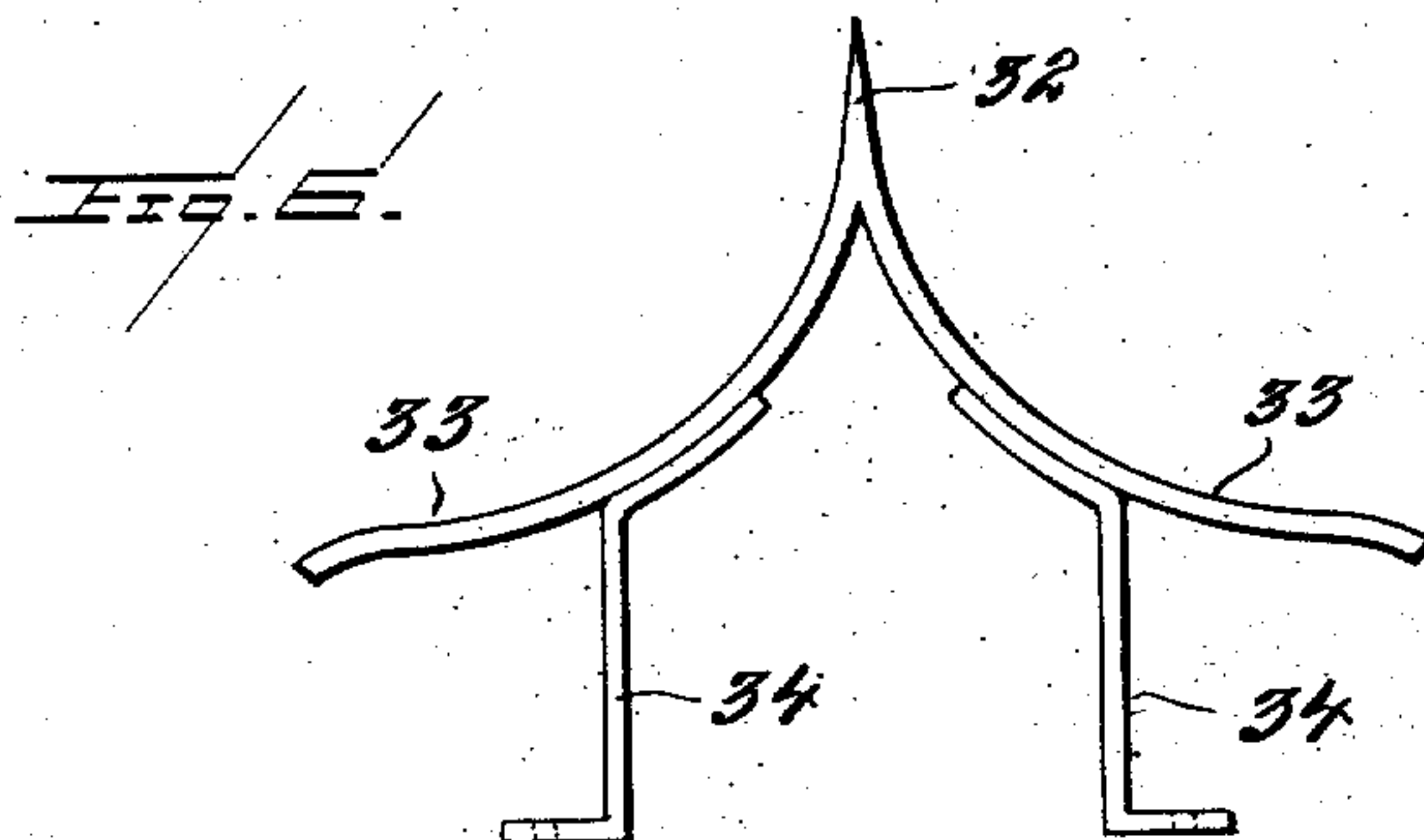
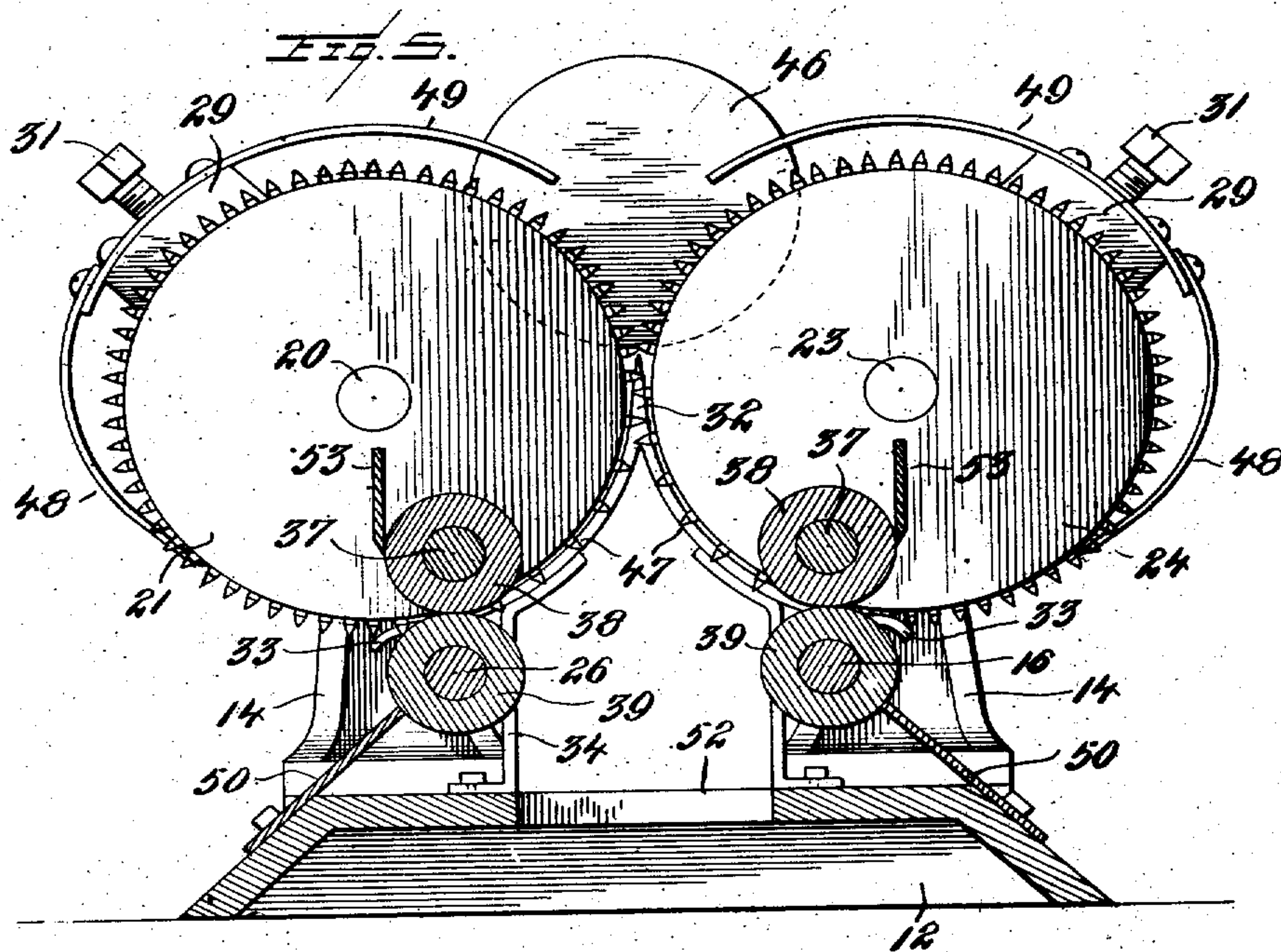
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4 SHEETS—SHEET 4.



WITNESSES:

W. F. Kable.
C. J. Sweeney

INVENTOR:

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UNITED STATES PATENT OFFICE.

CHARLES GORMLEY, OF MOUNT MORRIS, NEW YORK, ASSIGNOR OF ONE-HALF TO JOHN C. WINTERS AND JOHN W. PROPHET, OF MOUNT MORRIS, NEW YORK.

CORN-HUSKING MACHINE.

No. 879,538.

Specification of Letters Patent.

Patented Feb. 18, 1908.

Application filed April 15, 1907. Serial No. 368,405.

To all whom it may concern:

Be it known that I, CHARLES GORMLEY, a citizen of the United States, residing at Mount Morris, in the county of Livingston and State of New York, have invented or discovered certain new and useful Improvements in Corn-Husking Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to machines for husking ears of corn and has for its object to provide a machine for this purpose which is simple in construction and efficient in operation, and in which the husks are stripped from the ears of corn in a rapid and positive manner, and without damaging the corn.

The improved machine comprises means whereby unhusked ears of corn are caused to be conveyed to a knife or pin which will split the husks at the apexes of the ears, and from which knife or pin the split husks are carried to stripping rollers at each side of the machine, and which stripping rollers will tear off the husks from the ears which will then be discharged from the machine, either into a suitable receptacle or to a conveyer which will carry them away.

In the accompanying drawings, Figure 1 is a plan view of the improved machine, Fig. 2 a side view and Fig. 3 a rear end view of the same. Fig. 4 is a transverse section on line 4—4, Fig. 2, and Fig. 5 a transverse section on line 5—5, Fig. 2, looking in the direction of the arrows adjacent said lines in each instance. Fig. 6 is a detail view of the splitting pin and grooved guides, and Fig. 7 is a detail horizontal section on line 7—7, Fig. 2.

Referring to the drawings, 12 denotes the base of the machine provided with two sets of standards 13, 14 and 15. Journaled in one set of said standards 13, 14 and 15 is a driving shaft 16 provided with a pulley 17 and with a pinion 18, said pinion meshing with a gear wheel 19 on a shaft 20 carrying at its forward end a spur-wheel 21. The gear wheel 19 meshes with a similar gear wheel 22 fixed to a shaft 23 having at its forward end a spur-wheel 24 similar to the spur-wheel 21, said gear-wheel 22 meshing with a pinion 25 on a countershaft 26 journaled in the other set of said standards 13, 14 and 15. The shafts 20 and 23, carrying the spur-wheels 21 and 24, are preferably journaled in bearing boxes 27 pivoted at their

rear ends to the standards 13 by the bolts 28. The forward ends of said bearing boxes 27 extend through rectangular guides 29 formed on the standards 14, springs 30 being provided in said guides to press downward against said bearing boxes in such a manner that the forward ends of the shafts 20 and 23, carrying the spur-wheels 21 and 24, will be yieldingly mounted to permit said shafts to swing upward and outward in diverging planes when the material passing between the said spur-wheels is of sufficient thickness to render said yielding swinging action desirable or necessary to permit said spur-wheels to be moved apart from each other. The stress of the said springs and the positions of the forward ends of the bearing boxes may be properly regulated by adjusting screws 31.

Located between the spur-wheels 21 and 24 is an upwardly-pointing splitting knife or pointed pin 32 which, in the construction shown, is formed by an upward continuation of curved guides 33 suitably supported from the base of the machine, as by standards 34, said guides curving downwardly and outwardly as shown, adjacent to the faces of the said spur-wheels, and preferably extending beyond the shafts 16 and 26. The spaces or distances between the faces of the spur-wheels and the said curved guides is preferably less than the lengths of the spurs 47 so that said spurs will be properly embedded in the husks lying between said faces and said guides. The shafts 16 and 26, which are journaled at their forward ends to the standards 15, are provided, rearward of said standards, with pinions 35 meshing with similar pinions 36 on shafts 37 carrying stripping rolls 38 yieldingly held in contact with similar stripping rolls 39 which latter are mounted on the shafts 16 and 26. Said stripping rolls are preferably formed of some elastic material, such as rubber; or, instead of being formed throughout of such material, they may be faced with the same. Shafts 37, carrying the upper stripping rolls, are journaled in bearing boxes 40 preferably pivotally connected with the standards 15 by pivot-bolts 41, to hold the free inner ends of the said bearing-boxes yieldingly downward and thus press the upper stripping rolls yieldingly against the lower stripping rolls, this being effected, as herein shown, by hook-bolts 42 jointed at their upper ends to said bearing boxes 40, said bolts projecting down-

ward through the base 12. Between stirrups 43 at the bottom of said base and nuts 44 on the lower end of said bolts are interposed springs 45 which serve to draw the free ends of said boxes yieldingly downward. The said bearing-boxes are guided in their vertical movements in any suitable manner, as by lugs 54, on portions of the said boxes, overlapped by the ends of brackets 55 attached to the standards 15 by bolts 56.

Supported on the guides 29 of the upper bearing boxes 27 is a stop or gage 46 against which the forward end or apex of an ear of corn to be husked will be thrust by the attendant in such a manner that the said ear can be seized by the spur wheels 21 and 24 and carried downward against the splitting knife or pin 32, and the split husks will then be carried further downward by the spurs on said wheels, and between the latter and the curved guides 22, in such a manner that the husks will pass outward between the upper and lower stripping rolls 38 and 39, and the said stripping rolls will then quickly tear the husks from the ears and carry them outward to the outside of the machine, the husked ear then falling downward. The stop or gage 46 thus determines the lengthwise position of an ear of corn to be presented to the action of the spur-wheels and splitting knife or pin, as will be understood. The arms 58, supporting said stop or gage, are adjustably secured to the guides 29 by set screws 59.

From the sizes of the pinions 18 and 25 relative to the gear-wheels 19 and 22 it will be obvious that the stripping-rolls will be caused to rotate very much faster than the spur-wheels 21 and 24, so that as soon as the husks are carried by the said spur-wheels, in contact with the guides 33, to the said stripping rolls, such husks will be snatched away from the spur-wheels and torn from the ears being husked, as above stated. Each of the spur-wheels 21 and 24 is preferably provided with two separated circles of spurs 47 between which is arranged a stationary scraper or doctor 48, the free ends of said scrapers or doctors being contiguous or closely adjacent to the peripheries of the said spur wheels, so that the said scrapers or doctors will serve to remove from said spur-wheels any pieces of husks or other material which may become impaled upon said spurs and drawn away from the husks carried to the stripping rolls. The said scrapers or doctors 48 are, as herein shown, mounted on guard plates 49 which, in turn, are attached to the guides 29 on the standards 14.

Attached to the base 12 are guard-plates or scrapers 50 the upper edges of which extend closely adjacent to the lower stripping rolls 39, as also closely adjacent to the portions of the shafts 16 and 26 extending between said rolls and the standards 14, so as

to serve to remove fragments of husks or other material from the said rolls and the said portions of said shafts, as the latter rotate.

Attached to the bearing-boxes 40 are guards or scrapers 53 the lower edges of which are closely adjacent to the upper stripping rolls 38, so as to serve to remove from said rolls any fragments of husks or other material which may cling thereto. The guards or scrapers 50 and 53 thus serve to keep the stripping rolls clean and prevent fragments of husks or other material from being carried inward to the ears being husked.

Attached to the base 12 is a support or rest 51 for the butts of the ears of corn, said support or rest inclining downward toward the said stripping rolls, as shown, so as to tend to direct the ears of corn downward through the opening 52 in the base of the machine.

In the operation of the machine the attendant feeds the ears of corn one by one to the spur-wheels 21 and 24, the points of said ears being abutted against the stop or gage 46, and the spurs on said spur wheels will immediately seize an ear of corn presented thereto and carry the same downward against the splitting knife or pin 32 by which the husks at the point of the ear are split apart, and are carried downward by the spur wheels and in contact with the curved guides 33 in such a manner that the split husks are separated apart from each other, from the apex or small end of the ear and towards the butt of the latter, so as to be immediately seized by the stripping rollers and torn from the ear, and the denuded ear then passes downward through an opening 52 in the base of the machine into a suitable receptacle or to a conveyer by which it may be carried away.

The improved machine is more particularly intended for husking green corn, and is well adapted for husking the ears of green sweet or sugar corn, the husks of which are usually very thick and somewhat hard to remove. As the corn itself will not or need not come in contact with any rough or abrading surfaces it will be obvious that the kernels of the corn on the ear will not be injured or broken by the husking operation.

Having thus described my invention I claim and desire to secure by Letters Patent:

1. In a corn husking machine, the combination with a pair of spur-wheels and means for driving the same, of a splitting knife or pin arranged between said spur-wheels and cooperating with the latter to split the husks of an ear of corn, two pairs of stripping rolls, and means for rotating said stripping rolls at a higher speed than that at which said spur wheels are rotated.

2. In a corn husking machine, the combination with a pair of yieldingly-mounted spur-wheels and means for driving the same,

of a splitting knife or pin arranged between said spur-wheels and cooperating with the latter to split the husks of an ear of corn, two pairs of stripping rolls, and means for rotating said stripping rolls at a higher speed than that at which said spur wheels are rotated.

3. In a corn husking machine, the combination with a pair of spur-wheels and means for driving the same, of a splitting knife or pin arranged between said spur-wheels and cooperating with the latter to split the husks of an ear of corn, and curved guides extending downward and outward from said splitting knife or pin adjacent to the faces of said spur-wheels.

4. In a corn husking machine, the combination with a pair of yielding-mounted spur-wheels and means for driving the same, of a splitting knife or pin arranged between said spur-wheels and cooperating with the latter to split the husks of an ear of corn, and curved guides extending downward and outward from said splitting knife or pin adjacent to the faces of said spur-wheels.

5. In a corn husking machine, the combination with a pair of spur-wheels and means for driving the same, of an interposed splitting knife or pin, two pairs of stripping-rolls, and means, cooperating with said spur-wheels, for carrying the split husks of an ear of corn from the said splitting knife or pin to the said stripping-rolls.

6. In a corn husking machine, the combination with a pair of yielding-mounted spur-wheels and means for driving the same, of an interposed splitting knife or pin, two pairs of stripping-rolls and means, cooperating with said spur-wheels, for carrying the split husks of an ear of corn from the said splitting knife or pin to the said stripping-rolls.

7. In a corn-husking machine, the combination with a pair of spur-wheels and means for driving the same, of an interposed splitting knife or pin, two pairs of stripping-rolls, means, cooperating with said spur-wheels, for carrying the split husks of an ear of corn from the said splitting knife or pin to the said stripping-rolls, and means whereby said stripping-rolls are held in yielding contact with each other.

8. In a corn husking machine, the combination with a pair of spur-wheels and means for rotating the same, of a splitting knife or pin arranged between the said spur-wheels, two pairs of stripping-rolls, means for rotating said rolls at a higher speed than that at which said spur-wheels are rotated, and means, cooperating with said spur-wheels, for carrying the split husks to the said stripping rolls.

9. In a corn husking machine, the combination with a pair of yielding-mounted spur-wheels and means for rotating the same, of a splitting knife or pin arranged between the

said spur wheels, two pairs of stripping-rolls, means for rotating said rolls at a higher speed than that at which said spur-wheels are rotated, and means, cooperating with said spur-wheels, for carrying the split husks to the said stripping rolls.

10. In a corn husking machine, the combination with a pair of spur-wheels and means for rotating the same, of a splitting knife or pin arranged between the said spur-wheels, two pairs of stripping-rolls, means for rotating said rolls at a higher-speed than that at which said spur-wheels are rotated, means, cooperating with said spur-wheels, for carrying the split husks to the said stripping rolls, and means whereby said stripping-rolls are held in yielding contact with each other.

11. In a corn husking machine, the combination with a pair of spur-wheels and means for driving the same, of a splitting knife or pin arranged between said spur-wheels and cooperating with the latter to split the husks of an ear of corn, and a stop or gage, adjacent to said spur-wheels, for determining the lengthwise position of an ear of corn to be presented to the latter.

12. In a corn husking machine, the combination with a pair of spur-wheels and means for driving the same, of a splitting knife or pin arranged between said spur-wheels and cooperating with the latter to split the husks of an ear of corn, a stop or gage, adjacent to said spur-wheels, for determining the lengthwise position of an ear of corn to be presented to the latter, and means cooperating with said spur-wheels and splitting knife or pin for removing the split husks from an ear of corn.

13. In a corn husking machine, the combination with a pair of spur-wheels and means for driving same, of a splitting knife or pin arranged between said spur-wheels, a stop or gage for determining the lengthwise position of an ear of corn relative to said spur-wheels, means, cooperating with said spur-wheels and splitting knife or pin, for removing the split husks from an ear of corn, and an inclined support or rest for the butts of the ears.

14. In a corn husking machine, the combination with a pair of yielding-mounted spur-wheels and means for driving same, of a splitting knife or pin arranged between said spur-wheels, a stop or gage for determining the lengthwise position of an ear of corn relative to said spur-wheels, means, cooperating with said spur-wheels and splitting knife or pin, for removing the split husks from an ear of corn, and an inclined support or rest for the butts of the ears.

15. In a corn husking machine, the combination with a pair of rotating spur-wheels, of a splitting knife or pin arranged between the same, curved guards extending from said splitting knife or pin downward and out-

ward adjacent the faces of said spur-wheels, two pairs of stripping rolls, means for rotating said rolls at a higher speed than that at which the said spur-wheels are rotated, and guards or scrapers adjacent to said stripping rolls and serving to keep the latter clean.

16. In a corn-husking machine, the combination with a pair of yielding-mounted rotating spur-wheels, of a splitting knife or pin arranged between the same, curved guards extending from said splitting knife or pin downward and outward adjacent the face of said spur-wheels, two pairs of stripping rolls, means for rotating said rolls at a higher speed than that at which the said spur-wheels are rotated, and guards or scrapers adjacent to said stripping rolls and serving to keep the latter clean.

17. In a corn-husking machine, the combination with a pair of rotating spur-wheels, of a splitting knife or pin arranged between

the same, curved guards extending from said splitting knife or pin downward and outward adjacent the face of said spur-wheels, two pairs of elastic stripping rolls, means for rotating said rolls at a higher speed than that at which the said spur-wheels are rotated, and guards or scrapers adjacent to said stripping rolls and serving to keep the latter clean.

18. In a corn husking machine, the combination with a stationary pointed device for splitting the husks at the ends of ears of corn, of rotating means for causing such ears to be engaged with the splitting device, stationary means for separating the split husks apart, and rotating means for subsequently stripping the husks from the ears.

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

CHARLES GORMLEY.

Witnesses:

E. W. CREVELING,
JOHN C. DICKEY.

Correction in Letters Patent No. 879,538.

It is hereby certified that the name of the second-mentioned assignee in Letters Patent No. 879,538, granted February 18, 1908, upon the application of Charles Gormley, of Mount Morris, New York, for an improvement in "Corn-Husking Machines," was erroneously written and printed "John W. Prophet," whereas said name should have been written and printed *John M. Prophet*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 10th day of March, A. D., 1908.

[SEAL.]

C. C. BILLINGS,
Acting Commissioner of Patents.

ward adjacent the faces of said spur-wheels, two pairs of stripping rolls, means for rotating said rolls at a higher speed than that at which the said spur-wheels are rotated, and guards or scrapers adjacent to said stripping rolls and serving to keep the latter clean.

16. In a corn-husking machine, the combination with a pair of yielding-mounted rotating spur-wheels, of a splitting knife or pin arranged between the same, curved guards extending from said splitting knife or pin downward and outward adjacent the face of said spur-wheels, two pairs of stripping rolls, means for rotating said rolls at a higher speed than that at which the said spur-wheels are rotated, and guards or scrapers adjacent to said stripping rolls and serving to keep the latter clean.

17. In a corn-husking machine, the combination with a pair of rotating spur-wheels, of a splitting knife or pin arranged between

the same, curved guards extending from said splitting knife or pin downward and outward adjacent the face of said spur-wheels, two pairs of elastic stripping rolls, means for rotating said rolls at a higher speed than that at which the said spur-wheels are rotated, and guards or scrapers adjacent to said stripping rolls and serving to keep the latter clean.

18. In a corn husking machine, the combination with a stationary pointed device for splitting the husks at the ends of ears of corn, of rotating means for causing such ears to be engaged with the splitting device, stationary means for separating the split husks apart, and rotating means for subsequently stripping the husks from the ears.

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