

A. F. WEYMER,
 BROOM CORN SEEDING AND SORTING MACHINE.
 APPLICATION FILED MAY 13, 1914.

1,265,846.

Patented May 14, 1918.

3 SHEETS—SHEET 1.

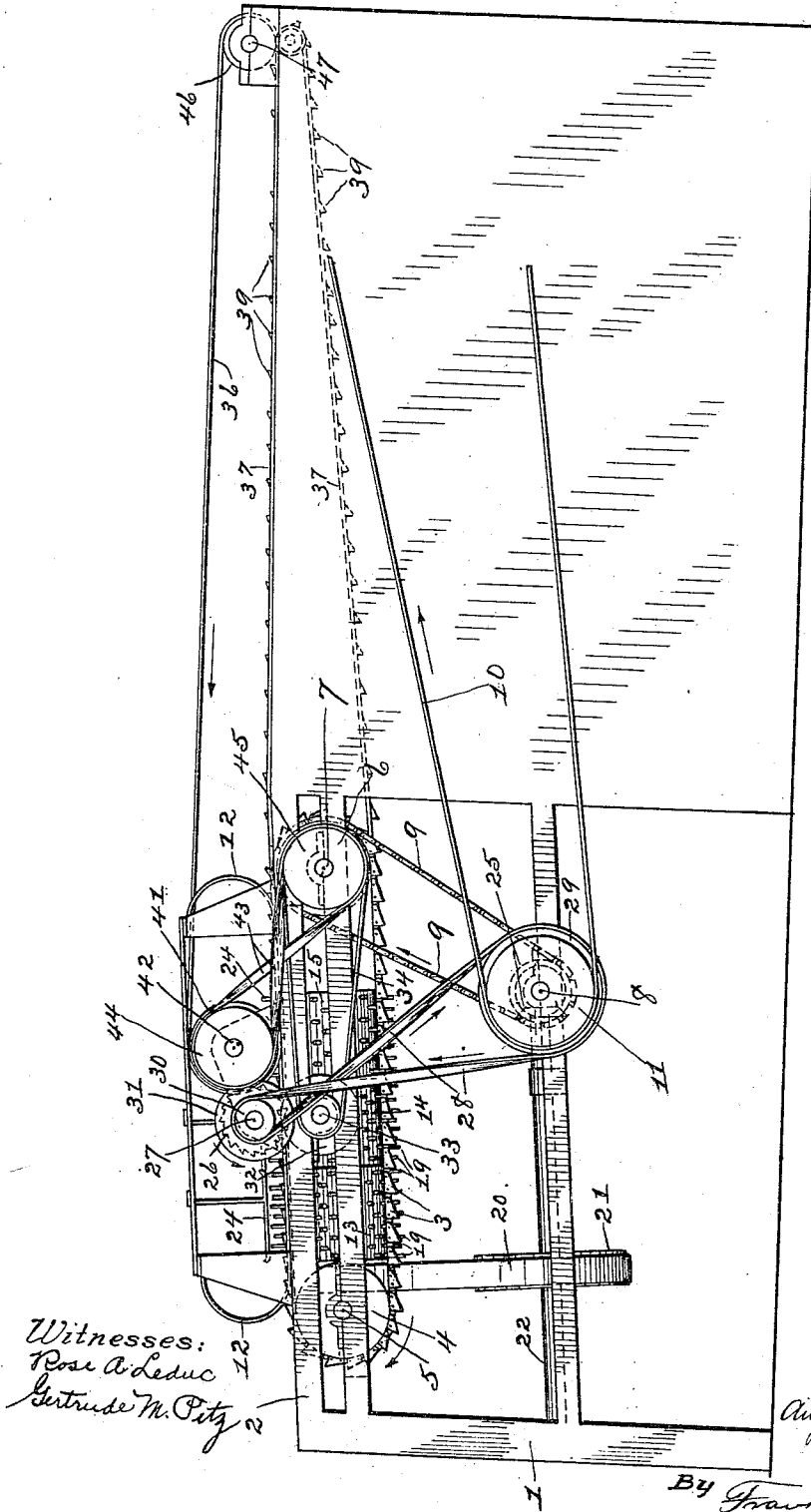


Fig. 1.

Witnesses:
 Rose A. Leduc
 Gertrude M. Pitz

Inventor
 August F. Weymer

By *Franz C. Curtis*
 Attorney

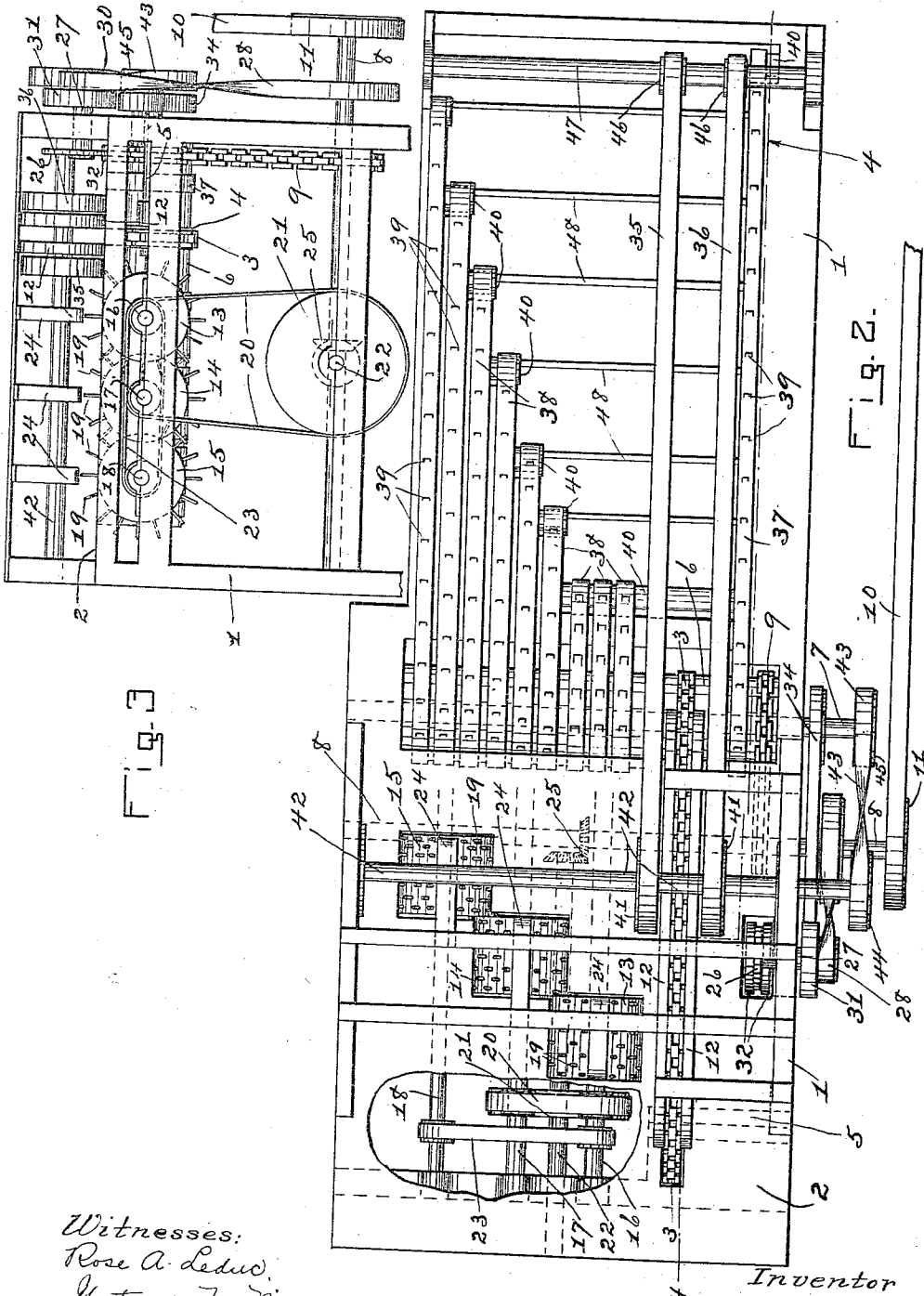
A. F. WEYMER.
BROOM CORN SEEDING AND SORTING MACHINE.

1,265,846.

APPLICATION FILED MAY 13, 1914.

Patented May 14, 1918.

3 SHEETS—SHEET 2.



Witnesses:
Rose A. Leduc.
Bertrude M. Pity.

Inventor
August F. Weymer.
By Frank C. Carter
Attorney

A. F. WEYMER,
 BROOM CORN SEEDING AND SORTING MACHINE.
 APPLICATION FILED MAY 13, 1914.

1,265,846.

Patented May 14, 1918.
 3 SHEETS—SHEET 3.

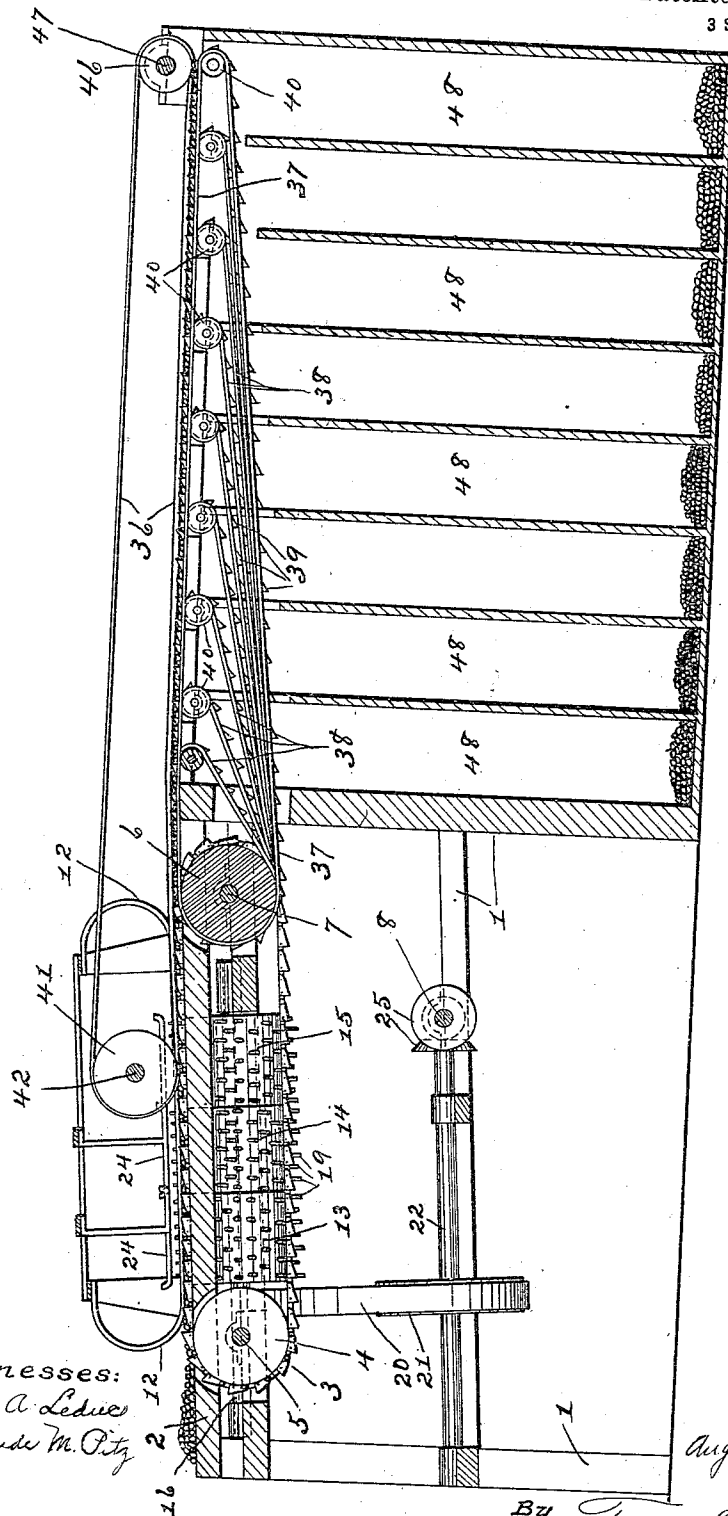


FIG. 4.

Witnesses:
 Rose A. Ledner
 Gertrude M. Oitz

Inventor
 August F. Weymer

By Frank C. Curtis
 Attorney

UNITED STATES PATENT OFFICE.

AUGUST F. WEYMER, OF SYRACUSE, NEW YORK. ASSIGNOR TO THE A. F. WEYMER CO., OF SYRACUSE, NEW YORK, AND AMERICAN BROOM AND BRUSH CO., OF AMSTERDAM, NEW YORK, BOTH CORPORATIONS OF NEW YORK.

BROOM-CORN SEEDING AND SORTING MACHINE.

1,265,846.

Specification of Letters Patent.

Patented May 14, 1918.

Application filed May 13, 1914. Serial No. 838,381.

To all whom it may concern:

Be it known that I, AUGUST F. WEYMER, a citizen of the United States, residing at Syracuse, county of Onondaga, and State of New York, have invented certain new and useful Improvements in Broom-Corn Seeding and Sorting Machines, of which the following is a specification.

The invention relates to such improvements and consists in the novel construction and combination of parts hereinafter described and subsequently claimed.

Reference may be had to the accompanying drawings, and the reference characters marked thereon, which form a part of this specification. Similar characters refer to similar parts in the several figures therein.

Figure 1 of the drawings is a view in side elevation of my improved broom-corn seeding and sorting machine.

Fig. 2 is a top plan view of the same, partly broken away.

Fig. 3 is a view in front elevation of the same.

Fig. 4 is a longitudinal vertical sectional view taken on line 4—4, Fig. 3.

The invention relates to a machine for removing the seeds from, and sorting according to length, heads of broom-corn or similar brush material.

Certain objects of the invention are to, at a single operation, remove the seeds from, and assort according to length, heads of broom-corn adapted for manufacture into brooms of various kinds; and to prevent unnecessary breakage and injury of the brush in removing the seeds therefrom.

Other objects will appear in connection with the following description:

1 is the frame of the machine having at its front end an upwardly inclined table, 2, upon which the heads of broom-corn are placed in feeding them into the machine.

The heads are fed into the machine along the table, 2, by means of a chain, 3, which passes over a wheel, 4 fixed upon a cross-shaft, 5, and over a driving drum, 6, fixed upon a cross-shaft, 7, which shafts are rotatively mounted in bearings on the frame of the machine.

The shaft, 7, is driven from the main

shaft, 8, by means of a sprocket-chain, 9, which passes over the drum, 6, and over a suitable sprocket-wheel on the shaft, 8.

The drive-shaft, 8, is operated by means of a main driving belt, 10, passing over a pulley, 11, on the shaft, 8.

The heads of broom-corn are placed by hand in engagement with the upper stretch of the chain, 3, with the heads transversely arranged with the stalks all directed toward the right-hand side of the machine as seen in Fig. 3; and the heads are carried in this transverse position by said sprockets on the chain, 3, beneath a pair of spring-shoes, 12, arranged on opposite sides of the chain, as shown in Figs. 2 and 3, which spring-shoes yieldingly hold the heads down upon the chain, so that they will be properly fed.

At the left-hand side of the feed-chain, 3, are arranged three seeding drums, 13, 14 and 15, which drums are arranged upon the respective shafts, 16, 17 and 18, with their axes parallel with the direction of feed-movement of the heads carried by the chain, 3.

The drums are mounted successively along the path traversed by the heads, and at different distances from the chain, 3, and are provided with peripheral projections or heckling pins, 19, which comb the brush of the heads, as the heads are being fed past the drum by the chain, 3.

The drums are arranged with their axes at one side of the plane of the feeding movement of the broom corn and with their axes in another horizontal plane but located different distances from the feeding means, the peripheries of the drums being arranged tangent to the plane of movement of the broom corn by the feeding means.

The drums, 13 and 14, are rapidly rotated by means of a belt, 20, which passes over a pulley, 21, on the shaft, 22, and over pulleys on the respective shafts, 16 and 17.

The drum, 15, is similarly rapidly rotated by means of a belt, 23, which passes over pulleys on the respective shafts, 16 and 18.

The shaft, 22, is driven from the shaft, 8, by means of a beveled gear connection at 25.

In passing the seeding mechanism, the brush of the longest heads will be whipped

and combed by the projections on the drum, 15; while the brush of the shortest heads will be whipped and combed by the projections on the drum, 13; and the intermediate sizes will be similarly treated by the drum, 14, whereby practically all of the seeds will be removed from the brush.

In passing the respective drums, the brush is held down by shoes, 24, so as to be properly engaged by the projections, 19.

On the opposite side of the feed-chain, 3, in the path traversed by the stalks of the heads, is a rotary saw or cutter, 26, fixed upon a shaft, 27, driven from the shaft, 8, by means of a crossed belt 28, passing over a pulley, 29, on the shaft, 8, and a pulley, 30, on the shaft, 27.

A fly-wheel, 31, is fixed upon the shaft, 27, to insure a steady operation of the cutter.

The saw or cutter, 26, plays in a peripheral groove in a wheel, 32, which wheel supports the stalks against the thrust of the cutter.

The grooved wheel, 32, is fixed upon a shaft, 33, driven by a belt-connection, 34, with the drum, 6.

By means of the mechanisms thus far described, the seeds are removed from the brush of the heads and the stalks of the heads are cut by the saw, 26, as the heads are fed along by the chain, 3, and held from disarrangement by means of the spring-shoes, 12, and after thus being cut and seeded the heads are delivered by the sprocket-chain, 3, in the same transverse position to the sorting or sizing mechanism.

As the heads leave the seeding and cutting mechanisms, they are carried by the feed-chain, 3, beneath the lower stretches of a pair of endless belts, 35 and 36, into engagement with an endless carrier, 37, on one side of the belts, 35 and 36, and a plurality of endless carriers, 38, on the opposite side of said belts.

The several carriers, 37 and 38, are provided with sprockets, 39, which engage the under side of the transversely arranged heads and positively carry them along beneath the belts, 35 and 36, the lower stretches of said belts and the upper stretches of said endless carriers traveling in the same direction, to the right as seen in Figs. 1 and 2.

All of the endless carriers, 37 and 38, pass over the drum, 6, and each also passes over a roller or pulley, 40.

The belts, 35 and 36, pass over the respective pulleys, 41, on a shaft, 42, driven by means of a crossed belt, 43, which passes over a pulley, 44, on the shaft, 42, and a pulley, 45, on the shaft, 7. Said belts, 35 and 36, also pass over the respective pulleys, 46, on a shaft, 47.

The endless carriers, 38, are of successively greater lengths leading to and over-

hanging a series of bins, 48, successively arranged along the inner side of the endless carrier, 37.

The stalk-ends of the heads are upheld and fed along over the bins, 48, by means of the endless carrier, 37; and the brush-ends are similarly upheld and fed along by means of the endless carriers, 38; while the heads are yieldingly held down by means of the belts, 35 and 36, which serve to force the heads down into the respective bins, 48, whenever the brush-ends of the heads fail to be supported by the endless carriers, 38.

The shortest heads will thus be deposited in the first of the bins, and the successively longer heads will be deposited in the successive bins thereafter, so that the heads will be thus sorted in accordance with their lengths.

I do not wish to be limited to the details of construction shown in the drawings, as various modifications are possible without departing from the spirit of the invention.

It will be also understood that while the various mechanisms above described combine to produce a seeded, cut and sorted product, certain of said mechanisms may, if desired, be omitted, and the others used for such treatment of the heads as may be desired.

What I claim as new and desire to secure by Letters Patent is—

1. In a broom-corn seeding machine, the combination of feeding mechanism for receiving transversely arranged heads of broom-corn, and a plurality of seeding devices arranged at one side of the plane of movement of the broom-corn and having hecklers extending into said plane, said devices being arranged different distances from the feeding means, substantially as and for the purpose described.

2. In a broom-corn seeding machine, the combination of feeding means arranged to engage transversely arranged heads of broom-corn, and a plurality of rotary seeding drums arranged with their peripheries substantially tangent to the plane of movement of the broom-corn and having peripheral heckling pins extending into said plane, the drums being arranged different distances from the feeding means, substantially as and for the purpose set forth.

3. In a broom corn seeding and sorting machine the combination of feeding-mechanism for transversely arranged heads of broom corn, a rotatory drum mounted at one side of said feeding mechanism, and yielding means engageable with the upper sides of said heads to press said heads upon the drum substantially as and for the purpose described.

4. In a broom corn seeding and sorting machine the combination of feeding mechanism adapted to engage transversely ar-

5 ranged heads of broom corn and a plurality of rotatory seeding drums, each separate from the other and arranged at one side of the said feeding mechanism, each of said drums having on its periphery projections engageable with the brush of the heads substantially as and for the purpose described.

10 5. In a broom corn seeding and sorting machine the combination of a feeding mechanism adapted to engage transversely arranged heads of broom-corn and a plurality of rotatory seeding drums each separate from the other and with their axes in the same plane and successively arranged at 15 different distances at one side of said feeding mechanism, each of said drums having on its periphery projections engageable with the brush of the heads substantially as and for the purpose described.

20 6. In a broom corn seeding and sorting machine the combination of feeding mechanism for transversely arranged heads of broom corn, a plurality of rotatory drums mounted at one side of said feeding mech-

anism, and arranged at different distances 25 from the said feeding mechanism and yielding means engageable with the upper sides of said heads to press said heads upon the drum substantially as and for the purpose described.

30 7. In a broom corn seeding and sorting machine the combination of seeding mechanism adapted to remove seeds from the brush of heads of broom corn, a cutter for severing the stalks of said heads, means for 35 supporting the stalks against the thrust of said cutter comprising a wheel having a groove in its periphery, the said cutting mechanism arranged to actuate in said groove and means for feeding the heads past 40 the seeding and cutting mechanism substantially as and for the purpose described.

In testimony whereof, I have hereunto set my hand this 11th day of May, 1914.

AUGUST F. WEYMER.

Witnesses:

CHAS. RESCH,
J. R. DUNN.