June 17, 1924. 1,498,379

E. B. JAHN

SEED TREATING MACHINE

Filed March 27. 1923 5 Sheets-Sheet 1

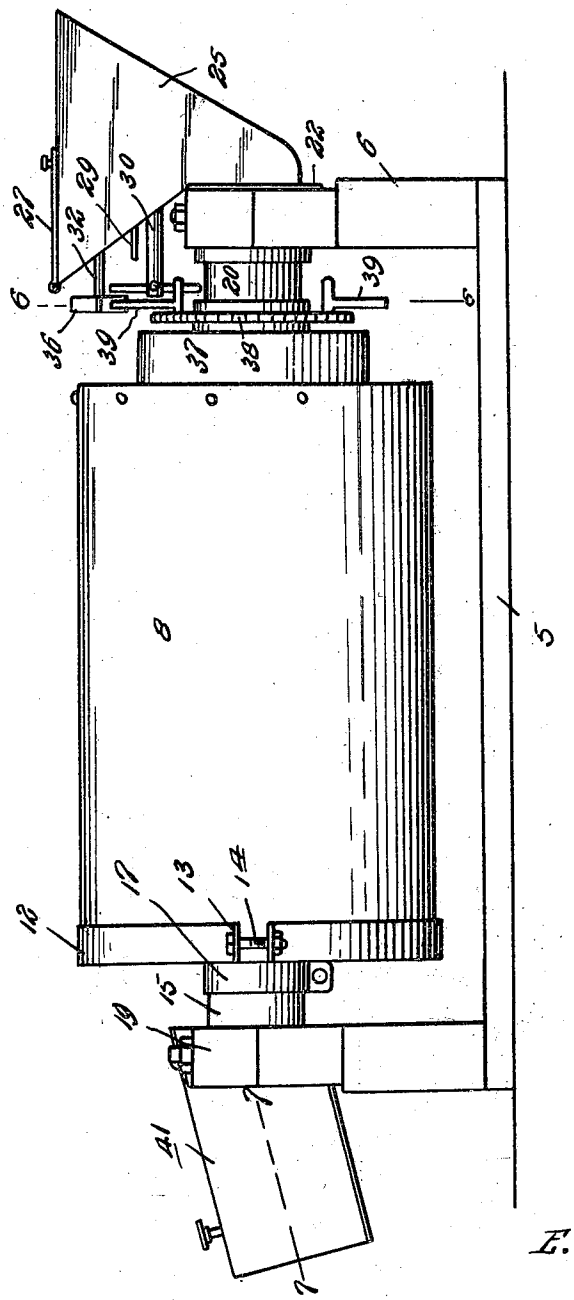


Fig. 1.

Witnesses:
H. L. Fox.
H. Berman

E. B. Jahn,
Inventor
By Pierce & Pierce
Attorneys

June 17, 1924. 1,498,379

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SEED TREATING MACHINE

Filed March 27, 1923 5 Sheets-Sheet 2

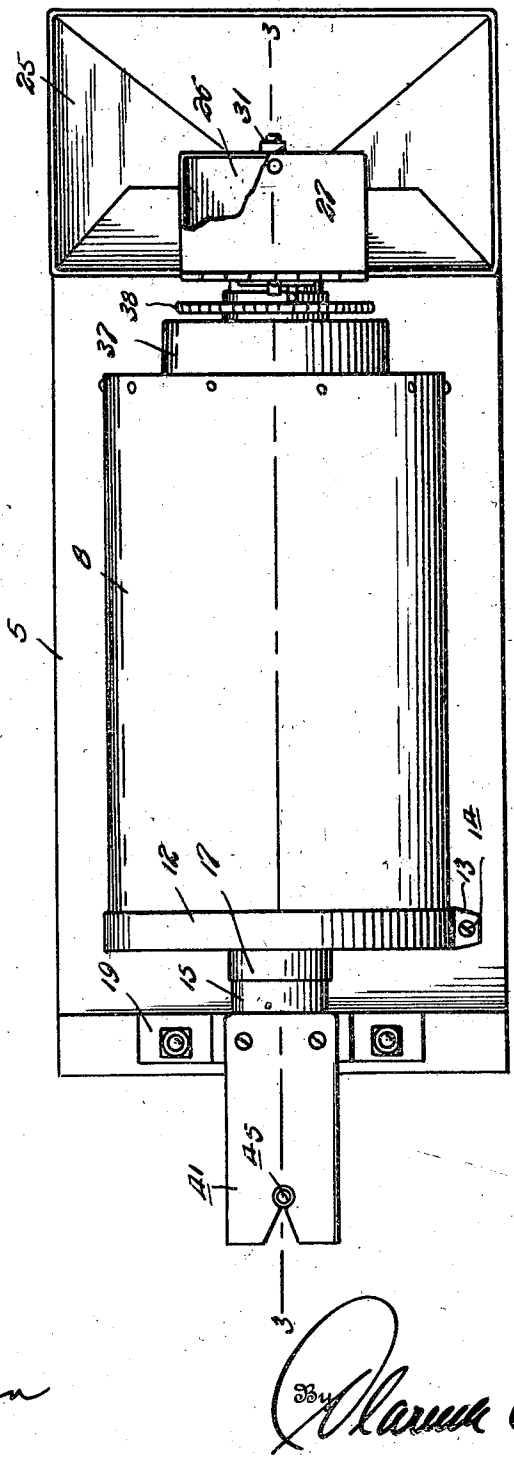


Fig. 2.

Witnesses:
F. L. Fox,
H. Berman

E. B. Jahn,
Inventor

By Marion & Baker
Attorney

June 17, 1924.

1,498,379

E. B. JAHN

SEED TREATING MACHINE

Filed March 27, 1923

5 Sheets-Sheet 3

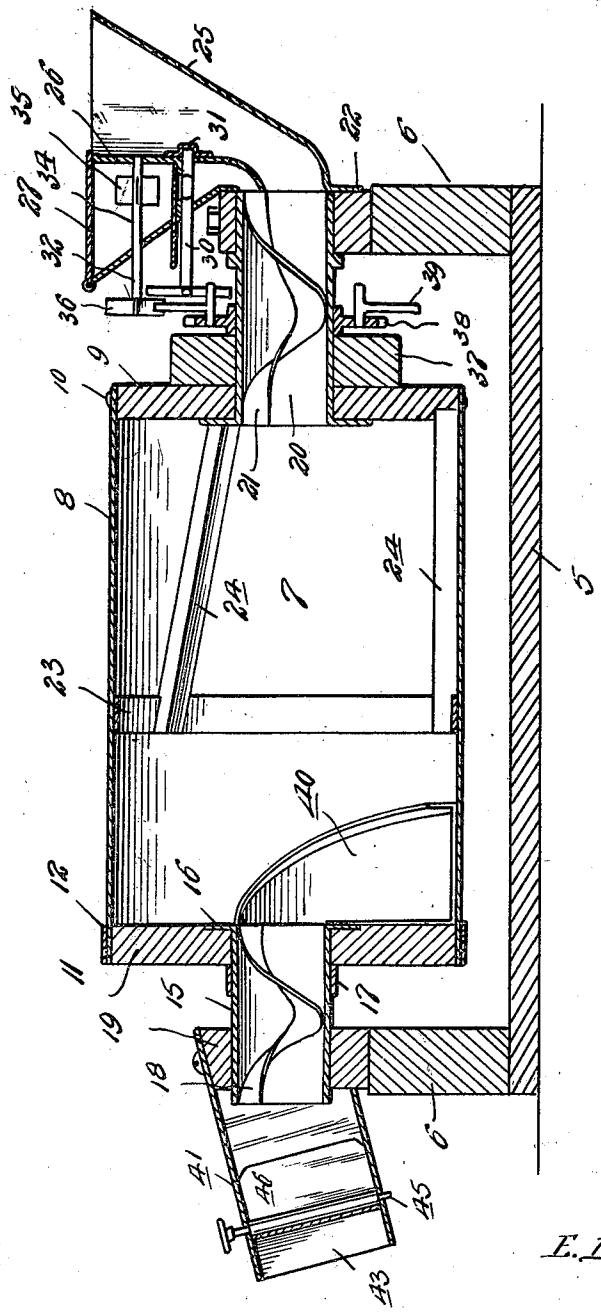


Fig. 3.

Witnesses:
H. L. Fox.
H. Berman

E. B. Jahn,
Inventor

By Parker & Parker
Attorney

June 17, 1924.

1,498,379

E. B. JAHN

SEED TREATING MACHINE

Filed March 27, 1923

5 Sheets-Sheet 4

Fig. 5.

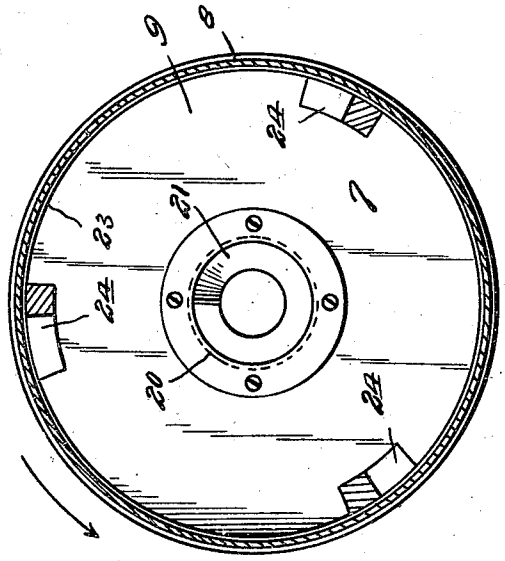
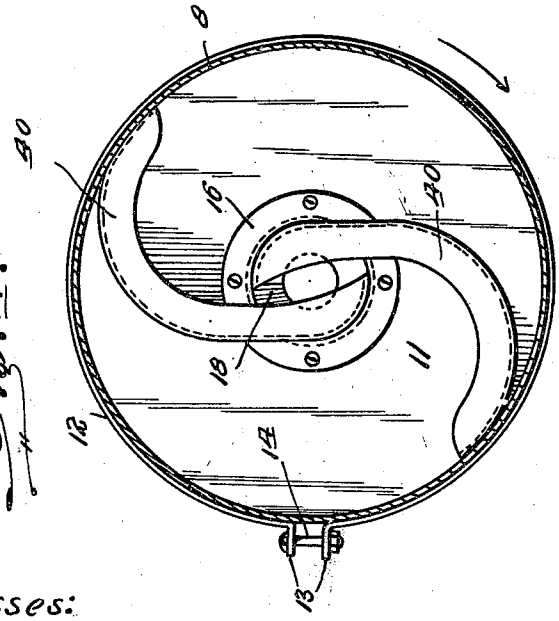


Fig. 4.



Witnesses:

F. L. Fox,

H. Berman

E. B. Jahn,

Inventor

By Marion & Brien.

Attorney

June 17, 1924. 1,498,379

E. B. JAHN

SEED TREATING MACHINE

Filed March 27, 1923 5 Sheets-Sheet 5

Fig. 7.

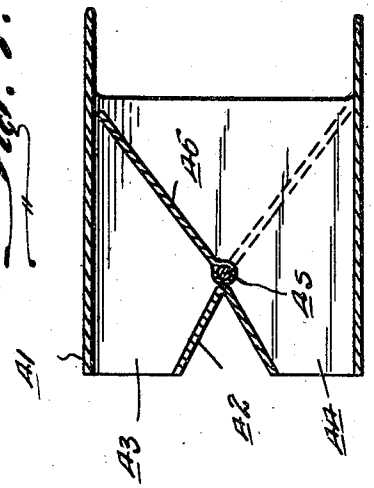


Fig. 8.

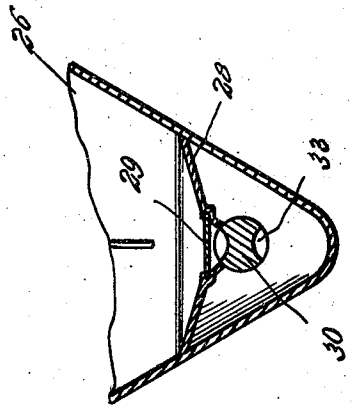
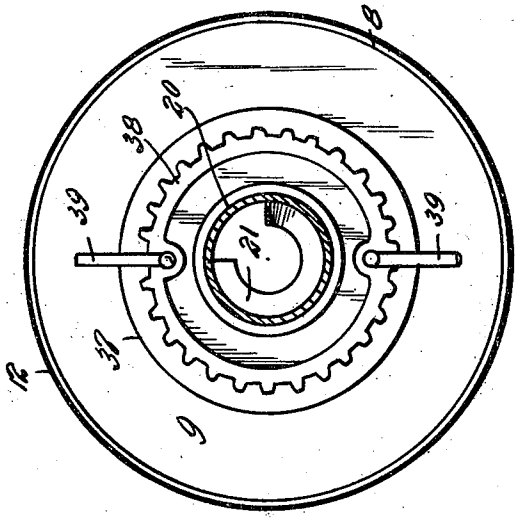


Fig. 6.



Witnesses:

H. L. Fox

H. Berman

E. B. Jahn,
Inventor

By Clarence A. O'Brien
Attorney

Patented June 17, 1924. 1,498,379

UNITED STATES PATENT OFFICE.

EMIL B. JAHN, OF DOWNS, WASHINGTON.

SEED-TREATING MACHINE.

Application filed March 27, 1923. Serial No. 627,965.

To all whom it may concern:

Be it known that I, EMIL B. JAHN, a citizen of the United States, residing at Downs, in the county of Lincoln and State of Washington, have invented certain new and useful Improvements in Seed-Treating Machines, of which the following is a specification.

In carrying out the present invention, it is my purpose to provide a highly improved machine, for permitting of the treating of seed wheat or other seeds, with copper carbonate, or other desirable chemical, the nature of the invention being such as to embrace all of the desired features of simplicity, durability and efficiency, the machine comprising relatively few parts, and these so correlated as to reduce the liability of derangement to a minimum.

A further purpose of my invention resides in the provision of such a machine that may be advantageously employed in carrying out what is now known as the copper carbonate process, the machine being well adapted to be run by either machine or hand power, an additional feature of the machine residing in the fact that the operator thereof is unexposed to the poisonous dust of the copper carbonate, which is now a great disadvantage in carrying out the said copper carbonate process.

The nature and advantages of the invention will be better understood when the following detailed description is read in connection with the accompanying drawings, the invention residing in the construction, combination, and arrangement of parts as claimed.

In the drawings forming part of this application, like numerals of reference indicate similar parts in the several views, and wherein:—

Figure 1 is a side elevation of my improved machine.

Figure 2 is a top plan view thereof.

Figure 3 is a detail longitudinal vertical sectional view taken substantially upon the line 3—3 of Figure 2.

Figures 4 and 5 are transverse cross sections through the machine drum, and looking in opposite directions.

Figure 6 is a cross section upon the line 6—6 of Figure 1.

Figure 7 is an enlarged detail cross section taken substantially upon the line 7—7 of the same figure, and

Figure 8 is an enlarged fragmentary vertical cross section through the copper carbonate hopper of the machine.

Referring to the drawings in detail, 5 designates a base or platform upon the ends of which are vertical standards 6. 7 designates generally the revolving drum of the machine, which comprises an open ended metallic casing 8, within one end of which is a disk or plate 9 secured within the casing in any manner desirable, preferably, through the instrumentality of nails or tacks 10. Within the opposite end of said casing is a similar plate or disk 11, removably secured within the casing, through the instrumentality of a coupling strap 12, which is more clearly shown in Figure 1 as having its adjacent ends bent at right angles to provide ears 13 between which is a bolt and nut connection 14. The said disk or plate 11 is provided with a central opening, within which is one end of a tube 15, it being noted that the inner end of the tube is laterally flanged as at 16, and is counter swung to the face of said disk, for preventing the outward movement of the said tube, with respect to the disk. Surrounding this tube 15 outwardly of the disk 11 is a band 17, rigidly secured thereon, for preventing an inward sliding movement of the tube with respect to the disk. This tube 15 is formed internally with auger blade 18 for purposes hereinafter described, it being noted that the said tube is rotatable within a bearing block 19, upon the adjacent end standards 6. The disk or plate 9 within the opposite end of the casing is provided with a central opening, within which is a tube 20, of a nature somewhat similar to the tube 15 of the opposite end of the casing, this tube being also provided internally with an auger 21, and being likewise rotatable within a bearing block 22, on the opposite standard 6. Within the casing 8 and substantially intermediate the ends thereof is a band or ring 23, and between this band and the said disk or plate 9 within the end of the casing 8 are a desirable number of what are hereinafter termed feeder slats 24. These slats 24 are arranged at any desirable angle to the longitudinal axis of the drum 7, whereby when this drum is rotated, the wheat seed and copper carbonate will be effectively conveyed forwardly within the drum.

Communicating at its outlet end with the outer end of said tube 20 is a relatively

large seed hopper 25, and formed within this hopper is a smaller copper carbonate hopper 26, provided with a hinged lid 27. The outlet end of this hopper 26 also has communication with the opposite end of the tube 20.

As more clearly shown in Figure 8, this hopper 26 is provided with a centrally inclined bottom wall 28, this bottom wall being provided with an opening, within which is slidable a valve plate 29, the same adapted to be moved away from the opening a desirable degree, for controlling the flow of the copper carbonate from the hopper to a desirable valve rod 30, which is directly beneath said opening of the bottom wall 28. This valve rod 30 is freely rotatable within the hopper, one end thereof being journaled within a bearing 31, upon the inner wall of the hopper, as clearly shown in Figure 3, the opposite end thereof being provided with a pair of right angular cross rods 32. A portion of the rod 30 directly beneath the bottom wall of the hopper is provided upon opposite sides thereof with pockets 33, for receiving the copper carbonate when the valve plate 29 is open, and the rod 30 is rotated. Within the hopper 26, and above the rod 30 and plate 29 is a shaft 34, which is equipped with an agitating wheel 35, and extends outwardly of the hopper, and is provided at its end with striker arms 36.

Upon the tube 20, and in face to face contact with the disk 9 of the said casing 8 is a pulley block 37, it being obvious that this pulley block is secured in any manner desirable to the disk 9 or tube 20. Forwardly of the pulley block 37, and keyed upon the tube 20, is a sprocket wheel 38, upon the front face of which are a desirable number of T arms 39, it being noted that the heads of these arms are arranged at right angles to the sprocket wheel, while the main portions thereof extend parallel therewith, the heads of the arms adapted for engagement with the said arms 32, upon the end of the valve rod 30, while the main portions thereof contact the strikers 36 of the shaft 34, when the said drum is rotated.

The pulley block 37 is adapted to have trained thereover a belt, which extends to a source of machine power, while the said sprocket wheel is adapted to have trained thereover a sprocket chain, that may extend from a suitable source of hand power.

Within the opposite end of the casing 8 are a pair of curvilinear scoops 40, the outlet ends of these scoops communicating with the inlet of the tube 15, within the said end disk or plate 11, the purpose of these scoops being to pick up the wheat seed and convey the same into the tube whereby the wheat is discharged outwardly of the drum, through the instrumentality of the auger 18 within said tube. Positioned upon the said bearing block 19, and communicating with the outlet end of the tube 15 is a chute 41, the same being inclined downwardly with respect to said tube 15, and being provided at its outlet end with a substantially V-shaped division plate 42, for providing a pair of outlets 43 and 44, respectively, for the chute 41. Within this chute, and directly rearwardly of the division plate 42, there is pivotally arranged as at 45, a seed flow control plate 46, for guiding the material outwardly of either of the desired outlets 43 or 44, it being of course understood that bags or other suitable seed receiving means are to be positioned upon these outlets of the chute for obvious purposes.

In view of the above description, it is believed by me that the advantages and operation of a machine of this character will be readily appreciated by those skilled in the art, and I wish to be distinctly understood that although I have herein shown and described my machine as being comprised of specific structural elements, the same may be changed from time to time as occasion demands without departing from the spirit and scope of the invention as claimed.

Having thus described my invention, what I claim as new, and desire to secure by Letters-Patent is:

An apparatus for treating seed comprising a drum journaled for rotation upon a horizontally disposed axis, hollow tubes connected with the center of the opposite ends of the drum and serving as gudgeons for the drum, spiral blades carried within said tubes, means for introducing seed and powder into the tube at the receiving end of the drum, slats mounted upon the inner surface of the drum at the receiving end thereof and disposed spirally along the drum and longitudinally curved scoops mounted at the delivery end of the drum and having their outer ends in contact with the inner surface of the drum at points beyond the ends of said slats and their inner ends communicating with the tube at the delivery end of the drum.

In testimony whereof I affix my signature.

EMIL B. JAHN.