J. Heygel.

Grain Separator.

No 2,914. Patented Jan. 16, 1843.

Fig. 1

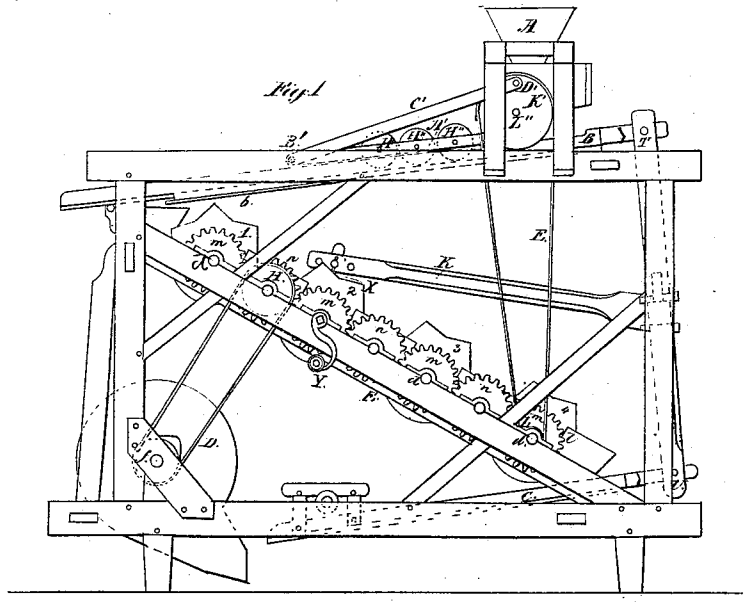
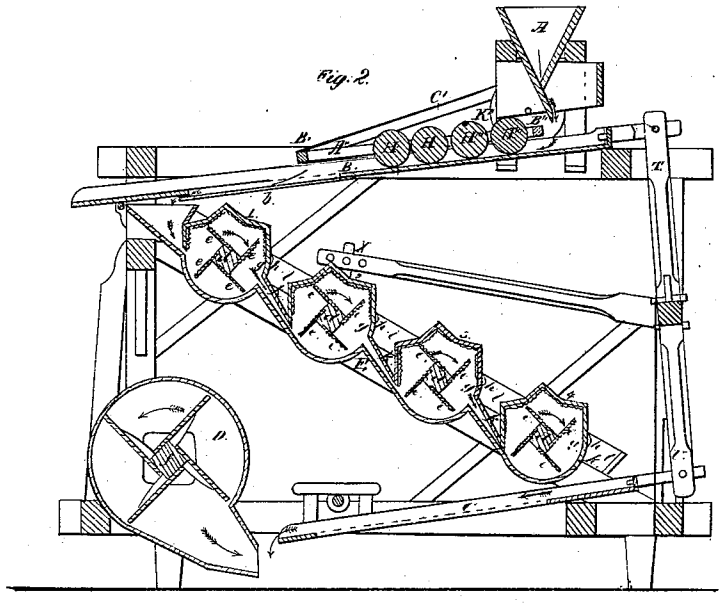


Fig. 2.



N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOSEPH HEYGEL, OF SALISBURY, PENNSYLVANIA.

SMUT-MACHINE.

Specification of Letters Patent No. 2,914, dated January 16, 1843.

To all whom it may concern:

Be it known that I, JOSEPH HEYGEL, of Salisbury, in the county of Somerset and State of Pennsylvania, have invented a new and useful Improvement on Machines for Cleaning and Separating Garlic, &c., from Grain; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a longitudinal elevation, and Fig. 2 a longitudinal vertical section.

Construction.—The construction of the present machine is in its prominent features substantially the same as the one for which Letters Patent of the United States was granted to me, on the twenty fifth day of September 1841. The improvement made thereon is comprised in the following description, the letters of reference on the drawing accompanying it being the same as those on the drawing of the said former patent. Additional references are in roman capital letters with one or more dashes annexed to them, thus: H′, H″, &c.

Between the sides and on the bottom board of the sieve B, and between the hopper A and the middle of said sieve, I place a number of wooden rollers (on the model and drawing four are represented, but more or less may be used.) These rollers H′, H″, H‴, and H⁗ revolve on axles, which rest, transversely to the sieve, in bearings in two side-frames of wood or iron A′ and A″, which are placed parallel to and a little above the sides of the sieve B, allowing room enough between for them to ply freely. The side frames are connected at their ends by means of two cross-pieces B′ and B″. The ends of the crosspiece B′ have gudgeons for the purpose of connecting with them two pitmen or rods C′ and C″, the other ends of said pitmen or rods are fastened by pins D′ D″ to two pulleys K′ and K″, placed on a shaft L″, and on each side and a little below the hopper A. A band E′ passes over the pulley K′ and another smaller pulley L′ on the shaft of box 4, by which the oscillating motion is communicated to the roller-frame, and consequently to the rollers, which crush the garlic in such a manner as to make it easier to the beaters in the boxes, to break it entirely. Thus far is the description of my improvement. The following alterations and changes made in my former machine may properly be noticed here also. Instead of fastening the pitmen K to the arm R (which is dispensed with) as formerly, it is now directly attached to the axis W itself, it being found simpler and more expedient. The sieve L, the fanwheel F and the band-wheel G of the old machine are dispensed with in the present machine, having been found ineffective. The crank Y is now attached to the shaft of box 2, the large cog-wheel I being done away with.

Operation.—The operation of the present machine does not essentially differ from my former, but in the following particular, in consequence of my improvement. The wheat having fallen from the hopper A on the sieve B, undergoes the action of the rollers H′ H″ H‴ and H⁗ previously to its passing through the said sieve, for the purpose of crushing the garlic, preparatory to its being subjected to the action of the revolving beaters *e e e e* in boxes 1, 2, 3 and 4. The rollers H′, ″, ‴ and ⁗ receive motion through the agency of the pitmen or rods C′ and C″, the pulleys K′ and K″, the band E′, the pulley L′, the cogwheels *m* on the shafts of boxes 4, 3 and 2, and the intermediate cogwheels *n* and *n*. The crank, where the power is applied is attached to the shaft of box 2.

What I claim as my improvement, and desire to secure by Letters Patent, is—

The application of the rollers H′, H″, H‴ and H⁗ hung in a frame, which is receiving an oscillating motion by means of two pitmen, whose extreme ends are connected by means of pins to, and near the periphery of, pulleys; the said rollers crushing the garlic preparatory to its being subjected to the action of revolving beaters, which break the garlic after the aforenamed process easier and more effectually; the said rollers, its frame, pitmen, and pulleys are constructed and operate substantially in the manner herein above described.

JOSEPH HEYGEL.

Witnesses:
W. THOMPSON,
P. FINEGAN.