

H. KURTH.
GRAIN-SEPARATOR.

No. 174,078.

Patented Feb. 29, 1876.

Fig. 1.

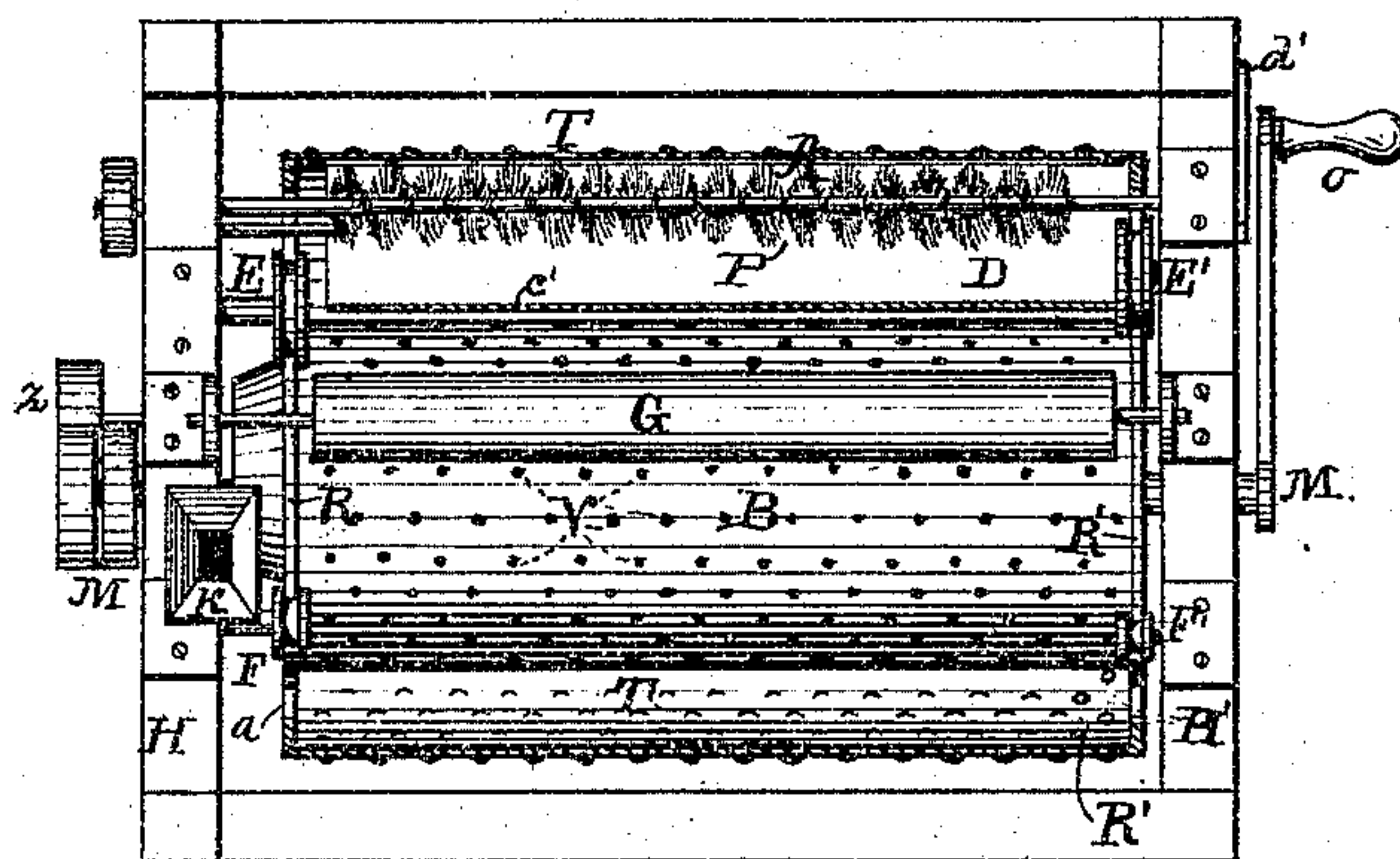


Fig. 2.

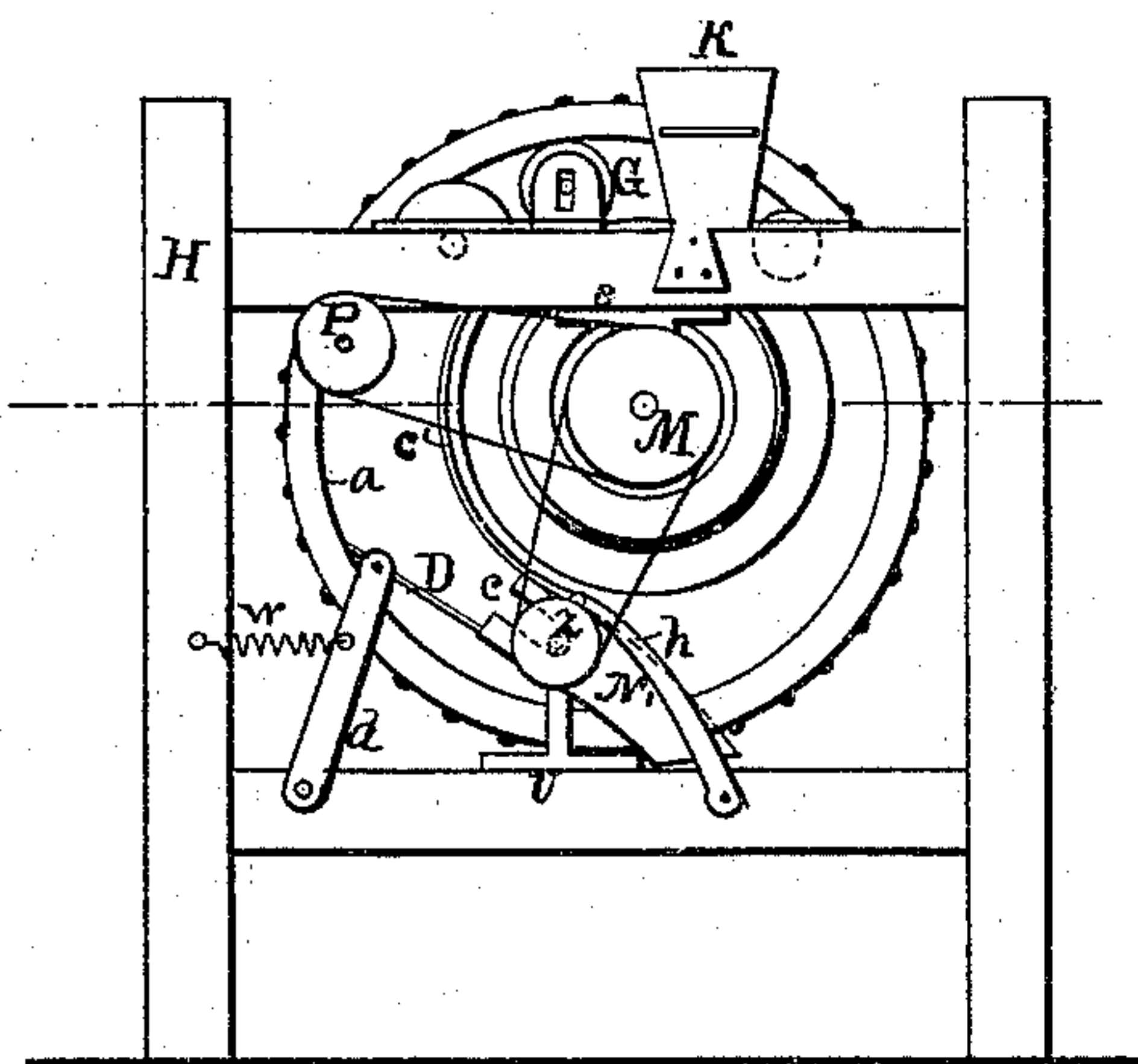
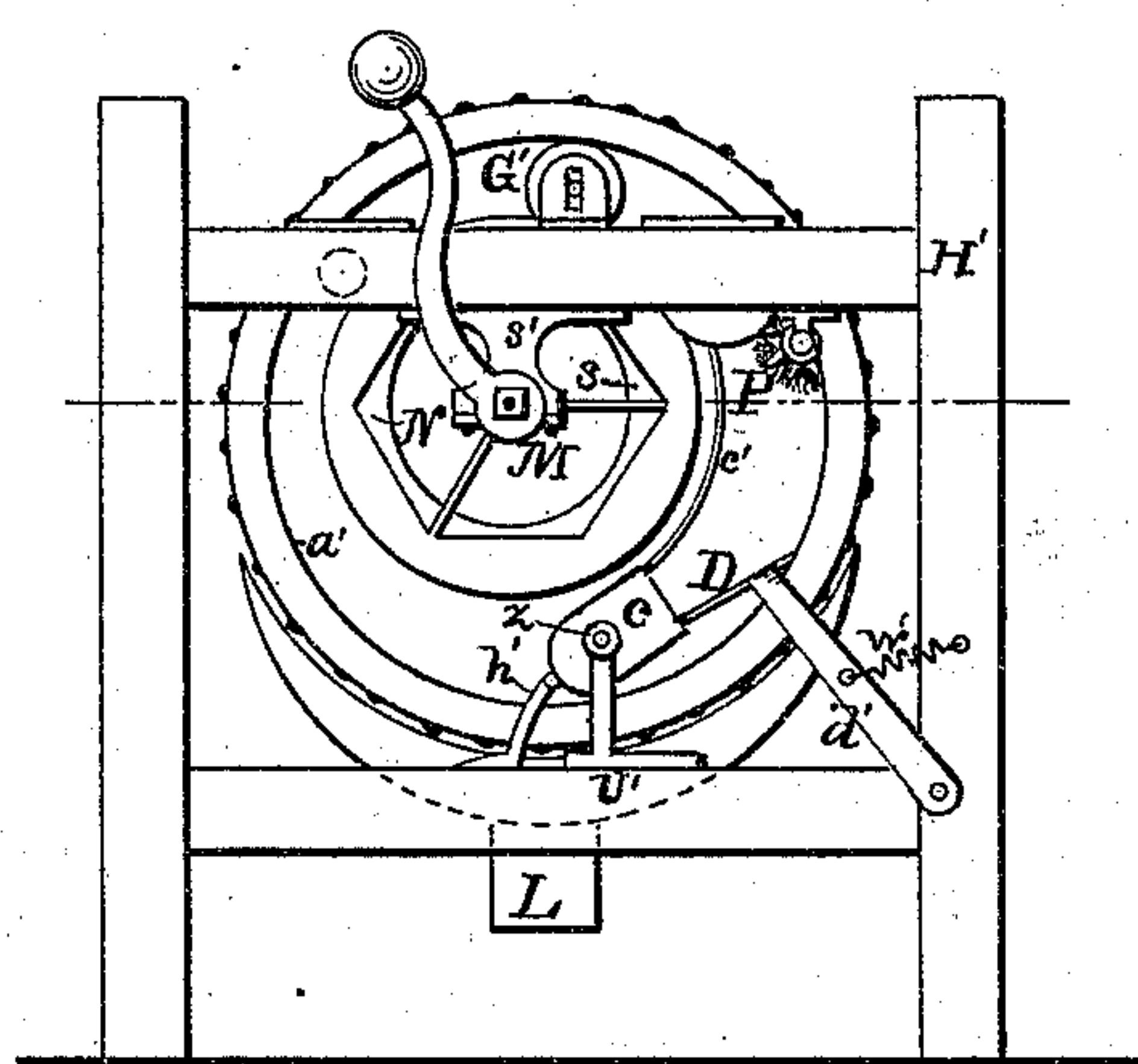


Fig. 3.



Witnesses:

Ferdinand Schlingensiefel

A. William Belcher

Inventor:

Hermann Kurth.

by Jas. F. Dwyer,
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UNITED STATES PATENT OFFICE.

HERMANN KURTH, OF MILWAUKEE, WISCONSIN.

IMPROVEMENT IN GRAIN-SEPARATORS.

Specification forming part of Letters Patent No. 174,078, dated February 29, 1876; application filed November 15, 1875.

To all whom it may concern:

Be it known that I, HERMANN KURTH, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Grain-Separating Machines; and that the following is a full, clear, and exact specification thereof, which will enable others skilled in the art to make and use the said invention.

My invention relates to certain improvements in grain-separating machines, and more particularly to machines for separating cockle and other small seed from wheat, as hereinafter more fully shown.

First, said invention consists in the combination of a revolving cylinder, having a perforated surface, with a self-adjusting roller revolving about an axis so situated with reference to the axis of the cylinder that the outer surfaces of cylinder and roller are always in contact, for the purpose of forcing any grains that become caught in the holes of the cylinder back into the cylinder, as hereinafter shown.

Second, said invention also consists in the combination of a revolving cylinder, having its inner surface covered with indentations, with a cylinder of smaller diameter and having a perforated surface and endless conveying-ribs secured to its inner surface and revolving in an opposite direction to that of larger cylinder, about an axis horizontally inclined and parallel to axis of larger cylinder, and situated within said larger cylinder, together with a self-adjusting roller revolving in contact with the outer surface of inner cylinder, and a revolving brush for cleaning the indentations of larger cylinders, together with a catch-board, covered trough, and conveyer turning within said trough, the several parts being so constructed and arranged as to thoroughly separate cockle-seed from wheat.

In the accompanying drawing, Figure 1 is a plan of my invention; Figs. 2 and 3 are end views of same.

A is the larger cylinder, with indentations T in its inner surface, which is supported and made to revolve by the grooved friction-wheels E E' and F F', in the grooves of which the weight of the whole cylinder A rests, through the rims a a', secured one at each end

of the cylinder and having inwardly-projecting V-shaped flanges which fit into the grooves of the friction-wheels.

B is the smaller cylinder, made of perforated sheet metal or wire netting, and is of same length as larger cylinder and of a diameter from one-half to two-thirds of that of larger cylinder. Said cylinder B has a wheel, R R, secured to each end, made with an outwardly-projecting V-shaped flange, which fits into the grooves of the friction-wheels E E' and F F'. Said friction-wheels are keyed to shafting that turns in boxes bolted to the frame H H', and they are placed far enough apart to give steadiness to turning of the larger cylinder.

N, Fig. 2, is an end view of the conveying-ribs, secured to inner surface of B, and winding about the same like threads in a nut. M is the main shaft that turns cylinder B. It is keyed to the hub of the wheels R R' and turns in boxes S S', bolted to the frame H H'. G is the roller made of wood whose shaft turns in the upwardly-elongated slots G G', Figs. 2 and 3, whereby the roller accommodates itself to any unevenness in the contour of cylinder B. P is the revolving brush, situated over the catch-board D, and turning by its shaft in boxes bolted to the frame H H'. D is the catch-board, held in place by arms d d' and springs W W'. C is the trough of sheet-metal, with upwardly-projecting cover C and closed ends. It is held stationary by supports h h'. Within trough C, and made of wood or metal, is a screw-shaped conveyer, which turns, by its shaft Z, in the bearings u u', in such a manner as to convey all cockle-seed falling into trough C into discharge-spout N'. At ends of shafts M, P, and Z are secured drums M', P', and Z', and the smaller drums P' and Z' connected to main drum M' by belting and are driven by drum M'.

When the above described machine is put up in proper manner it operates as follows:

The crank O is turned to the left, which causes the friction-wheels E E' and F F' to turn to the right, and consequently cylinder A to turn to the right. The wheat is fed into spout K, which discharges into higher end of cylinder B, and while larger grains are carried along the whole length of the cylinder by

conveying-ribs N to the discharging-point at lower end of cylinder, whence they fall through large holes R' of cylinder A, Fig. 1, into discharge-trough L, the smaller grains and cockle-seed fall through the perforations V in cylinder B onto the inner surface of cylinder A, somewhere to the left of discharging-trough C, Fig. 3. After the small wheat and cockle-seed strike cylinder A they are separated and discharged, as shown in Letters Patent granted to me May 11, A. D. 1875, and numbered 163,214, except that where I then used a shaking motion to clean the trough C I now use a screw conveyer, on account of economy in power.

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

1. The combination of a revolving cylinder, having a perforated surface, with a self-adjusting roller revolving about an axis paral-

lel to the axis of the cylinder and situated directly over the cylinder, so that outer surfaces of cylinder and roller are always in contact, whereby any grains lodging in the perforations of the cylinder are forced back into said cylinder by the weight of the roller coming upon them, substantially as and for the purpose described.

2. The combination of a revolving cylinder, having indentations in its inner surface, with a cylinder of smaller diameter having a perforated surface and revolving in an opposite direction, a self-adjusting roller, a revolving brush, a catch-board, covered trough, and endless conveyer, substantially as and for the purpose set forth.

HERMANN KURTH.

Witnesses:

NATH. PERELES,
JAS. MADISON PERELES.