

W. H. SLONAKER.

Churn.

No. 49,450.

Patented Aug. 15, 1865.

Fig. 1

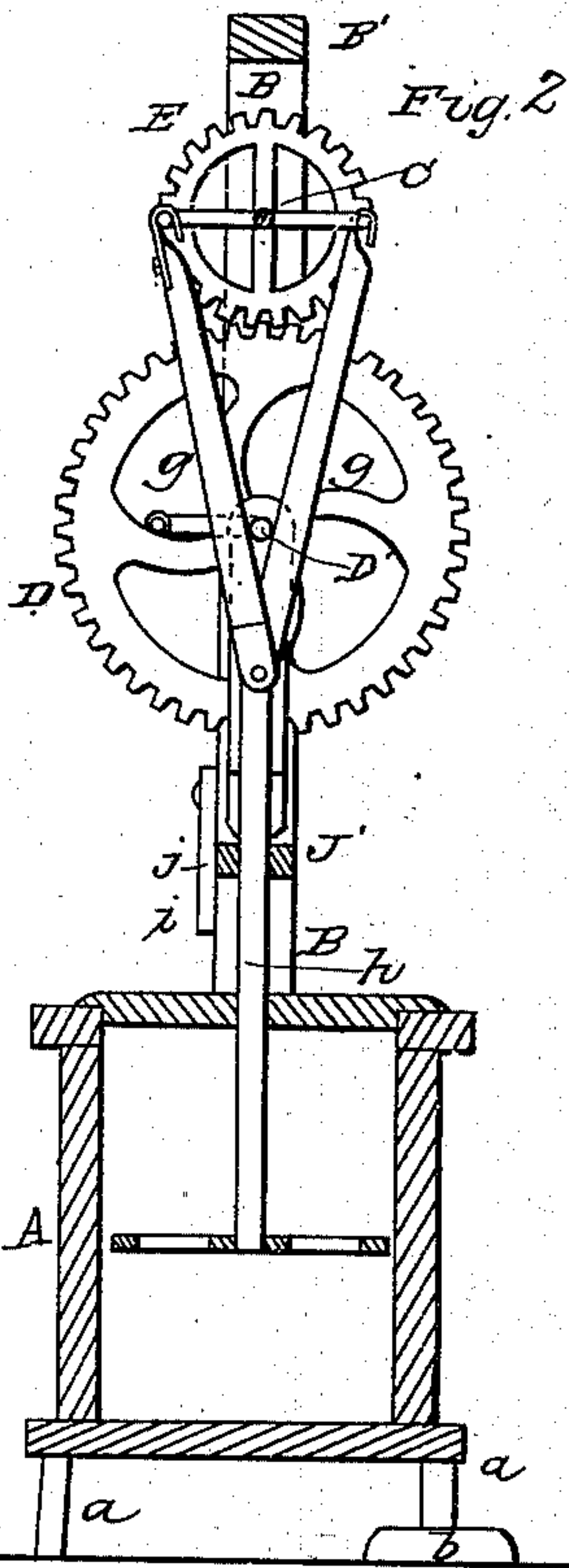
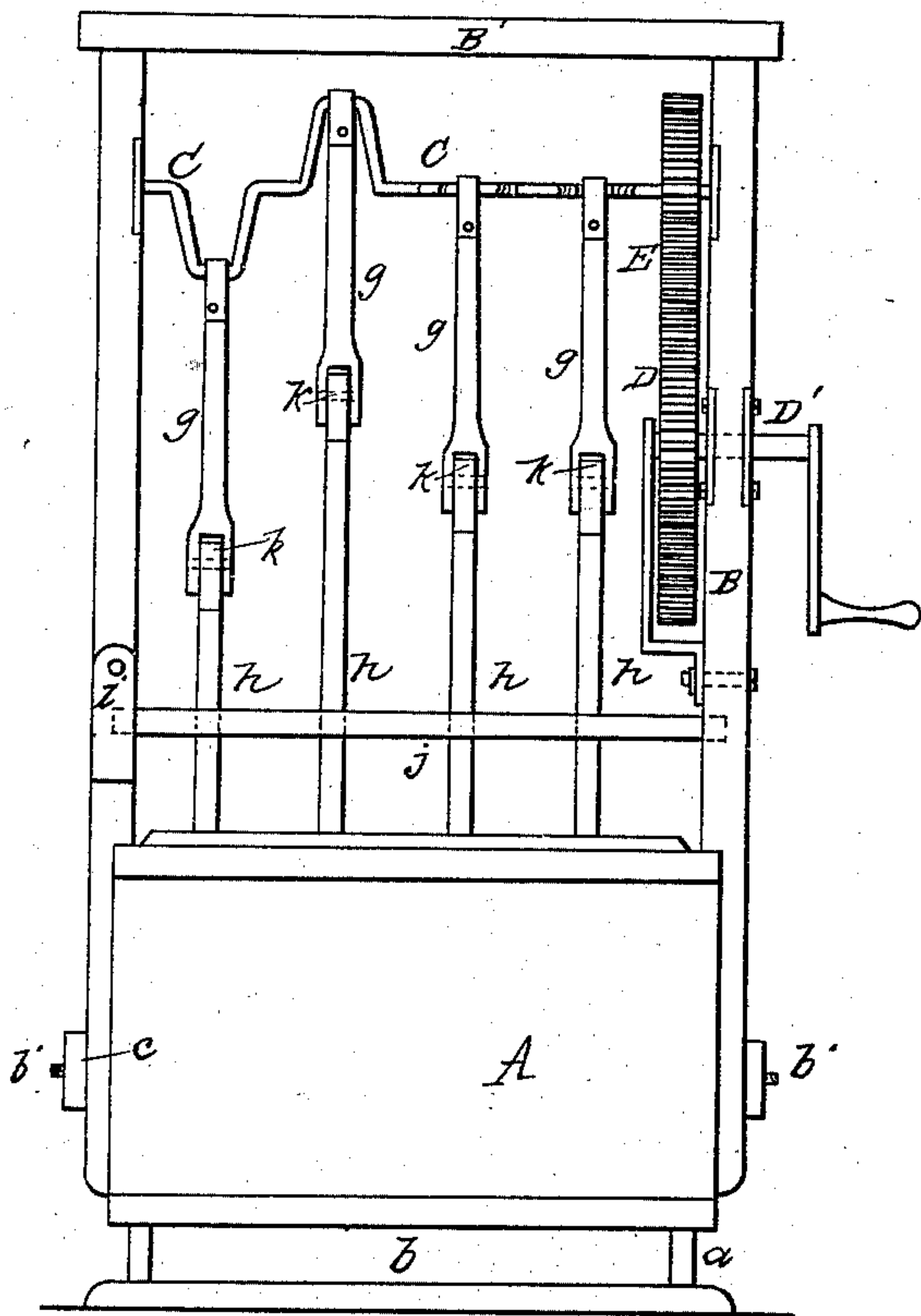


Fig. 3

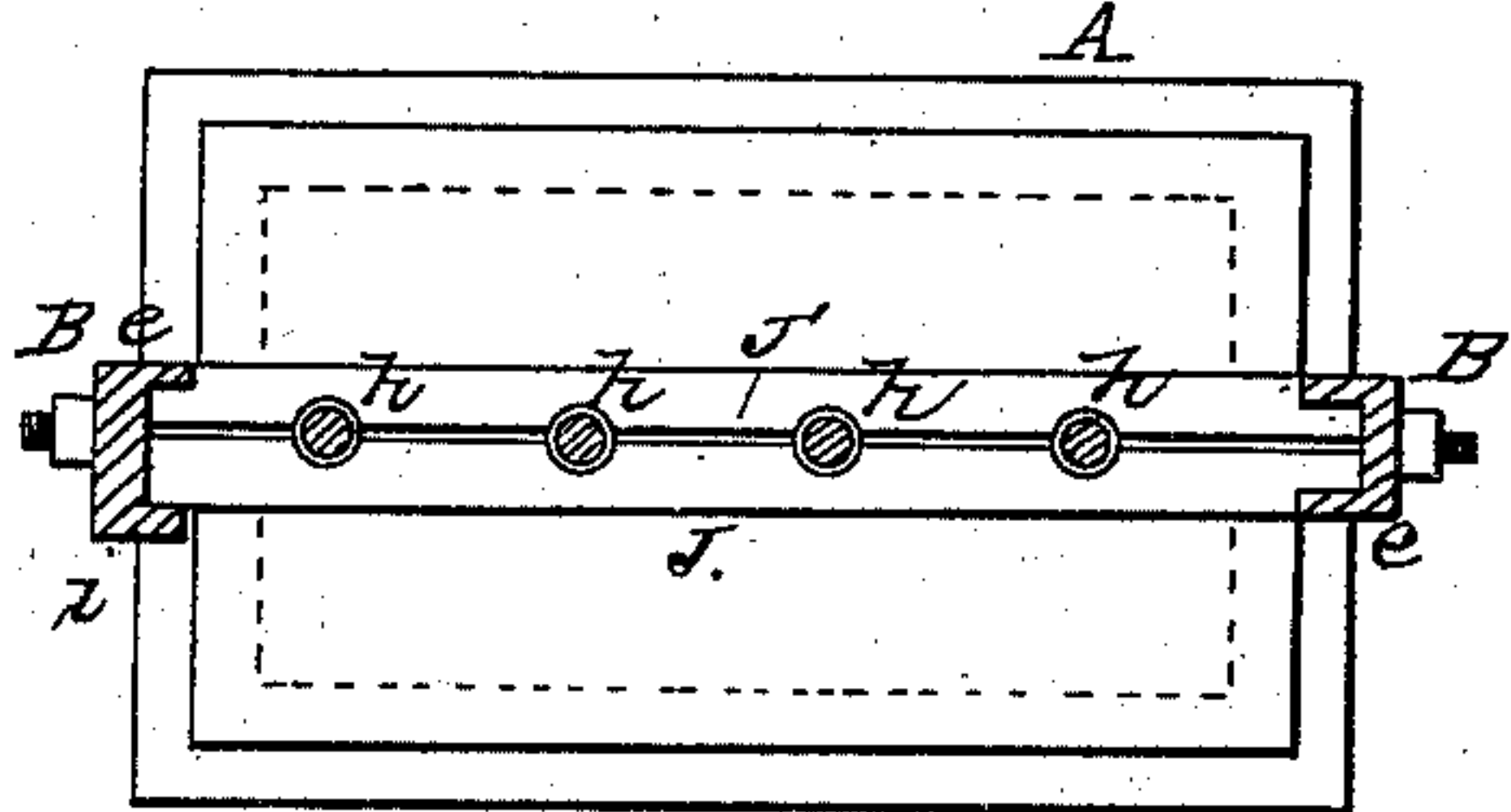
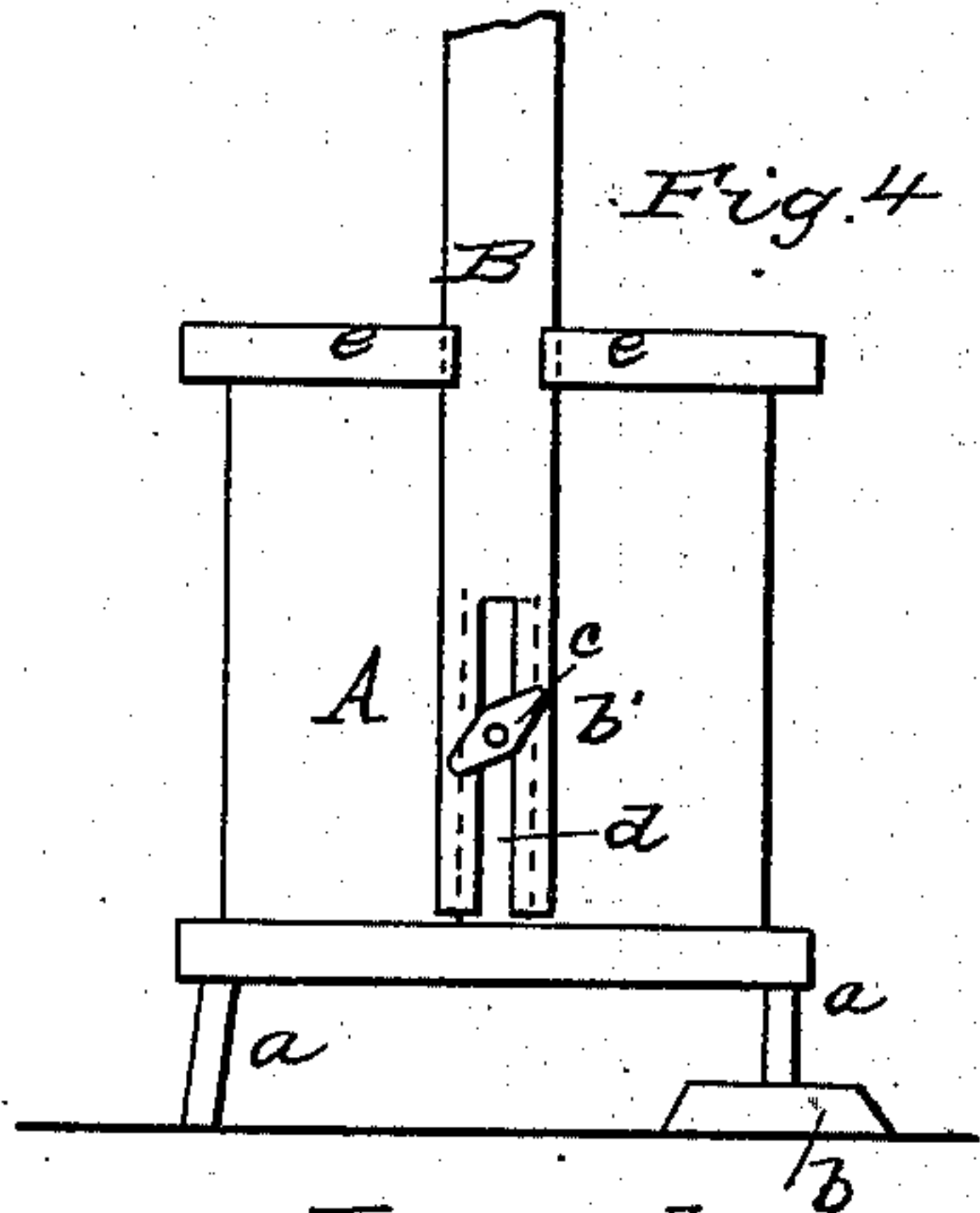


Fig. 4



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IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. 49,450, dated August 15, 1865.

To all whom it may concern:

Be it known that I, WILLIAM H. SLONAKER, of Cooperstown, Venango county, State of Pennsylvania, have invented a new and Improved Churn; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a front elevation of the improved churn. Fig. 2 is a vertical transverse section through the churn. Fig. 3 is a horizontal section through the standards and dash-rods. Fig. 4 is an end view, showing the manner of attaching the standards to the ends of the churn-box.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to that class of churns which have a number of dashers that are operated by cranks so as to receive vertical reciprocating motions.

The object of my invention is to provide, in such churns, a means for guiding the dash-rods so that they will all move freely in vertical lines, and to so apply the guide that the dashers can be readily removed from the churn-box or replaced therein at pleasure, as will be hereinafter described.

Another object of my invention is to provide for detaching the dash-rods from their pitman-rods, and also for detaching the standards, which support the movable parts of the churn, from the churn-box, so that the churn can be packed up in a small compass when not in use, or for purposes of transportation, as will be hereinafter described.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

In the accompanying drawings, A represents a churn-box of a rectangular oblong form, which is mounted upon legs *a a* and a foot-stand, *b*, upon which the foot is placed to steady the churn during the operation of churning.

B B are vertical standards, which are secured to the ends of the churn-box A and project upward a suitable distance, receiving upon their upper ends a cross-bar, B', which serves as a brace to steady and strengthen them. These standards are secured to the ends of the churn-box by means of dovetail tenons *d d*,

which are secured rigidly to said box, and which receive the slotted ends of the standards, as shown in Fig. 4. A screw-pin, *b'*, projects from each one of the tenons *d d* and receives a nut, *c*, upon it, by means of which the ends of the standards are held in their places. In addition to these fastenings, the lower ends of the standards are beveled on each side, so as to enter the dovetail slots or notches through the projecting portions of the top of the churn-box, as shown in Fig. 4. By thus attaching the standards B B to the churn-box A they can be detached at pleasure by simply loosening the thumb-nuts *c c* and lifting the standards vertically out of their seats.

C represents a crank-shaft, having as many cranks as there are dashers. In the drawings four cranks are shown; but any number may be employed, according to the length of the churn-box and the number of dashers which it will receive. To these cranks pitman-rods *g g* are attached, as will be hereinafter described, and to the lower ends of these rods the dash-rods *h h* are pivoted, as shown in Fig. 1. These dash-rods pass down through guides *j j'* and through the top of the churn-box, and are held in vertical position by means of said parts.

The guides *j j'* are notched and halved together, so as to receive between them the rods *h h*, and the ends of the guides are let into recesses formed in the standards B B, and secured in place by means of a turn-button, *i*, as shown in Figs. 1 and 2. The cover of the churn-box is made in two parts and notched to receive between these parts the dash-rods *h h*. Thus it will be seen that these rods have an upper and lower guide for keeping them in vertical positions and allowing them to receive a vertical motion.

When it is desired to remove the dashers the button *i* is turned to one side, the rod *j* and covers of the churn-box removed, and the dash-rods disengaged from their pitman-rods.

The dash-rods have hooks *k* secured on their upper ends, which hook over pins in the notched ends of the pitman-rods, which pins are so arranged that when rods *h h* are attached to the pitmen and brought down to a vertical position they will not become disengaged therefrom.

The dashers receive their motion from a crank-shaft having four cranks at right angles

to each other. This shaft is driven by means of a large spur-wheel, D, on a crank-shaft, D', which wheel engages with the teeth of a pinion, E, on the crank-shaft C. By turning the crank-shaft D' the crank-shaft C will receive a rapid motion, which is communicated to the dashers.

There is nothing peculiar in the dashers. They may be made in any suitable manner, and they may be perforated or imperforated, as may be desired.

From the above description it will be seen that I am enabled to attach or detach the dashers at pleasure for the purpose of cleaning out the churn-box and these dashers, and keeping the churn always sweet.

When it is desired to pack up the churn for transportation the entire frame-work which supports the dashers can be taken to pieces and put together in a very compact form.

I am aware that churns have been hitherto constructed employing a number of dashers which were operated by cranks, also that provision has been made in such churns for keeping the dash-rods in vertical positions; but these things I do not claim as my invention.

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

The arrangement of the notched guides *jj'*, in combination with a crank-shaft, C, pitman-rods *h*, turn-button *i*, and churn-box A, with supports B, substantially in the manner and for the purpose described.

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Witnesses:

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