

(No Model.)

E. KRUEGER.
BUTTER WORKER.

No. 333,309.

Patented Dec. 29, 1885.

Fig: 1.

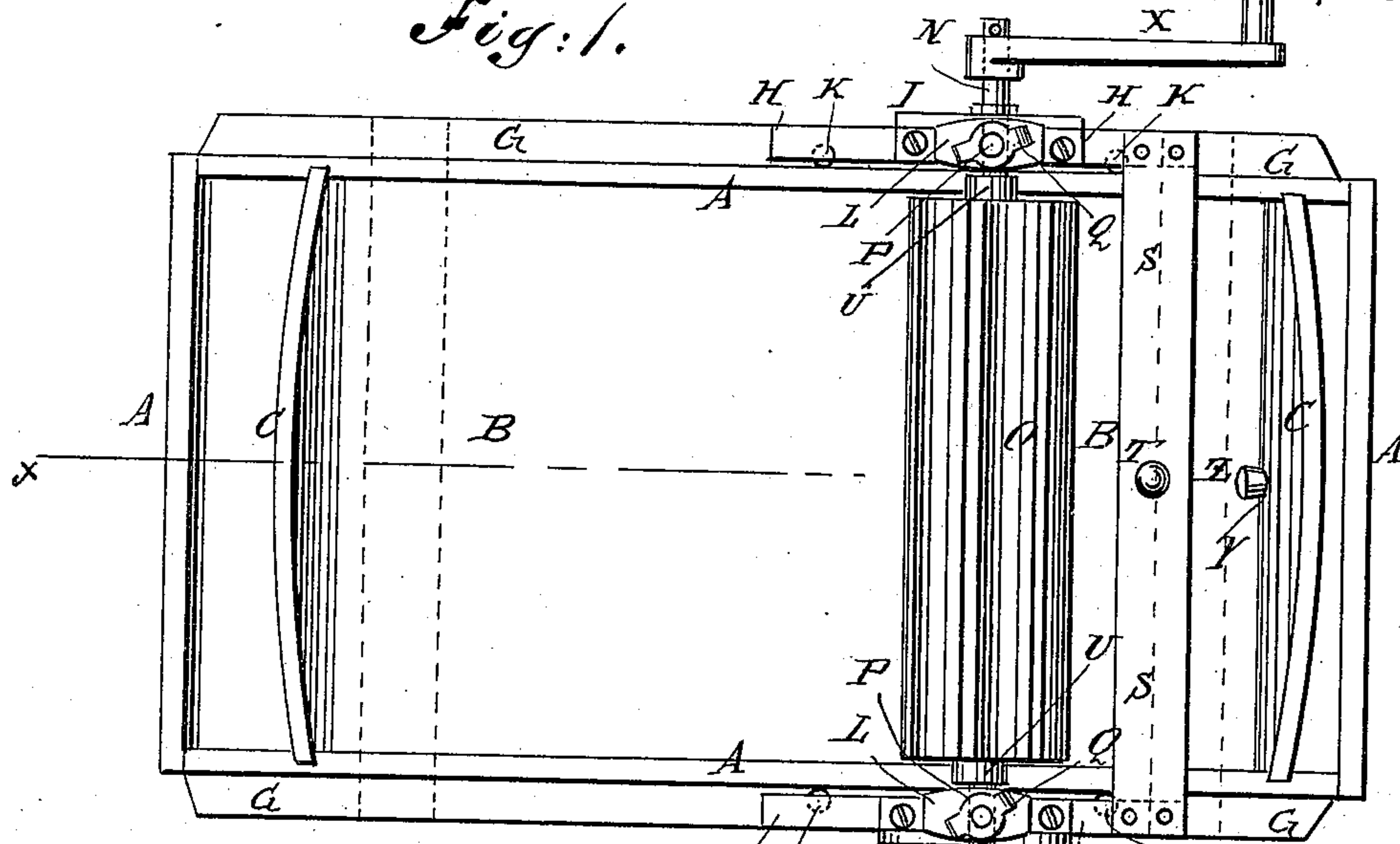


Fig: 2.

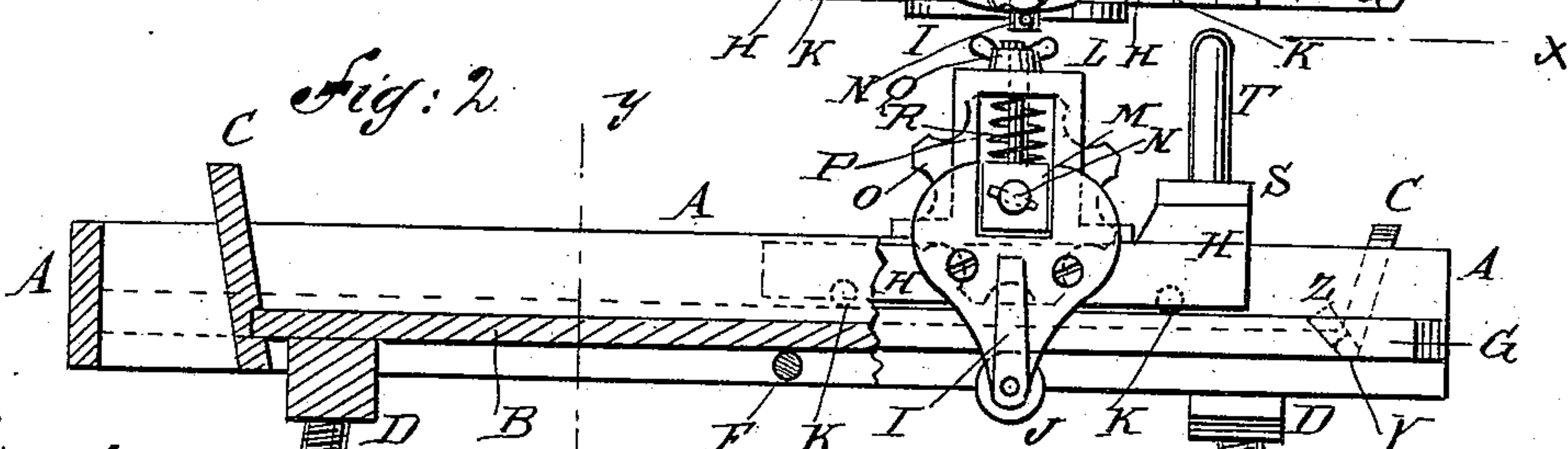


Fig: 4.

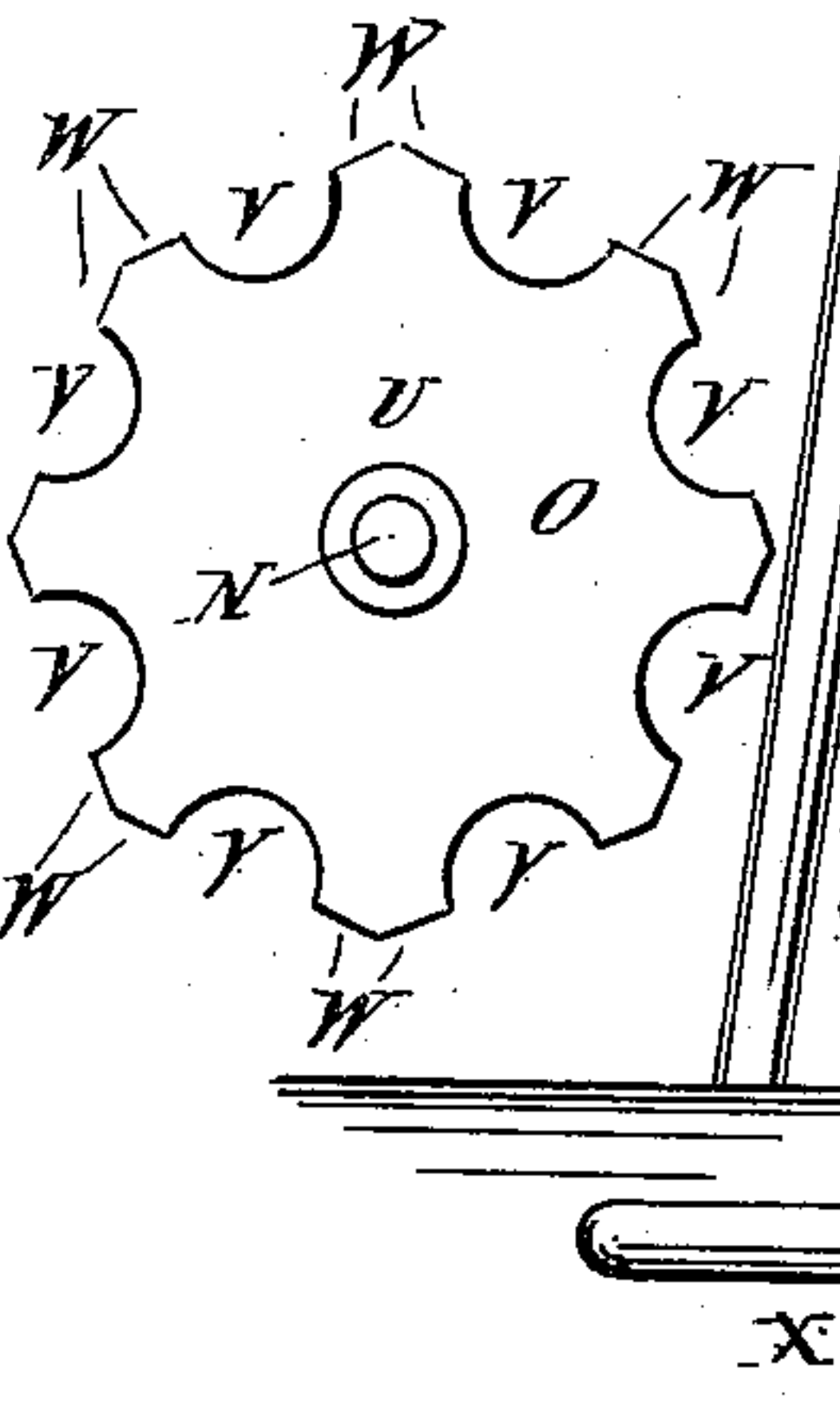
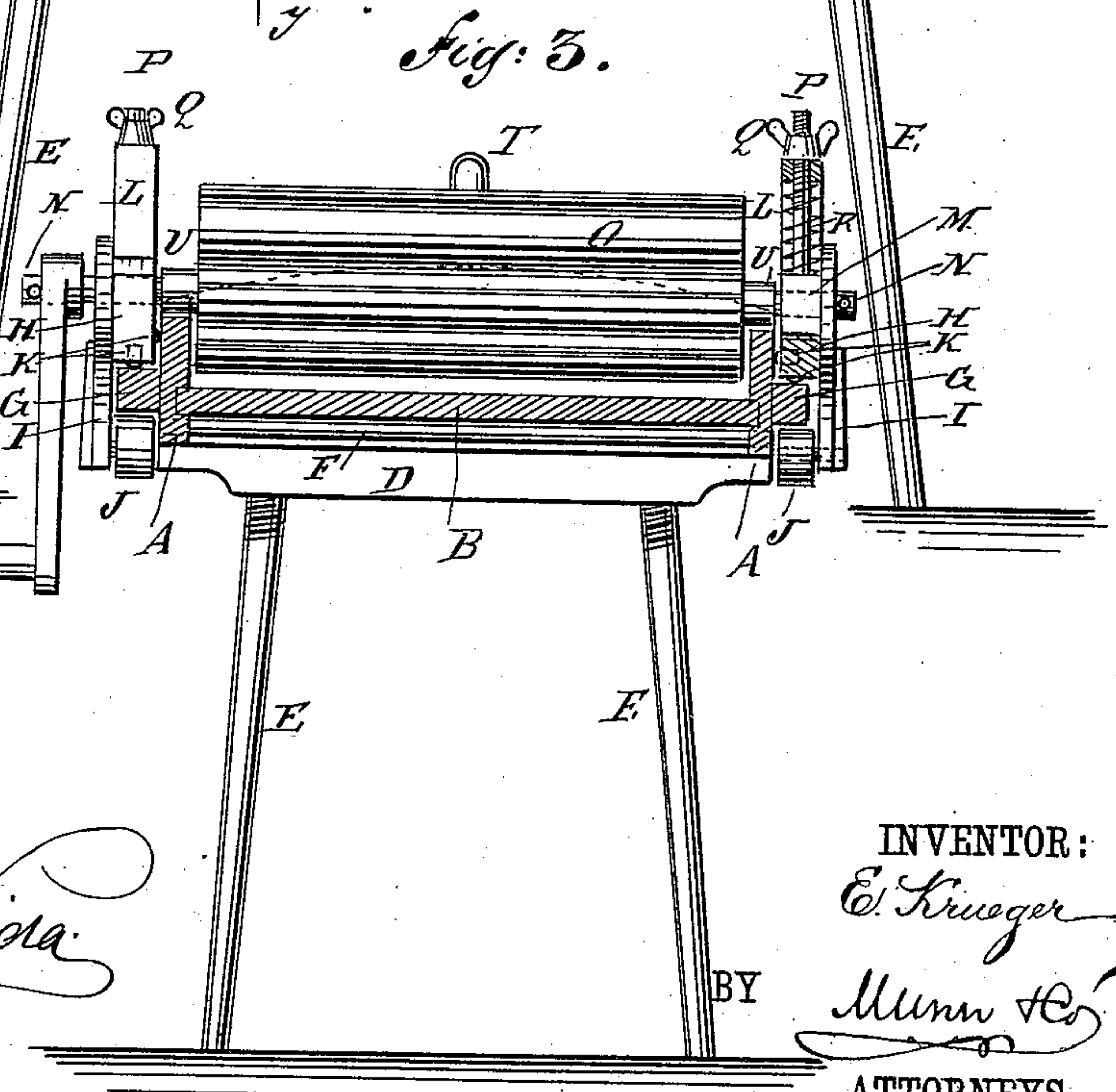


Fig: 3.



WITNESSES:

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BUTTER-WORKER.

SPECIFICATION forming part of Letters Patent No. 333,309, dated December 29, 1885.

Application filed August 29, 1885. Serial No. 175,643. (No model.)

To all whom it may concern:

Be it known that I, EDWARD KRUEGER, of Youngsville, in the county of Sullivan and State of New York, have invented certain new and useful Improvements in Butter-Workers, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of one of my improved machines. Fig. 2 is a side elevation of the same, partly in section through the line *x x*, Fig. 1. Fig. 3 is a sectional end elevation of the same, taken through the line *y y*, Fig. 2. Fig. 4 is an end elevation of the butter-working roller enlarged.

The object of this invention is to provide butter-workers constructed in such a manner that the operating mechanism of the machine will not be affected by the swelling and shrinking of the bottom of the tray, and which can be readily adjusted and conveniently operated.

The invention consists in the construction and combination of various parts of the butter-worker, as will be hereinafter fully described, and then claimed.

A represents a rectangular frame, the sides of which form the sides of the tray. In the lower parts of the inner sides of the side bars of the frame A are formed longitudinal grooves, in which are inserted the side edges of the bottom B. The bottom B is arranged with the grain of the wood at right angles with the length of the frame A, so that the swelling of the bottom B cannot spring or bulge the sides of the said frame A, and thus prevent the proper working of the carriage, hereinafter described.

The bottom B is shorter than the frame A, and the ends of the tray are formed by inclined or flaring end boards, C, the end edges of which are inserted in inclined grooves in the side bars of the frame A. In the lower parts of the inner sides of the end boards, C, are formed grooves to receive the end edges of the bottom B. The end parts of the bottom B rest upon cross-bars D, attached at their ends to the lower edges of the side bars of the frame A, and in the lower sides of which, near their ends, are formed screw-holes to receive the screws formed upon the upper

ends of the legs E, the said screw-holes being slightly inclined, so that the said legs will incline outward toward the corners of the frame A, to give the machine a firm support. The middle part of the bottom B is further supported and the frame A is strengthened by a cross bar or round, F, the ends of which are attached to the lower parts of the side bars of the said frame A. To the outer sides of the side bars of the frame A, a little below their centers, are attached longitudinal cleats G, to serve as ways for the carriage. Upon the cleats G are placed bars H, to the outer sides of which are attached hangers I, projecting downward across the outer edges of the cleats G, and to the inner sides of the lower ends of which are pivoted rollers J, which rest against and roll along the lower sides of the cleats G and hold the carriage against upward pressure. In recesses in the lower and inner sides of the bars H are pivoted small rollers K, to roll along the upper sides of the cleats G and the outer sides of the side bars of the frame A, and thus lessen the friction between the said bars and the said cleats and side bars. To the middle parts of the bars H are attached the standards L, which are slotted to receive the bearings M for the journals N of the butter-working roller O. To the bearings M are rigidly attached the screws P, which pass up through the caps of the slotted standards L, and have hand-nuts Q screwed upon their upper ends. With this construction by adjusting the hand-nuts Q upon the screws P the bearings M can be raised or lowered, to limit the closeness to which the roller O can approach the bottom B of the tray. The bearings M are held down, to hold the roller O against the resistance of the butter, by spiral or other springs, R, placed upon the screws P, with their lower ends resting against the said bearings M, and their upper ends resting against the caps of the standards L, so that the said roller O can rise should it encounter a thicker or a harder part of the butter.

The rear ends of the bars H are connected and kept parallel with each other, and are made to move together by a cross-bar, S, blocks being interposed between the ends of the said bars and cross-bar to raise the said cross-bar above the upper edges of the side bars of the frame A. To the center of the cross-bar S is at-

tached an upwardly-projecting handle, T, for convenience in moving the carriage back and forth, and for holding the said carriage in place when it is desired to operate the roller O without having the said roller carry the said carriage forward or back.

Upon the inner parts of the journals N of the roller O are placed wooden sleeves or washers U, to prevent butter and water from coming in contact with the iron of the said journals.

The butter-working roller O has eight longitudinal rounded grooves, V, formed in its face at equal distances apart to receive butter, to prevent the said roller from slipping upon the butter while working it. Each part of the face of the roller O between two grooves V is formed with two plane surfaces, W, meeting at an angle along the central line of the said part, which plane surfaces operate upon the butter in the manner of paddles, and thus work the said butter as the said roller is revolved. The roller O is revolved by means of a crank, X, attached to one of its journals.

In one of the end boards, C, at one end of the bottom B, is formed an opening, Y, through which the water can be drawn out of the tray, and which is closed by a plug, Z, as indicated in Figs. 1 and 2.

In using the machine the butter and a suitable supply of water are placed in the tray, and the butter is thoroughly worked by operating

the roller O and moving the carriage forward and back upon the cleats G, and the water is drawn off through the opening Y. The butter is washed in successive waters until the buttermilk has been washed out. The butter is then thoroughly worked, the necessary amount of salt is put into it, and it is again worked until all its particles are equally salted. If desired or necessary, the surplus salt can be taken out by again working the butter in water. The butter is then allowed to stand to cool and harden, and can then be made into rolls or packed into crocks or firkins.

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

A butter-worker consisting of the tray A B C D, supported upon legs E, and provided with the side cleats, G, the bars H, provided with the slotted standards L, the rollers K, and the hangers I, having the rollers J, the roller O V W, the bearings M, in which the roller is journaled, the screws P, attached to said bearings and passing through the standards L, the nuts Q on the screws, and the springs R upon the said screws in the slot of the standards, substantially as herein shown and described.

EDWARD KRUEGER.

Witnesses:

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JOHANNES SPIELMAN.