

(No Model.)

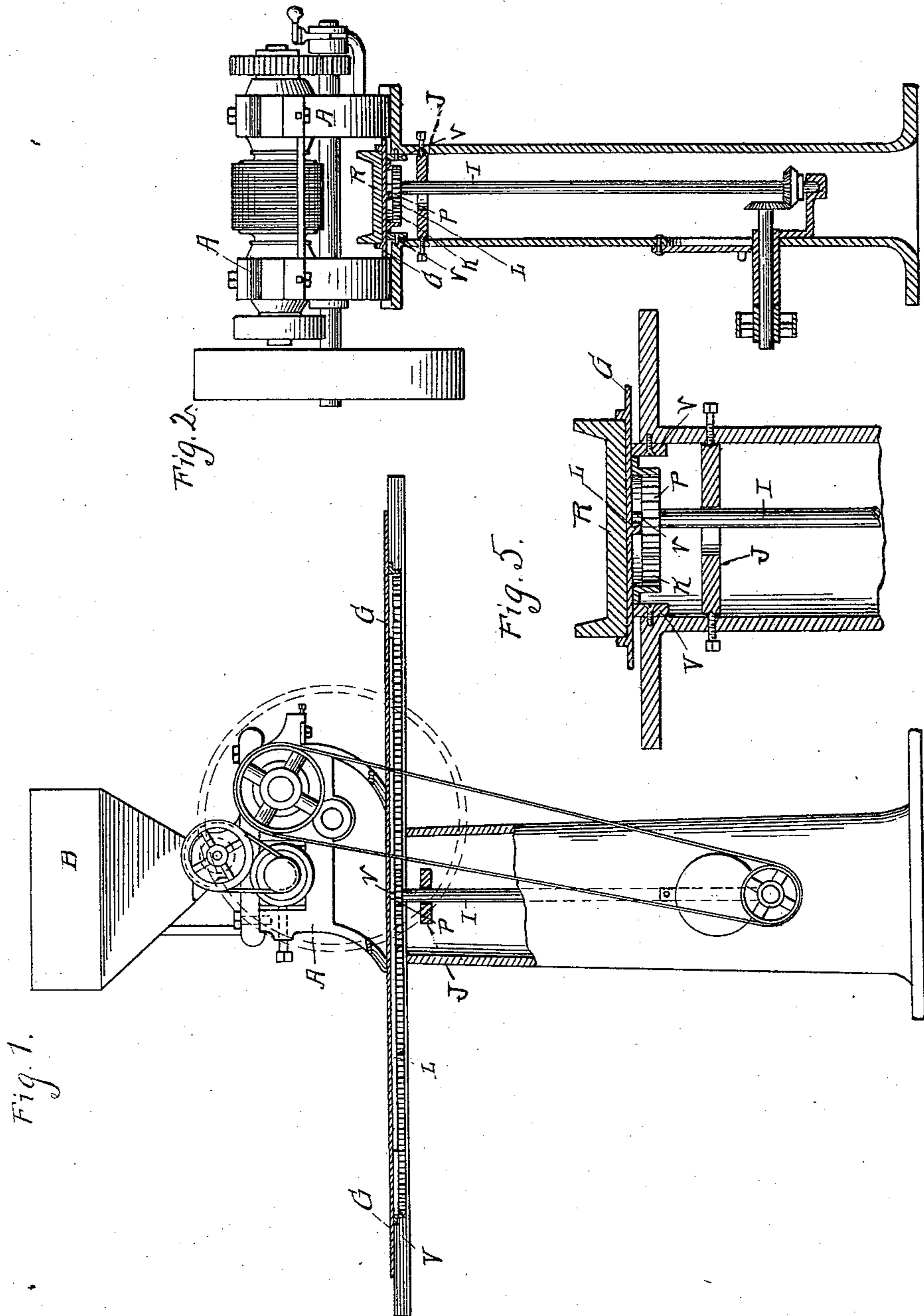
2 Sheets—Sheet 1.

H. D. PERKY.

ROLL MACHINE FOR REDUCING CEREALS FOR FOOD.

No. 532,480.

Patented Jan. 15, 1895.



WITNESSES

Geo. M. Anderson
Phillips Massi.

INVENTOR

Henry D. Perky
By E. W. Anderson
his Attorney

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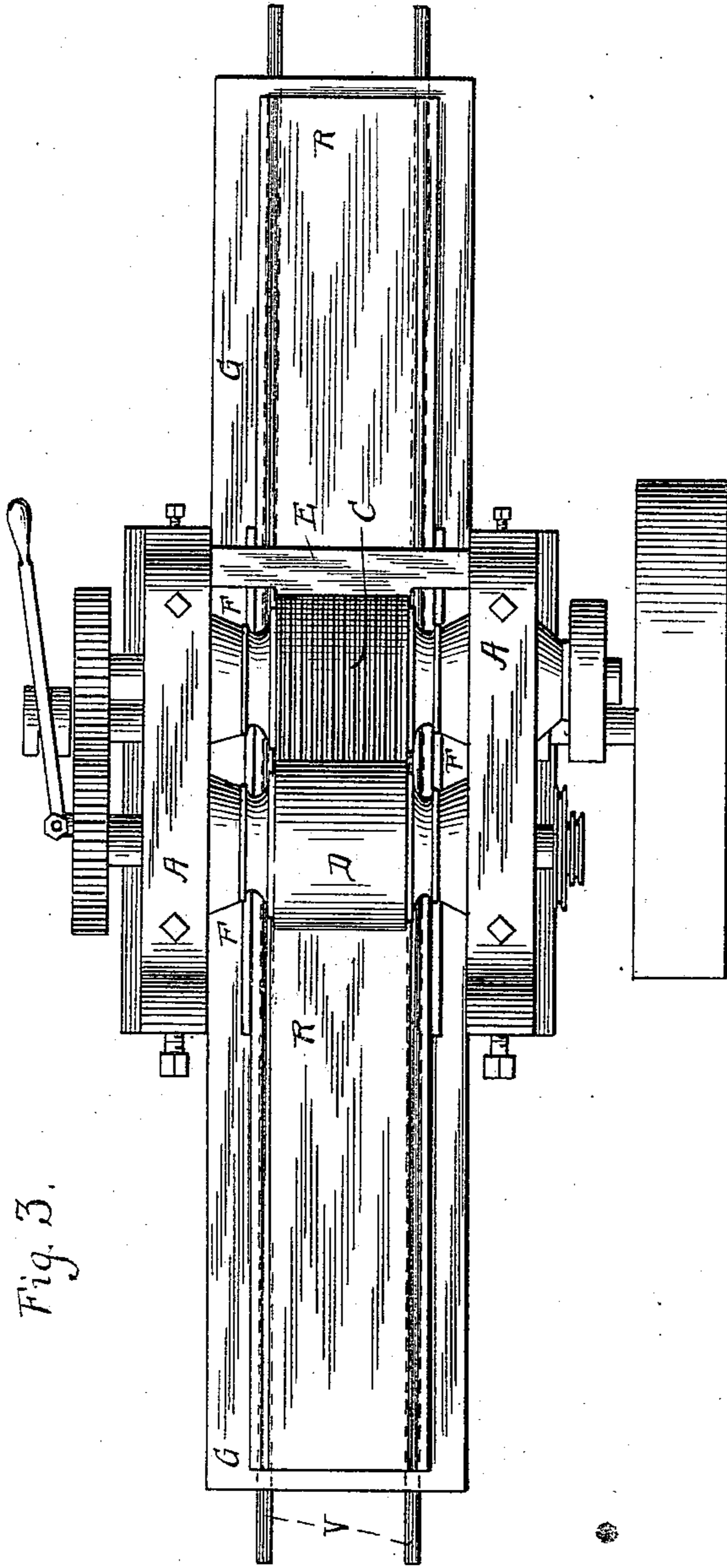


Fig. 3.

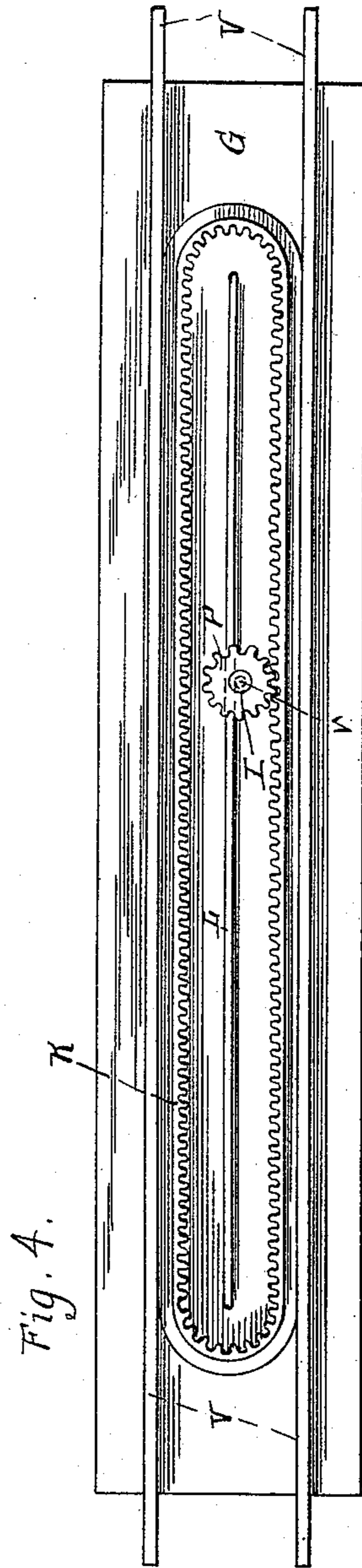


Fig. 4.

WITNESSES

Geo M. Anderson
Phil C. Wasi.

INVENTOR

Henry D. Perky
by E. W. Anderson
his Attorney

UNITED STATES PATENT OFFICE.

HENRY D. PERKY, OF DENVER, COLORADO, ASSIGNOR TO THE CEREAL MACHINE COMPANY, OF SAME PLACE.

ROLL-MACHINE FOR REDUCING CEREALS FOR FOOD.

SPECIFICATION forming part of Letters Patent No. 532,480, dated January 15, 1895.

Application filed March 31, 1894. Serial No. 505,950. (No model.)

To all whom it may concern:

Be it known that I, HENRY D. PERKY, a citizen of the United States, and a resident of Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Roll-Machines for Reducing Cereals for Food; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a side view, partly in section, of a machine embodying the invention. Fig. 2 is a front elevation, of the machine, with parts in section; the hopper being removed. Fig. 3 is a plan view of the machine with the hopper removed. Fig. 4 is a bottom plan view of the endless rack, its support, and the pinion; and Fig. 5 is a detail, sectional view of part of the frame, showing the engagement of the rack and pinion.

The object of this invention is to provide a reducing machine for grain and other articles of food, whereby the material, being reduced continuously by the machine to the form of long threads or shreds, falls upon a long reciprocating receiver, which disposes said threads or shreds lengthwise of the receiver in layers to any desired thickness.

In the accompanying drawings the letter A designates the frame of a reducing machine, supporting a hopper B, and a pair of reducing rolls C and D, whereof the roll C is formed with circumferential grooves, into which the material fed into the hopper is compressed, and from which it is discharged in thread or shred-like form by means of the comb or scraper E, having its toothed edge complementary in contour to the sectional form of the grooved roll. These shreds or threads, especially those formed by passing cooked wheat grains between the rolls, are very tender and delicate, and cannot be independently manipulated or disposed after discharge by the comb. The form, therefore, in which they are laid or disposed by the machine upon such discharge is of great importance.

Under the rolls and comb of the machine is

provided a through-way or passage F, for a reciprocating receiver, which consists usually of a reciprocating holder or plate G, a detachable receiving board or trough R, and suitable reciprocating mechanism.

In order to provide a compact machine of this character with a long throw of the receiver, various mechanisms may be employed, such as a vibrating lever, or reversing cams, with pulley and reversing cord, or the device indicated in the drawings which is preferred, being compact, reliable, and capable of arrangement within the framing. In this movement, the letter K, represents an endless internal-tooth rack, cast or otherwise attached to the under side of the plate G, such rack being of elongated form, with parallel sides and semicircular ends. Between the sides midway is also attached to the under side of said plate a guide rib L, the ends of which are separated from the semicircular toothed ends of the rack sufficiently to allow for the passage of the pinion P, from one side of the rack to the other. This pinion is secured to the upper end of the vertical shaft I, the lower end of which may be turned by means of bevel gearing, or otherwise. It is provided with a central stud *v*, engaging the rib L.

Below the pinion the shaft engages the transverse slotted bearing J, whereby sufficient lateral vibratory movement is allowed to the shaft I, when its pinion engages the semicircular ends of the rack in passing from one side thereof to the other. As the pinion rotates in engagement with one side of the rack the plate or holder or carriage G, is moved longitudinally in the passage F, until the semicircular end of said rack comes into engagement with said pinion, causing the latter to transfer its engagement from one side of the rack to the other, and thereby reversing the endwise motion of said plate or carriage.

A detachable or removable receiver, board or trough R, is usually provided, to be placed on the plate G, to receive the shreds or threads as they fall from the reducing rolls. The reciprocating movement disposes these continuous shreds longitudinally on the receiver, and in layers, these layers increasing in number, in accordance with the number of reciprocations of said receiver, until the desired thick-

ness is produced. The receiver board with its contents can then be removed from the plate or carrier, and another substituted. The contents of the trough can be subdivided into 5 biscuits or loaves for baking.

The carrier or plate G moves upon elongated guide arms V, extending from the frame, which is usually constructed in hollow pedestal form inclosing and concealing the reciprocating gear mechanism of the receiver. 10

The receiver is designed to be geared up to run at about the same speed as the reducing rolls, or a little more slowly when it is desired to effect a wavy or sinuous disposition of the 15 shreds or threads along the receiver.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

1. In a food-reducing machine, the combination with the rolls and discharging comb, of a reciprocating receiver, adapted to dispose the shreds or threads, as they fall from the reducing rolls, in longitudinal manner and in layers, substantially as specified. 20

2. In a food-reducing machine, the combination with the frame, the reducing rolls, the discharging comb, and the passage in said frame below said rolls and comb, of the reciprocating plate or carrier, and the removable receiver board or trough substantially as 25 specified. 30

3. In a food-reducing machine, the combination with reducing mechanism, of a receiver plate its endless bottom rack and guide, the vertical vibratory shaft its pinion, and the 35 driving gear, substantially as specified.

4. In a food-reducing machine, the combination with reducing rolls of a reciprocating receiver moving in a way or passage of the frame, below said reducing rolls, and having 40 its reciprocating mechanism inclosed in said frame, substantially as specified.

In testimony whereof I affix my signature in the presence of two witnesses.

HENRY D. PERKY.

Witnesses:

J. M. STANLEY,

HARRY C. JAMES.