

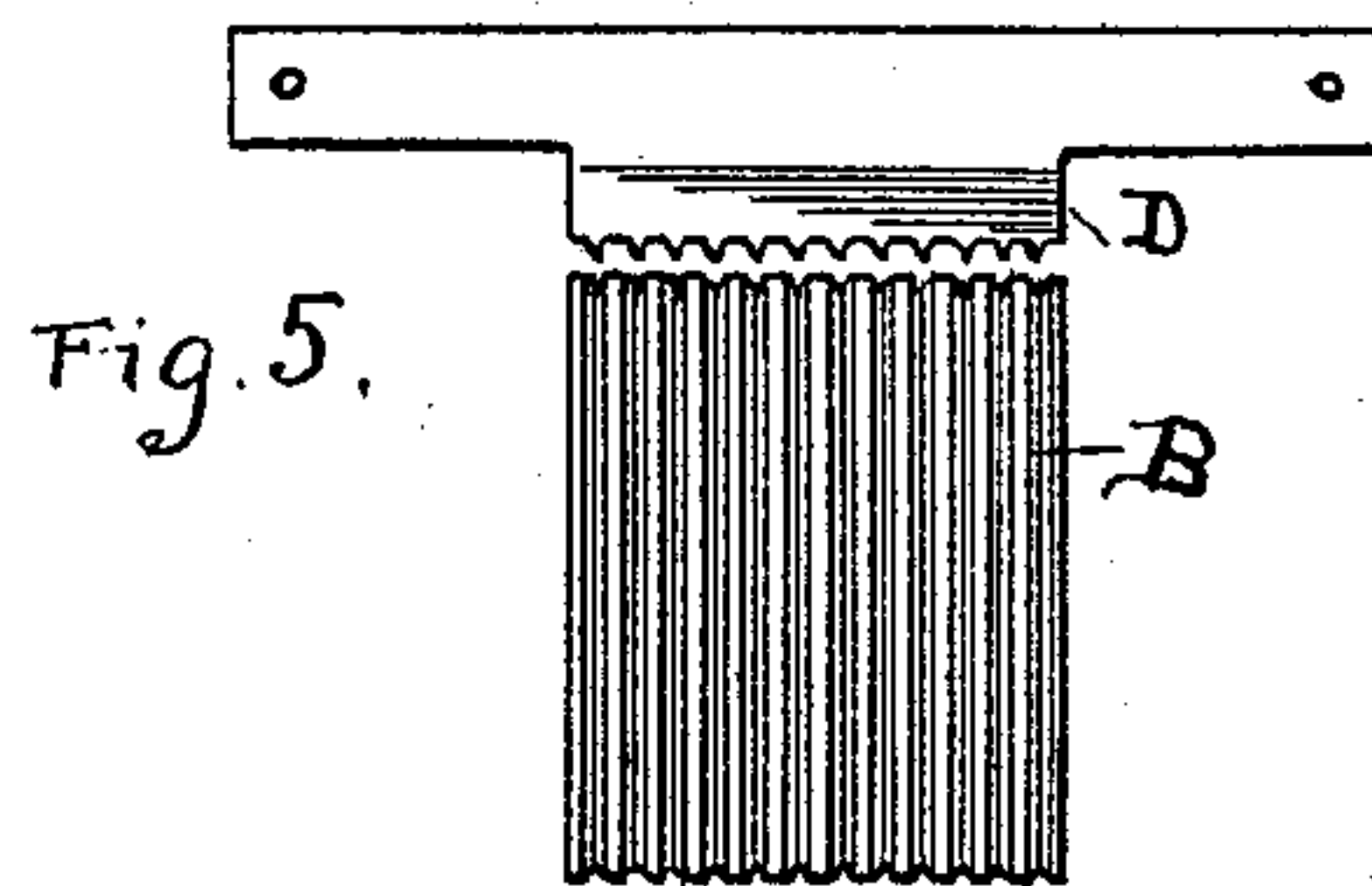
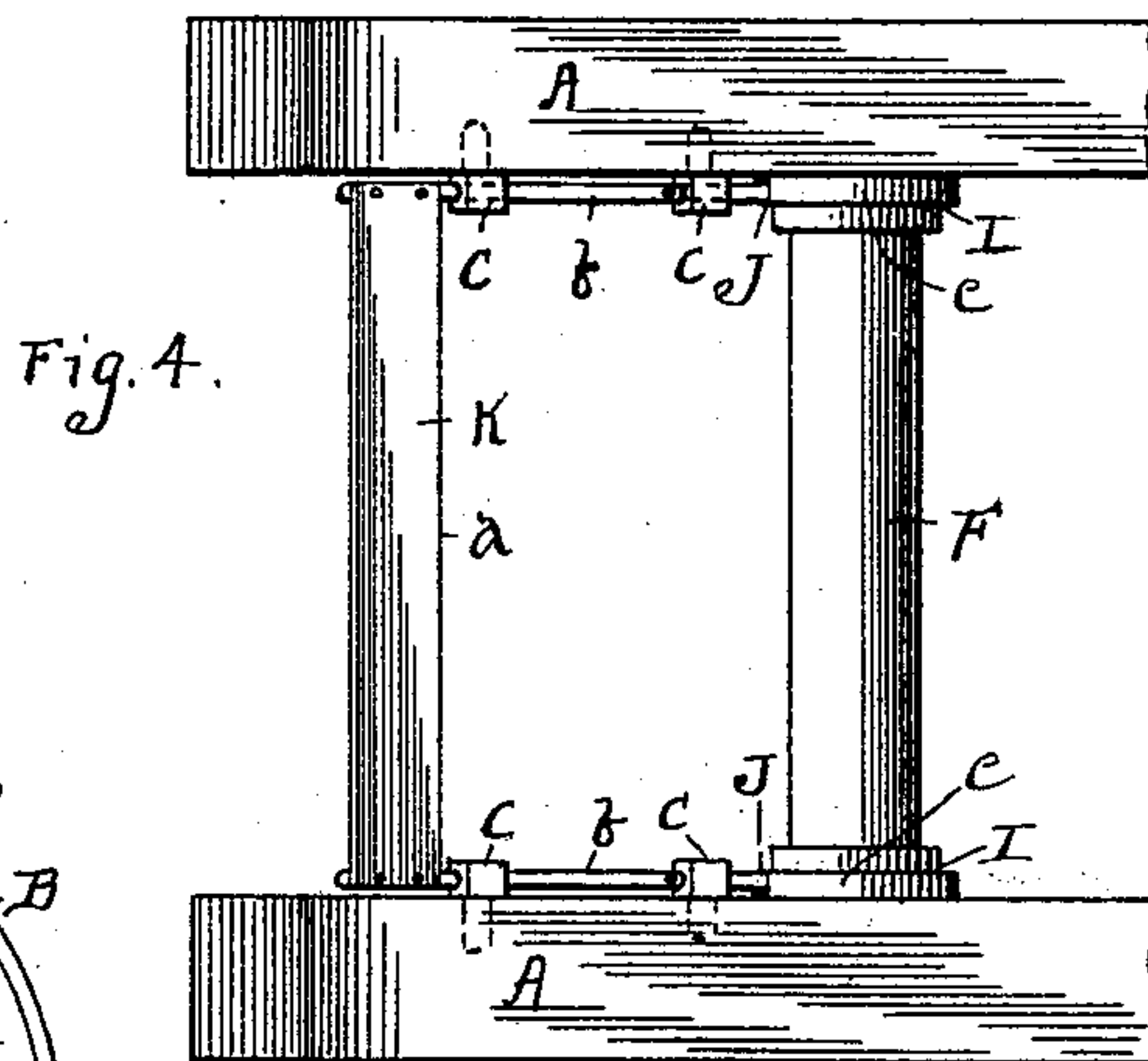
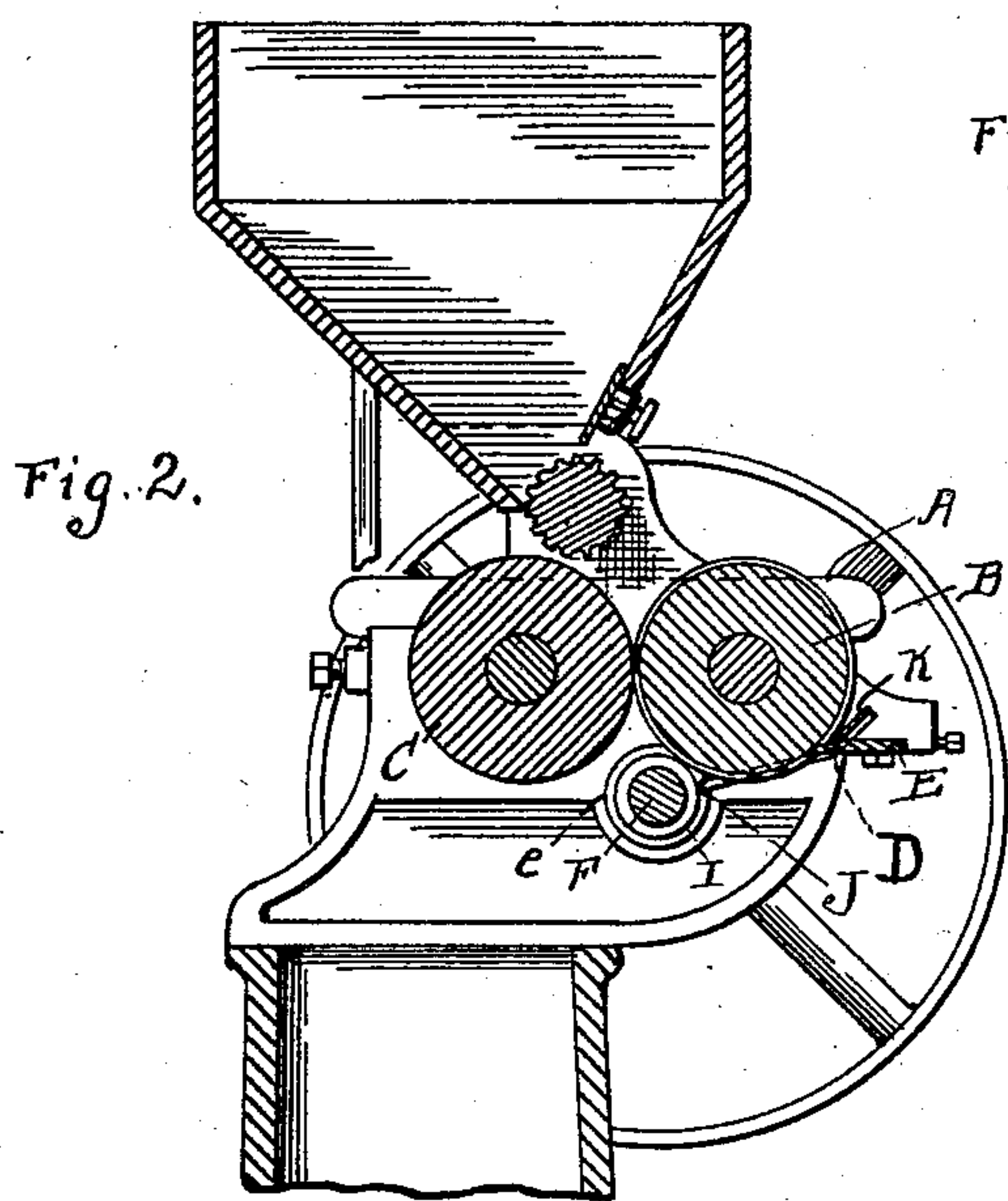
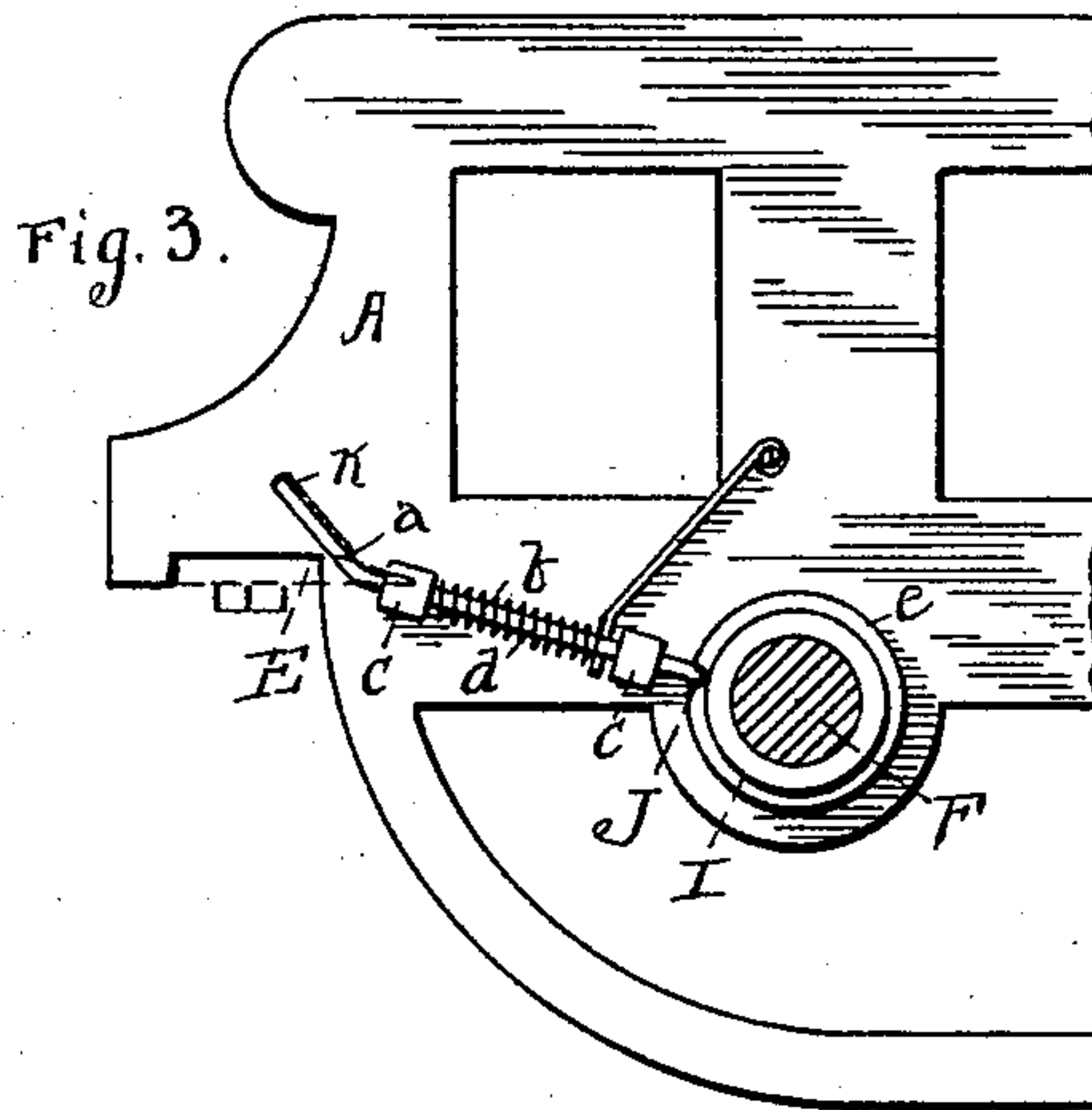
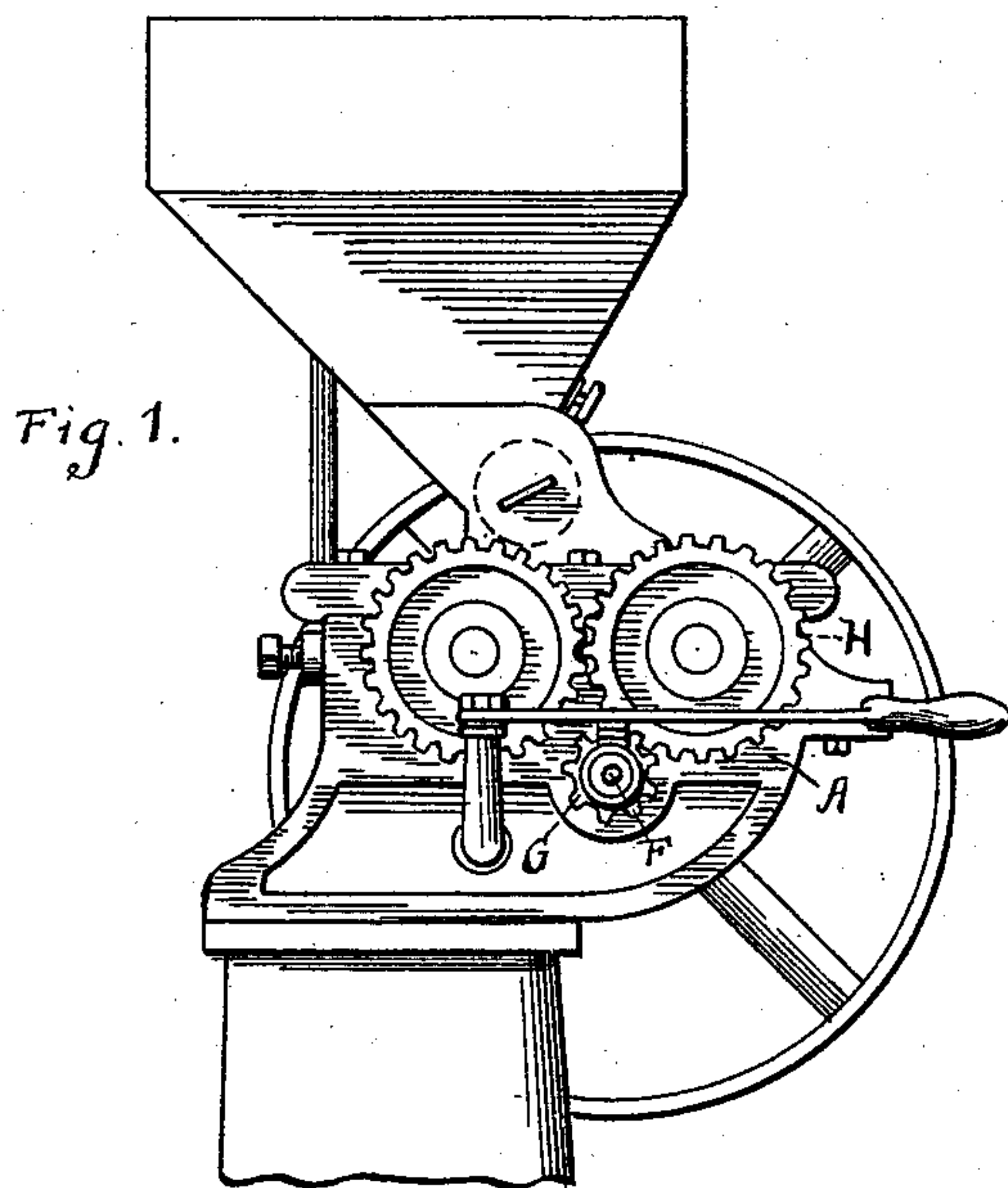
(No Model.)

H. D. PERKY.

GROOVE ROLL MACHINE FOR REDUCING CEREALS FOR FOOD.

No. 532,698.

Patented Jan. 15, 1895.



WITNESSES

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UNITED STATES PATENT OFFICE.

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

GROOVE-ROLL MACHINE FOR REDUCING CEREALS FOR FOOD.

SPECIFICATION forming part of Letters Patent No. 532,698, dated January 15, 1895.

Application filed March 31, 1894. Serial No. 505,949. (No model.)

To all whom it may concern:

Be it known that I, HENRY D. PERKY, a citizen of the United States, residing at Denver, in the county of Arapahoe and State of Colorado, have invented a certain new and useful Improvement in Groove-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 an end view of a machine embodying my invention, part of the supporting frame being broken away. Fig. 2 is a vertical section of the same. Fig. 3 is a detail view of a portion of the frame, showing the comb cleaner. Fig. 4 is a plan view of the comb-cleaner and a portion of the frame; and Fig. 5 is a detail view of one of the groove-rolls and comb.

The invention relates to groove roll machines for reducing grain or other articles of food to shredded or thread-like form, and consists mainly in the novel construction, and combination with the grooved roll and its discharging comb, of a cleaner for said comb, as hereinafter set forth. In these machines, although the grooved roll and the discharging comb, are of fine construction, the teeth and lands of the comb fitting neatly the grooves and surface intervals of the roll, it is found that particles of the food material will, to some extent, pass the discharging comb and accumulate on its upper marginal surface near the roll; and the object of this invention is to provide means for clearing away, and saving this accumulation.

In the accompanying drawings, the letter A designates a portion of the frame of the machine, carrying a pair of reducing rolls, whereof the front roll B is formed with a series of fine circumferential grooves, the back roll C having a simple cylindrical surface.

The material fed between these rolls is compressed into the fine grooves of the roll B, and is discharged from these grooves in shredded or thread-like form by the comb D, the teeth

of which fit neatly into said grooves. This comb is secured to bearings of the frame, as indicated at E.

F represents a small shaft, located below the reducing rolls, and having a pinion G, engaging the gear-wheel H of the grooved reducing roll. At each end this shaft is provided with a cam I, having a circular contour broken by the notch J.

K indicates the comb cleaner, which is usually a plate of steel extending along the top of the comb, but having an oblique position with reference to the top plane of the comb, its lower or working edge *a*, when said cleaner is moved inward being just clear of the top of said comb and free of the surface of the grooved roll. This cleaner is designed to have an intermittent quick movement in the direction of this roll, and to give it such motion, the lateral slides *b*, are employed, these being attached to the ends of the cleaner plate, and working in side bearings *c*, of the frame in a reciprocating manner, intermittently, their motion being governed by the notch cams I. Springs *d*, serve to hold the ends of the slides *b*, in engagement with said cams. At each revolution of the cams I, the cleaner is moved, as the slides enter and leave the notches J, suddenly toward the roll surface, and away therefrom a short distance, this distance being maintained by the engagement of the circular portion *e*, of the cams with the ends of said slides, until the rotation of the cams brings their notches again to bear on the slides. This intermittent reciprocating cleaner, at each revolution of the cams, quickly pushes whatever particles of material may have accumulated on the inner edge of the comb toward and into the grooves of the reducing roll, so that they are taken up thereby and carried around in said grooves to be mixed with the new material fed from the hopper, and utilized.

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

1. The combination with the reducing rolls and the discharging comb, of a comb cleaner, substantially as specified.
2. The combination with the reducing rolls

and the discharging comb, of an intermittently reciprocating comb cleaner, substantially as specified.

3. The combination with the grooved reducing rolls and the discharging comb engaging one of said rolls, of the intermittently reciprocating cleaner plate extending along the top of the comb and having oblique position with reference to its top plane, its lateral

slides and springs, and the circular notch to cams, moving in contact with said slides 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.