

No. 790,926.

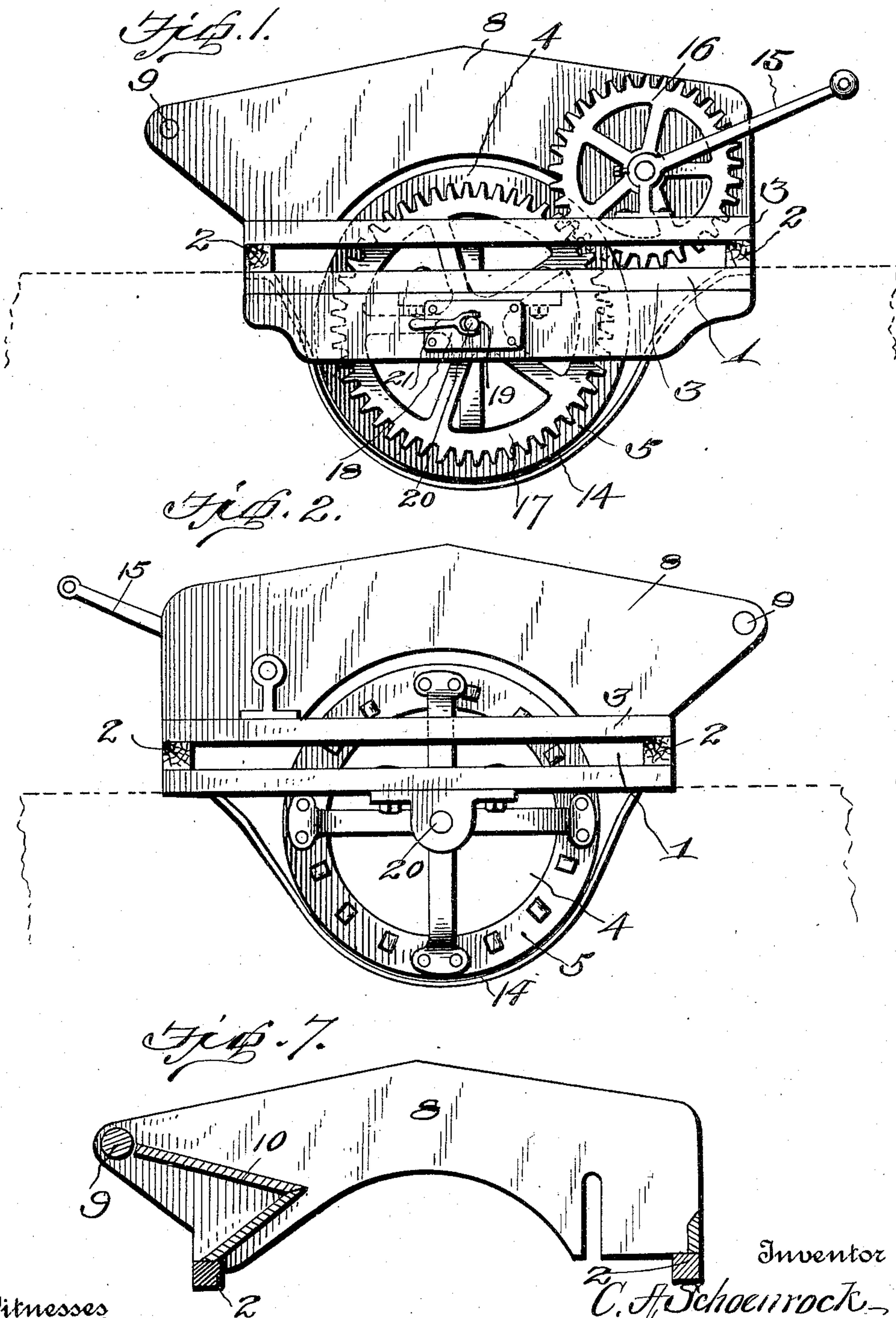
PATENTED MAY 30, 1905.

C. A. SCHOENROCK.

CURD CUTTER.

APPLICATION FILED FEB. 2, 1905.

2 SHEETS—SHEET 1.



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Fig. 3.

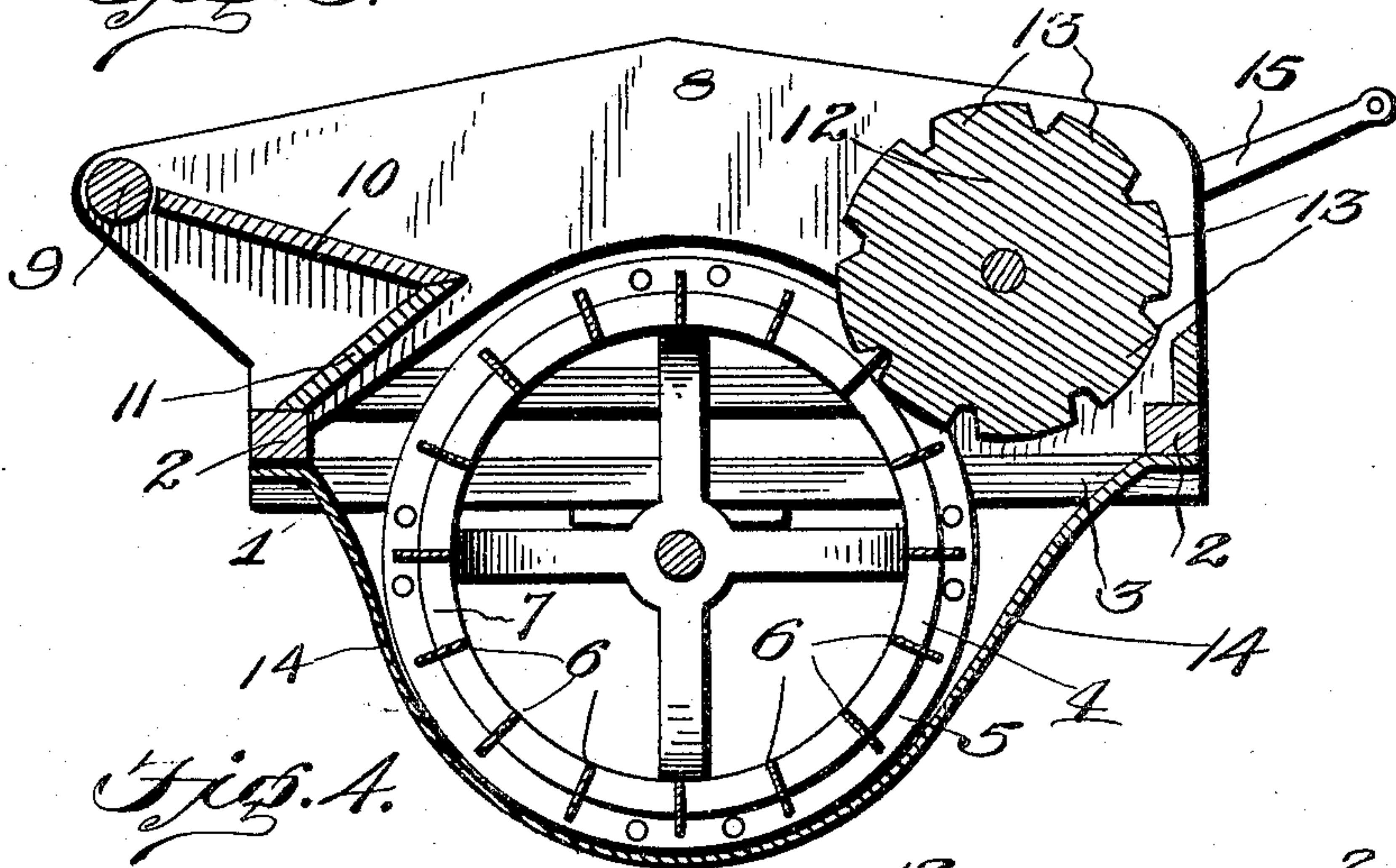


Fig. 4.

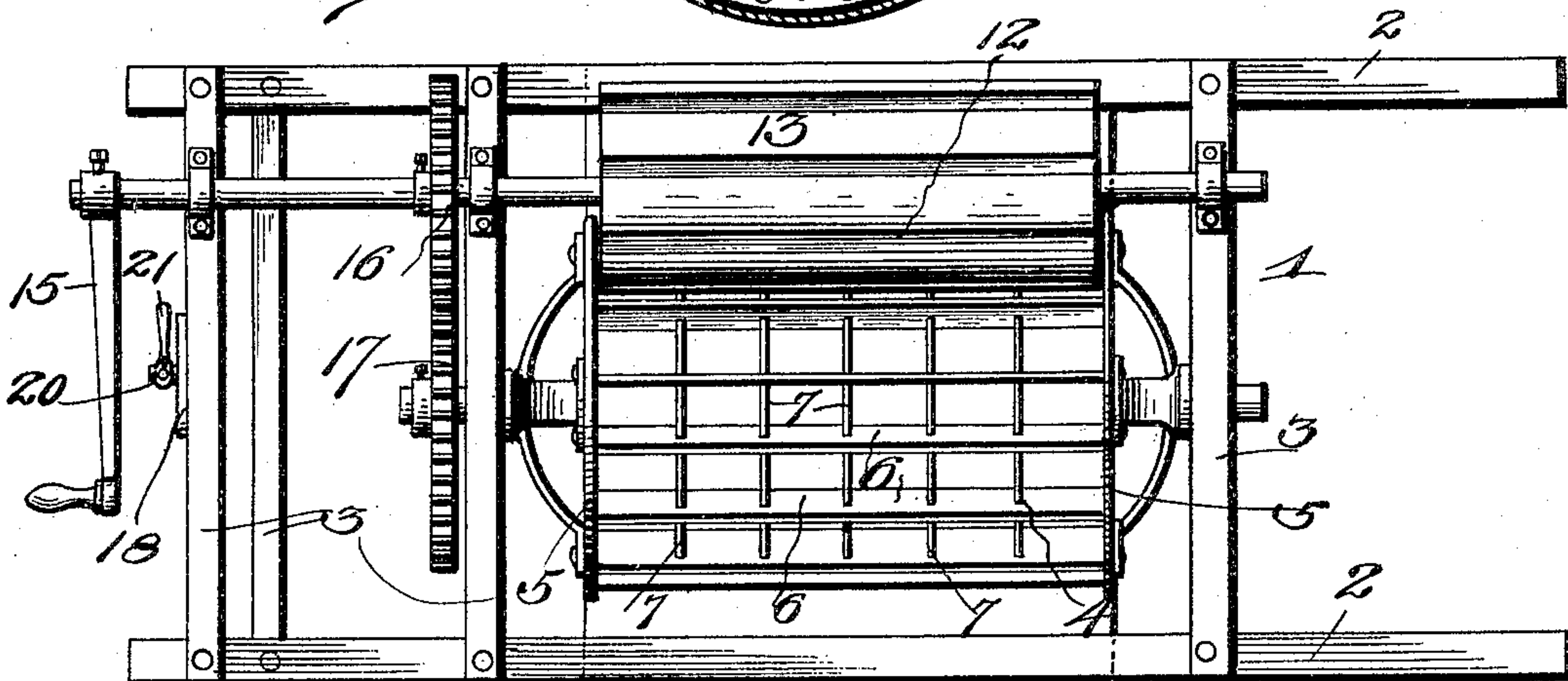


Fig. 5.

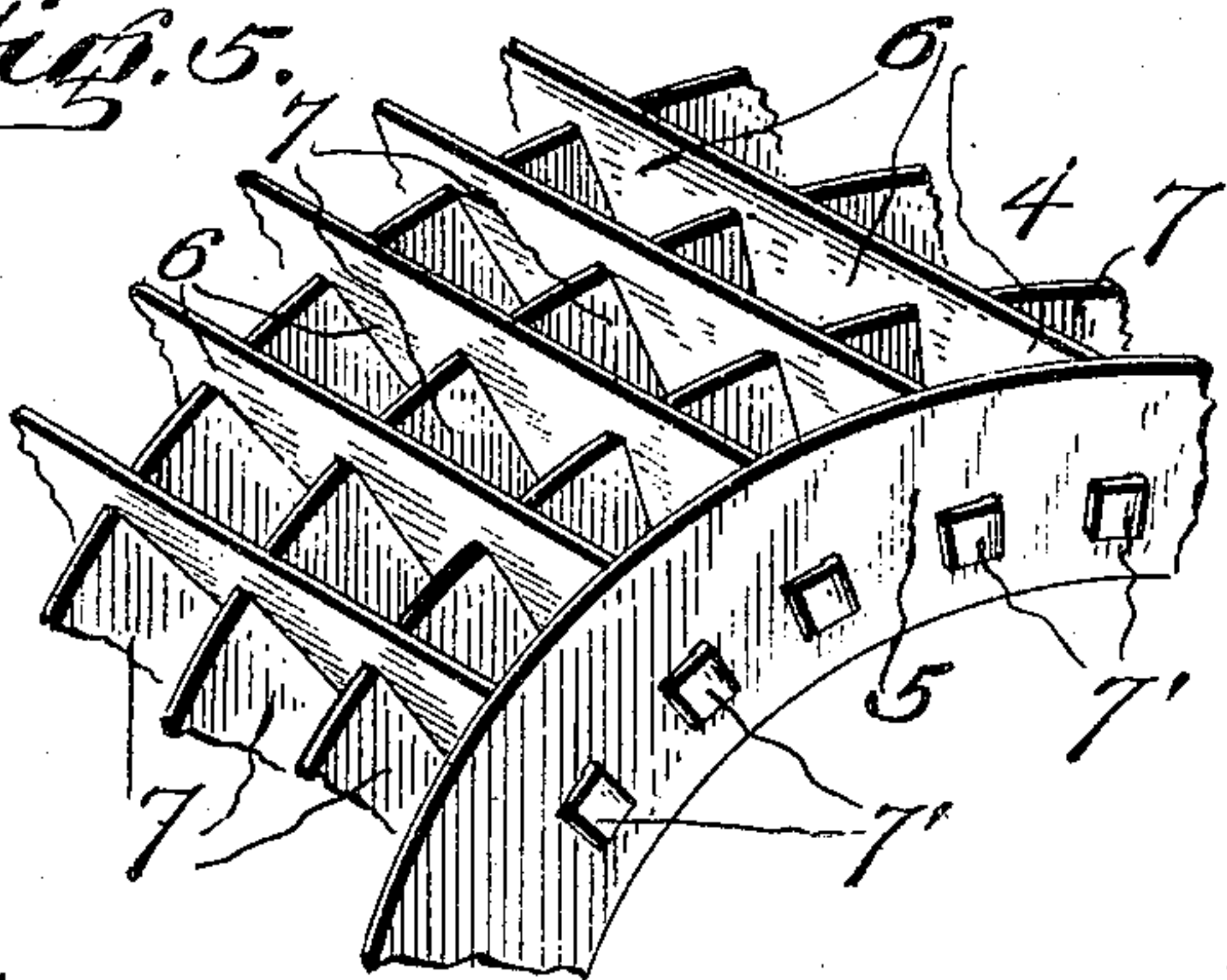
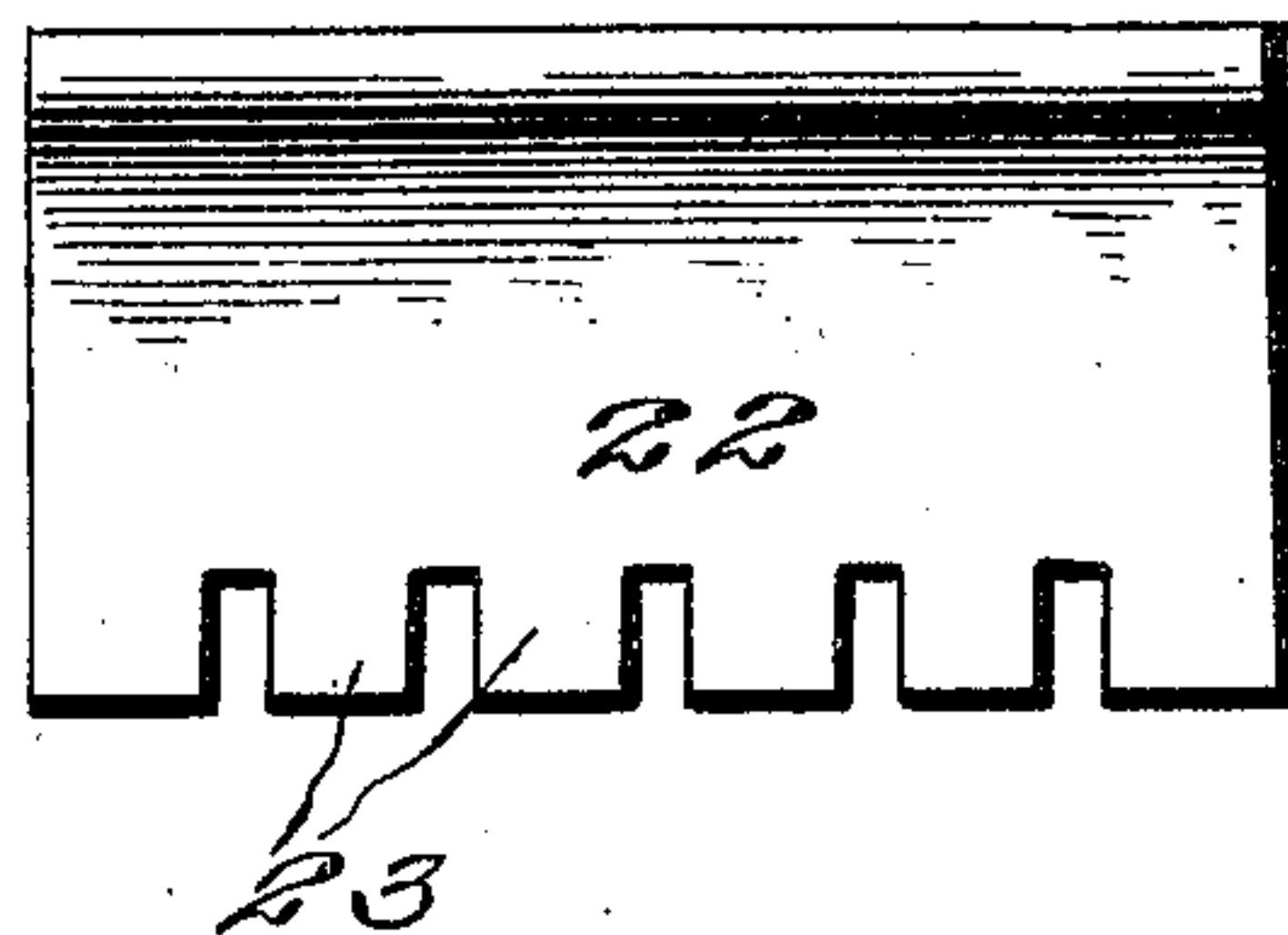


Fig. 6.



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UNITED STATES PATENT OFFICE.

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CURD-CUTTER.

SPECIFICATION forming part of Letters Patent No. 790,926, dated May 30, 1905.

Application filed February 2, 1905. Serial No. 243,896.

To all whom it may concern:

Be it known that I, CHARLES A. SCHOENROCK, a citizen of the United States, residing at Holland, in the county of Brown and State of Wisconsin, have invented certain new and useful Improvements in Curd-Cutters; 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.

This invention relates to improvements in curd-cutters.

The object of the invention is to provide a machine of this character which will be simple in construction and efficient in operation, means being provided whereby the curd will be discharged from the cutting-cylinder in condition to be received and readily pressed into the desired shape by the pressing mechanism.

A further object is to provide means whereby any of the curd that may fall through between the knives of the cutter after being forced through the same will be caught and again carried around and forced through the cutting-knives, thereby causing all curd to be discharged from the ends of the cutting-cylinder.

With these and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side view of one side of the machine. Fig. 2 is a similar view of the opposite side of the same. Fig. 3 is a longitudinal vertical sectional view. Fig. 4 is a top plan view. Fig. 5 is a detail perspective view of a portion of the cylinder, showing the arrangement of the cutting-blades. Fig. 6 is a detail view of the clearing-board, and Fig. 7 is a vertical sectional view through the hopper.

Referring more particularly to the drawings, 1 denotes the supporting-frame of the machine, said frame consisting of supporting-bars 2, adapted to rest upon the upper edges of the sides of the cheese-vat and are connected together by cross-bars 3, arranged at suitable intervals on the supporting-bars 2.

Journalled on a pair of cross-bars 3 is a cutting-cylinder 4, which consists of open end frames or heads 5, between which and secured thereto is an annular series of longitudinally-disposed cutting bars or blades 6. Said blades are spaced apart and intersected by a series of circular knives or cutting-bars 7. The longitudinally-disposed blades 6 project somewhat beyond the outer edges of the circular knives, as shown, the ends of the longitudinal blades being reduced and adapted to project through slots in the heads 5 and clenched on the outer side of said heads, as shown at 7' in Fig. 5.

Over the cylinder 4 and supported upon the longitudinal bars 2 is a hopper 8, in one end of and journalled in the side boards of which is a guide-roller 9, adjacent to which is arranged a downwardly-projecting inclined guide-board 10 and an upwardly-projecting guide-board 11. In the opposite end of the hopper 8 is arranged a pressing-roll 12, having formed thereon an annular series of longitudinally-disposed ribs or corrugations 13, which are adapted to project between the longitudinally-disposed knives or blades of the cutting-cylinder 4, whereby the curd will be forced into engagement with said cutting-blades.

Below the cutting-cylinder and secured at its opposite end to the bars 2 of the supporting-frame is a curved sheet-metal plate forming a trough 14. The arrangement of the trough is such that any pieces of curd which may fall through the cylinder after being pushed into the same by the pressing-roll will be caught and carried around by the cutting-cylinder and again forced between the knives of the same by the pressing-roll, thus causing all of the curd to be discharged from the ends of the cylinder.

The shaft of the pressing-roller 12 is journalled in suitable bearings upon the cross-bars 3 of the supporting-frame, and on the end of said shaft is mounted a crank-handle 15, by which said shaft and roll may be turned. On the shaft of the pressing-roll is also fixedly mounted a spur-gear pinion 16, which is adapted to mesh with a gear-wheel 17 on the end of the cutting-cylinder shaft, whereby when the

crank-handle 15 is turned to drive the pressing-roller 12 the cutting-cylinder will also be revolved, the revolution of the cutting-cylinder being the reverse of that of the pressing-roller, thereby drawing the curd between said pressing-roll and said cutting-cylinder.

On the lower outer cross-bar 3 of the supporting-frame adjacent to one side of the vat is secured a plate 18, which is provided with a threaded aperture 19, in which is mounted a clamping-screw 20. The inner end of said screw is adapted to be screwed into engagement with the side of the vat, thereby holding the machine in place upon said vat. To the outer end of the screw is pivotally connected the end of an operating-handle 21. Thereby said screw may be turned into and out of engagement with the side of the vat.

In operation the sheet of curd from the vat is fed over the guide-roll 9 and the guide-board 10 onto the knives of the cutting-cylinder, where the same may be engaged by the pressing-roller 12 and thereby forced into engagement with the knives or blades of the cutting-cylinder, each successive sheet of curd passing between said pressing-roll, and the cylinder will force the pieces of curd previously forced between the knives of the cylinder farther inwardly until the same is caused to drop into said cylinder, after which said pieces of curd will be discharged from the ends of the cylinder. Should any small pieces of curd drop out from between the knives of the cylinder, the same will be caught by the trough 14 and will be carried around by the longitudinally-disposed blades of the cylinder and again forced into engagement with the knives by the pressing-roll or the next piece of curd passing beneath the same. After all of the curd has been fed to the cylinder the pieces of the same left between the knives may be forced into the cylinder by means of the clearing-board 22, upon which is formed a series of teeth 23. Said teeth are spaced apart and arranged to enter the spaces between the longitudinal and circular knives or blades of the cylinder.

From the foregoing description, taken in

connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

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

1. In a curd-cutting machine, the combination with a supporting-frame, of a hopper arranged therein, a cutting-cylinder journaled in said hopper, a feed-roll and a clearing-roll also journaled in said hopper, and a trough arranged below said cutting-cylinder whereby any curds falling through the latter will be caught and carried around thereby, to the clearing-roll by which they are again forced into the cutting-cylinder, substantially as described.

2. In a curd-cutting machine, the combination of a supporting-frame, a hopper arranged therein, a cutting-cylinder having a series of annular knives and a series of longitudinally-disposed knives intersecting said annular knives, to form rectangular spaces between the same, the cutting edges of said longitudinal knives projecting beyond the cutting edges of said annular knives, a feed-roll and a clearing-roll journaled in said hopper, said clearing-roll having formed thereon a series of longitudinal radially-disposed ribs to project between the cutting edges of said longitudinal knives, and grooves extending longitudinally of said roll at distances apart conforming to the distances between the knives, and means whereby said cylinder and rolls are driven, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CHARLES A. SCHOENROCK.

Witnesses:

W. J. KOWALKE,
ROY P. KUEHN.