

(No Model.)

3 Sheets—Sheet 1.

P. C. HEWITT.
GLUE STOCK CUTTER AND FEEDER.

No. 545,288.

Patented Aug. 27, 1895.

Fig. 1.

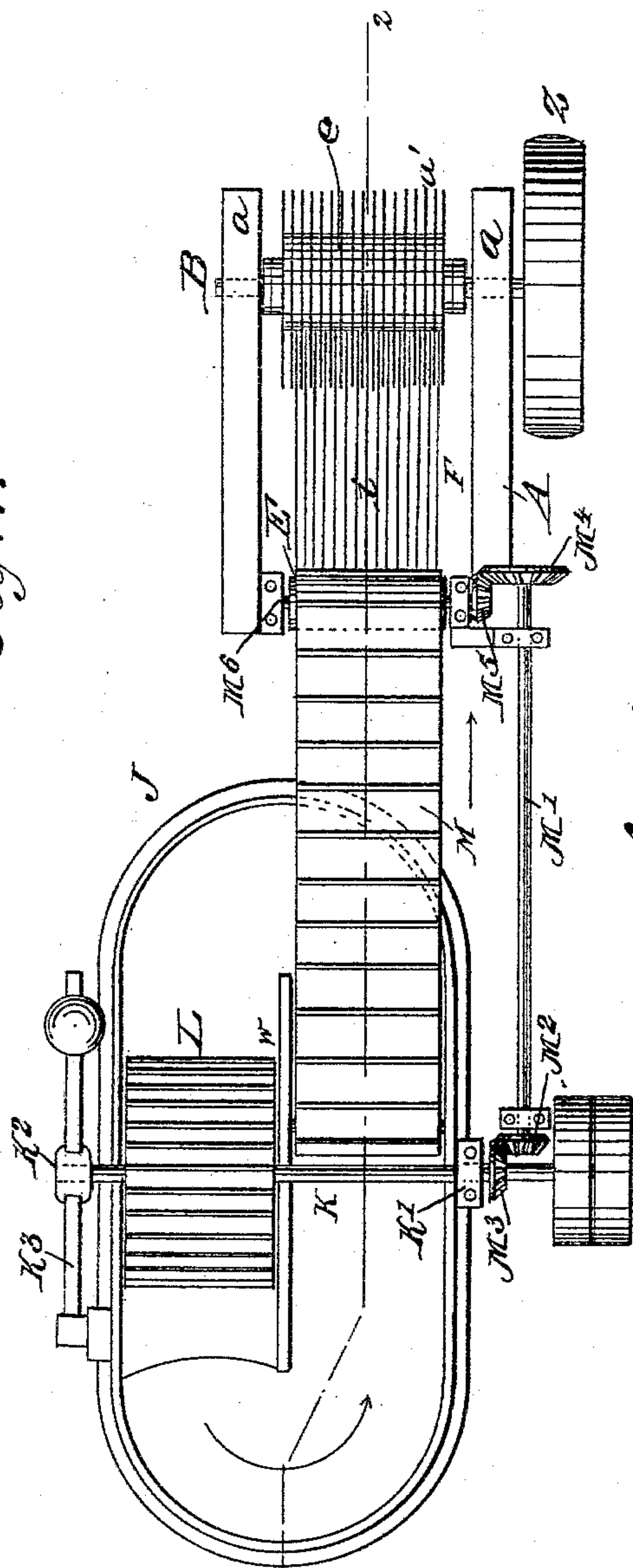
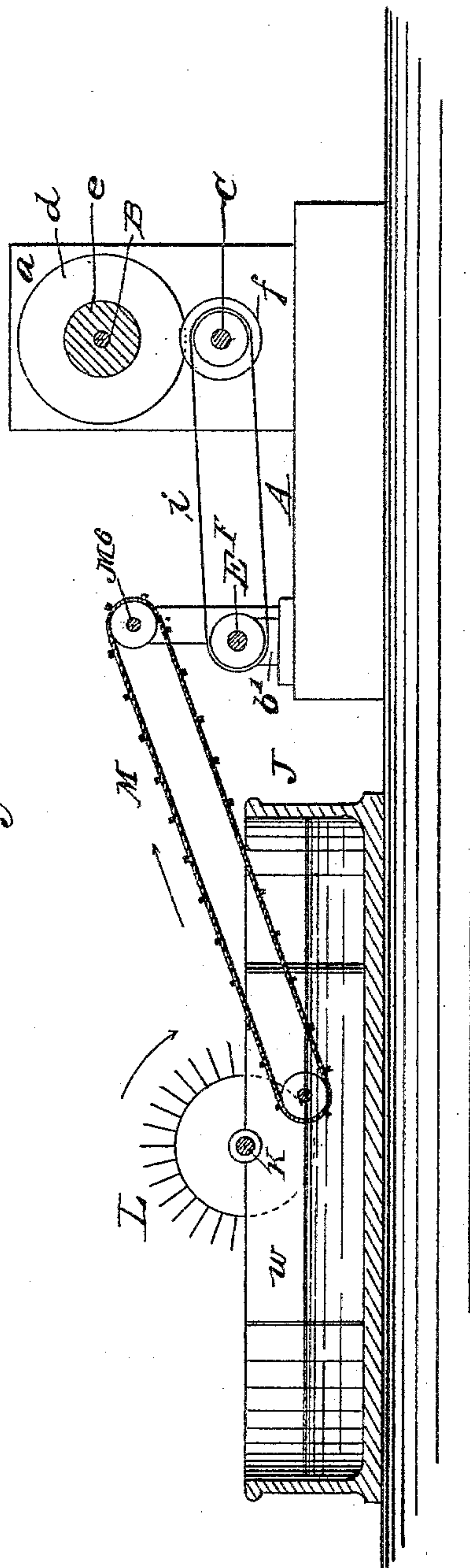


Fig. 2.



WITNESSES:

Chas. Oida
G. M. Hopkins,

INVENTOR

P. C. Hewitt

BY

Munn & Co

ATTORNEYS.

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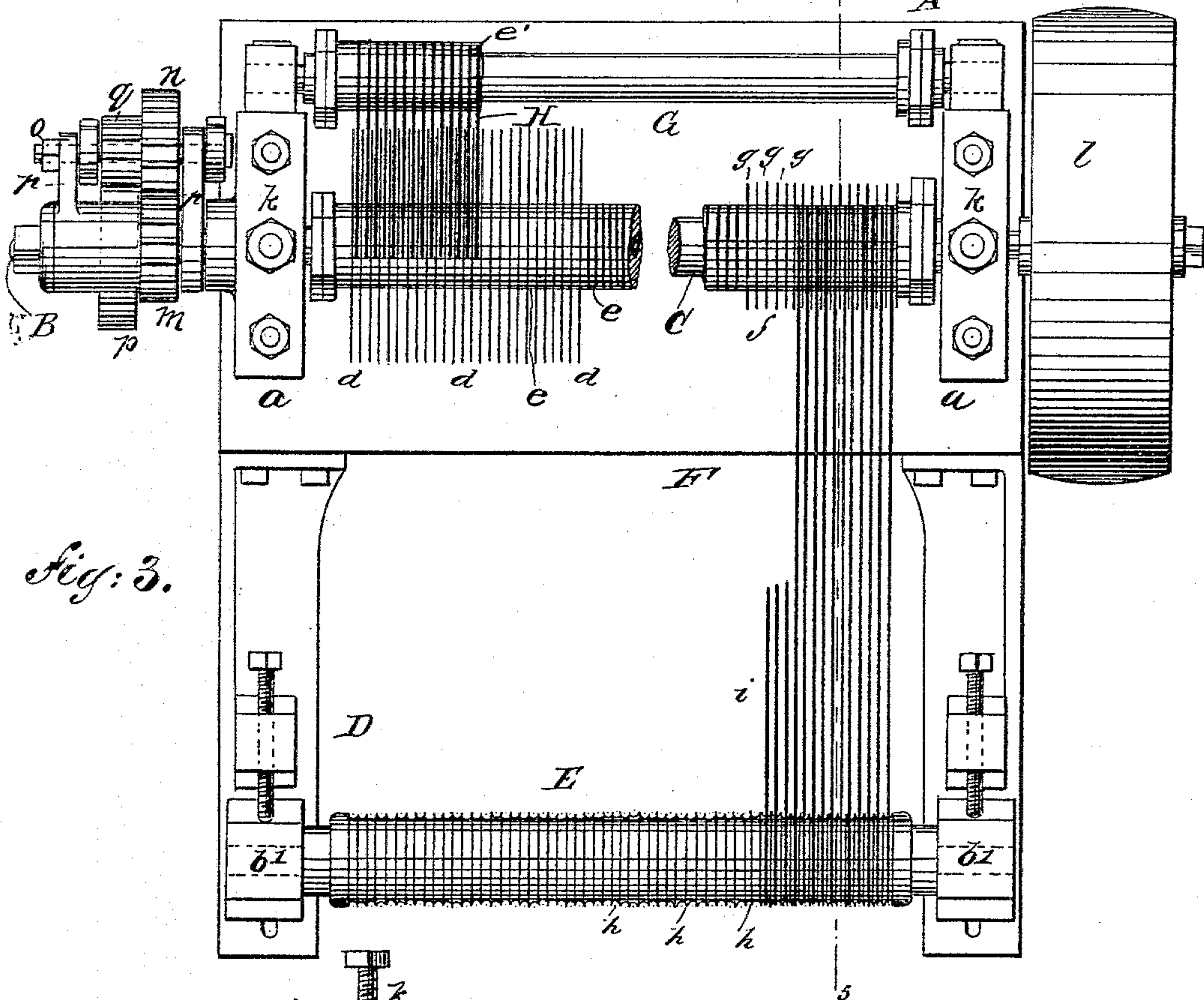


Fig. 3.

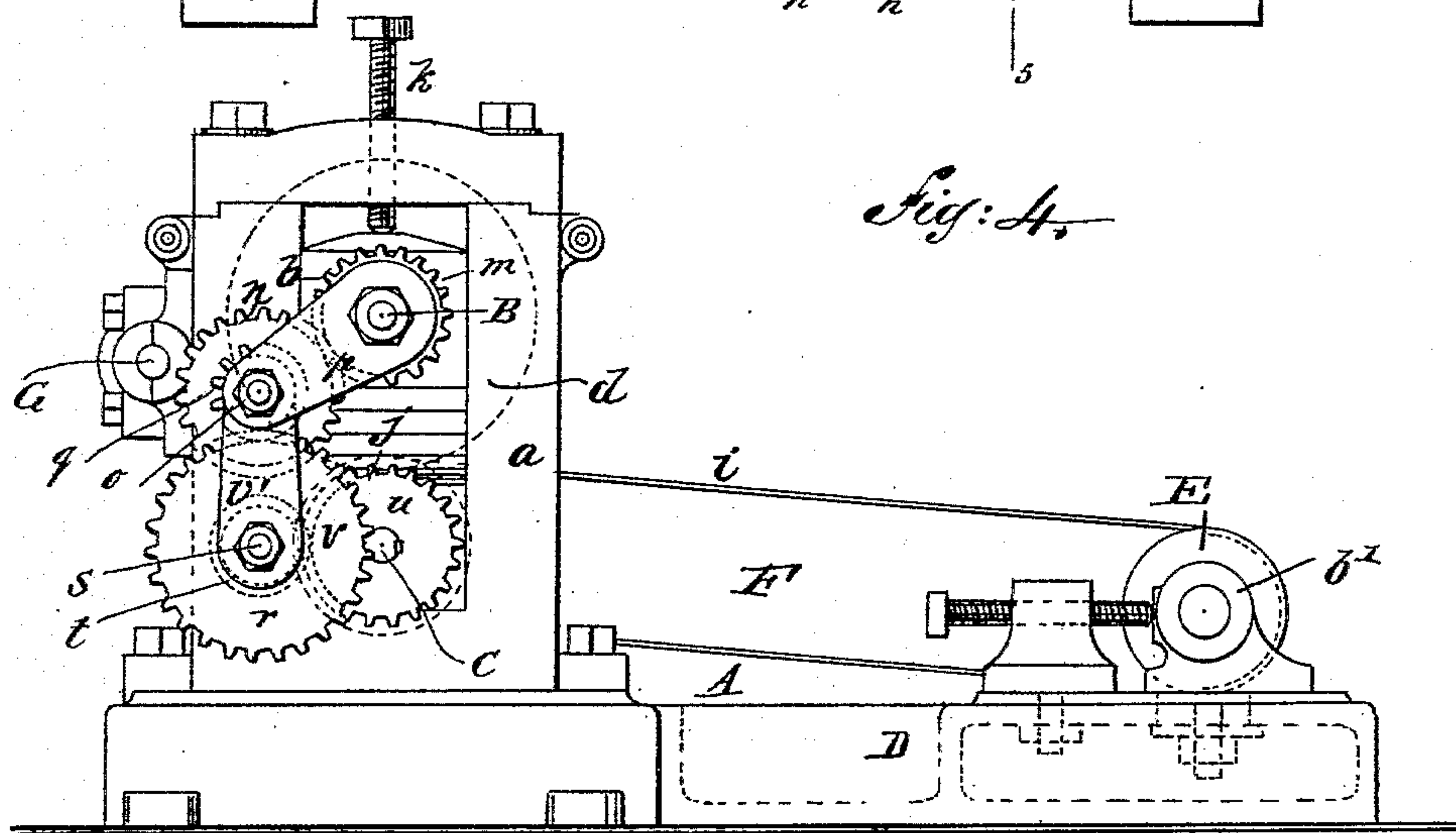


Fig. 4.

WITNESSES:

Chas. Nida
G. M. Hopkins,

INVENTOR

P. C. Hewitt

BY

Munn & Co

ATTORNEYS.

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fig: 5.

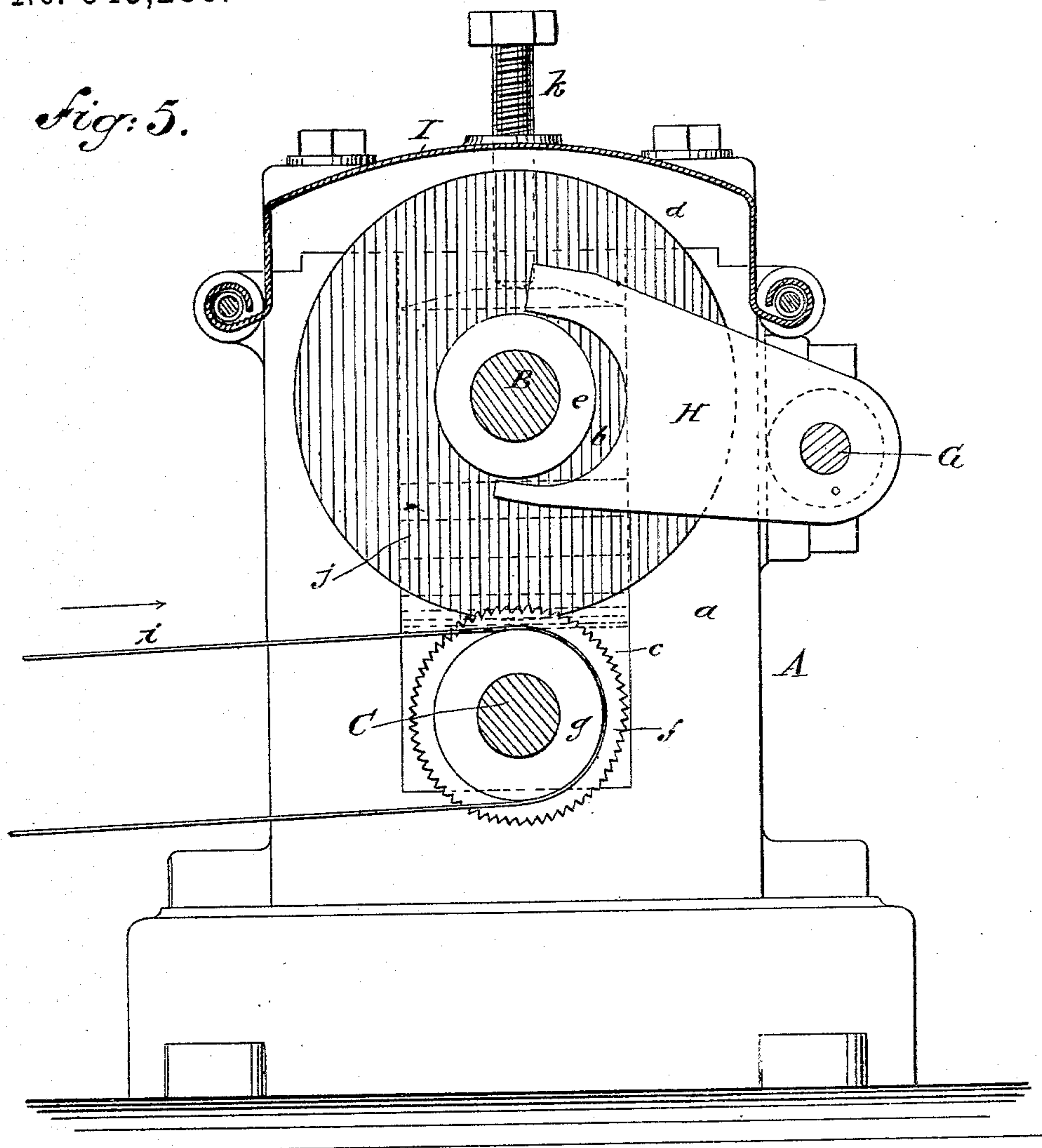
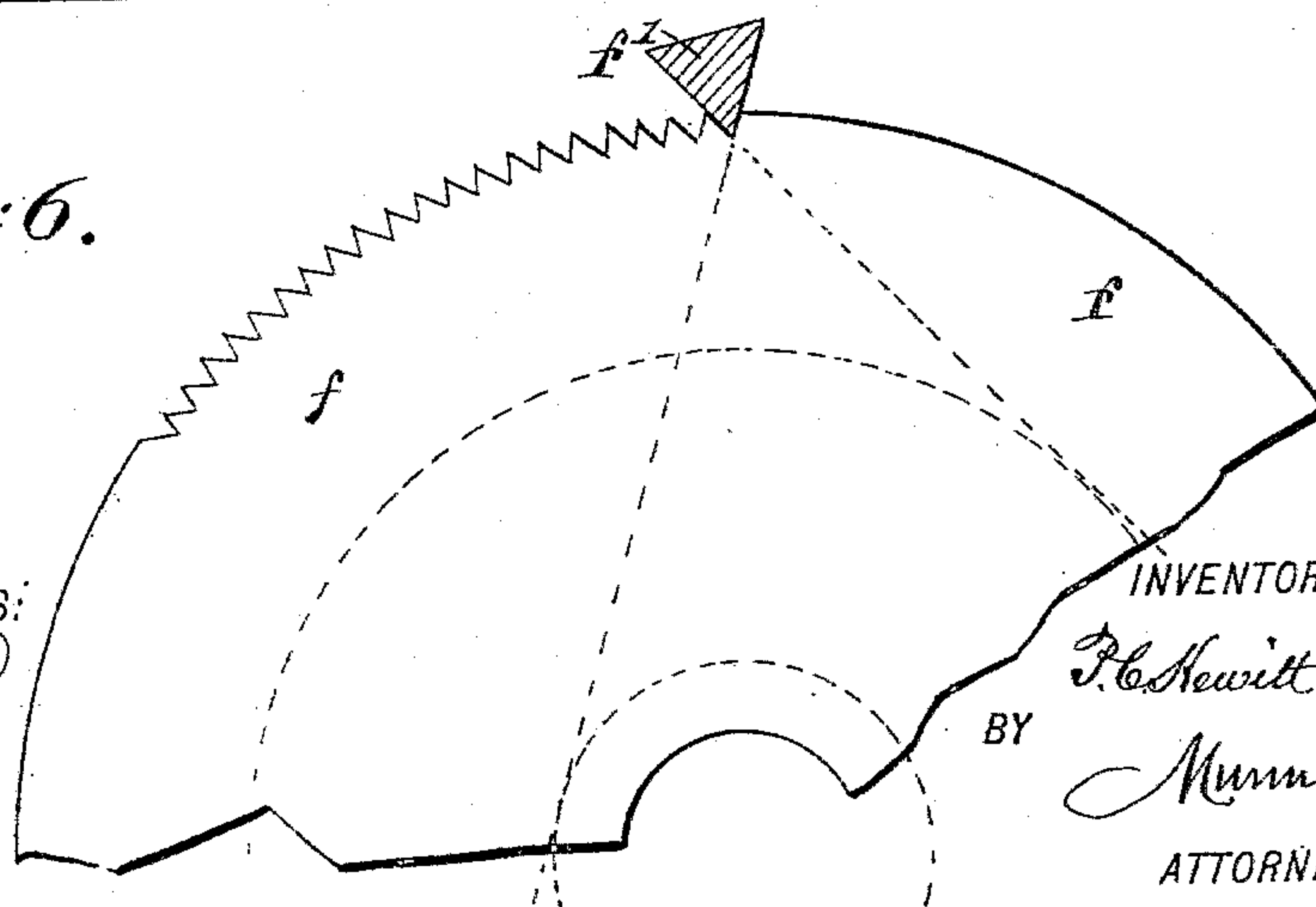


Fig: 6.



WITNESSES:

Chas. Nickle.
G M Hopkins,

INVENTOR

J. C. Hewitt

BY

Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

PETER COOPER HEWITT, OF NEW YORK, N. Y.

GLUE-STOCK CUTTER AND FEEDER.

SPECIFICATION forming part of Letters Patent No. 545,288, dated August 27, 1895.

Application filed July 20, 1894. Serial No. 518,114. (No model.)

To all whom it may concern:

Be it known that I, PETER COOPER HEWITT, of New York city, in the county and State of New York, have invented a new and Improved
5 Glue-Stock Cutter and Feeder, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a plan view of my improved
10 glue-stock cutter and feeder. Fig. 2 is a vertical longitudinal section taken on line 2 2 in Fig. 1. Fig. 3 is a plan view of the cutter with parts removed to clearly show the construction. Fig. 4 is a side elevation of the
15 same. Fig. 5 is an enlarged vertical transverse section taken on line 5 5 in Fig. 3; and Fig. 6 is a side elevation of a portion of one of the serrated disks, showing the pitch of the teeth and a section of the cutter used in
20 producing the teeth.

Similar letters of reference indicate corresponding parts in all the views.

The object of my invention is to construct
25 apparatus by means of which glue-stock may be taken from the washer, conveyed to a cutter, and held in position to be acted upon by the knives, by means of which it is cut into pieces of suitable size.

My invention consists in a glue-stock cutting-machine provided with a series of circular cutters, a series of serrated disks for holding the stock while it is being cut, a glue-stock conveyer formed of a series of endless belts extending between the serrated disks,
30 and a series of guards extending between the circular cutters and serving to prevent the stock from being carried around by the cutters.

It also consists in the combination, with the
40 circular cutters and serrated disks, of adjustable gearing connecting the shafts of the same to admit of adjusting the position of the circular cutters relative to the serrated disks.

The invention also consists in the combination, with the glue-stock cutters, of a glue-stock washer and a conveyer for carrying the glue-stock from the washer to the cutter, all
45 as will be hereinafter more fully described.

50 In housings *a* of the frame *A* are placed boxes *b* *c*, in which are journaled the shafts *B* *C*, the journal-boxes *c* of the shaft *C* being

made stationary, while the journal-boxes *b* of the shaft *B* are movable.

On the shaft *B* are mounted circular cutters *d*, alternating with collars *e*. By this
55 arrangement the circular cutters *d* are spaced, thereby determining the width of the strips of glue-stock. The circular cutters *d* and collars *e* are clamped together on the shaft *B*
60 by means of nuts turned on the threaded portions of the shaft. On the shaft *C*, in a similar way, are mounted the serrated disks *f*, alternating with collars *g*. The circular cutters *d* project between the serrated disks
65 *f* a sufficient distance to cut any stock carried by the said serrated disks.

In adjustable journal-boxes *b'*, attached to an extension *D* of the frame *A*, is journaled the shaft of a grooved roller *E* provided with
70 as many grooves *h* as there are collars *g* on the shaft *C*, and in each groove is placed an endless belt *i*, which extends around one of the collars *g* and between two of the serrated disks *f*. The series of belts *i* form an endless
75 carrier *F* for conveying the glue-stock to the serrated disks *f*. The endless belts *i* are preferably made of wire rope. The journal-boxes of the shafts *B* *C* are separated by a packing
80 *j*, and the journal-boxes *b* of the shaft *B* are held down upon the packing by screws *k* passing through the tops of the housings *a*. The shaft *B* is prolonged beyond its journal-boxes and is provided at one end with a pulley *l* for
85 receiving the belt by which the machine is driven. At the opposite end the shaft *B* carries a spur-wheel *m*, which engages a spur-wheel *n*, turning on a rod *o*, extending through
90 movable arms *p*, arranged to swing on the end of the shaft *B*. The spur-wheel *n* carries a pinion *q*, which engages a spur-wheel *r*, journaled on the stud *s*, projecting from the housing *a*, and the spur-wheel *r* carries a pinion *t*,
95 which engages a spur-wheel *u* on the end of the shaft *C*. The rod *o* is supported by links *v'*, arranged to swing on the stud *s*. By means of this gearing motion is communicated from the shaft *B* to the shaft *C*. The adjustability of the train of gearing permits
100 of raising or lowering the shaft *B* as may be required.

At the rear of the frame *A* is journaled a shaft *G*, on which are clamped guard-plates *H*, which extend between the circular cutters

d. The guard-plates are spaced by intermediate collars *e'* and their free ends are notched to permit them to embrace the collars *e*.

A cover I is attached to the upper portion of the frame A to insure safety to the attendants and to prevent injury to the circular cutters.

The glue-stock washer used in connection with the cutter is shown in Figs. 1 and 2. The oblong tank J is divided longitudinally in the middle by a partition *w*, and at the center of the tank is journaled a horizontal shaft K, which extends across the tank at right angles to the center of the partition, one end of the shaft being journaled in a fixed journal-box K', the other end being journaled in a journal-box K², carried by a weighted lever K³, pivoted to the side of the tank J. At one side of the partition and upon the shaft K is mounted a paddle-wheel L, which nearly fills the space between the partition and the side of the tank. The weighted lever K³ allows the wheel L to yield when an unusual quantity of glue-stock passes under the wheel. At the opposite side of the partition, between the side of the tank and the partition, is placed an endless conveyer M. The endless conveyer is placed in an inclined position, the lower end extending into the water contained by the washer, while the upper end extends over the endless conveyer F of the glue-stock cutter. The conveyer M receives motion from the shaft K through the shaft M' at the side of the tank, which carries at one end a miter-wheel M², engaged by a miter-wheel M³ on the shaft K. On the other end of the shaft M' is secured a bevel-wheel M⁴, which engages a bevel-pinion M⁵ on the upper shaft M⁶ of the conveyer M. As the glue-stock is rapidly circulated around the partition in the washer by the action of the paddle-wheel L, some of it is taken up by the endless conveyer M and delivered by it to the endless conveyer F. The said endless conveyer F carries the stock forward to the serrated disks *f*, which carry it upwardly against the edges of the circular cutters *d*. As the cutters *d* revolve rapidly while the glue-stock is slowly carried forward by the serrated disks, the stock is readily cut into narrow strips and delivered at the rear of the machine by the guard-plates H. The stock which is not taken from the washer by the endless conveyer M passes around the partition *w* in the tank and is thoroughly washed.

In Fig. 6 is shown a cross-section of the

cutter *f'* by which the serrations of the disk *f* are made. The cutter and the broken lines extending from the sides thereof show the most practical angle for the teeth of the serrated disk.

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

1. In a glue stock cutter and feeder, the combination of a series of rotary circular cutters, a series of serrated disks extending between the cutters, a series of guards projecting between the cutters, and endless carrier belts passing between the serrated disks, substantially as specified.

2. The combination of a series of rotary circular cutters, a series of serrated disks extending between the cutters, and endless belts passing between the serrated disks, substantially as specified.

3. In a glue stock cutter and feeder, the combination of a series of serrated disks, a series of circular cutters extending between the serrated disks, and adjustable gearing connecting the shafts of the serrated disks and circular cutters for communicating motion from the shaft carrying the circular cutters, to the shaft carrying the serrated disks and endless belts, while at the same time allowing of raising or lowering the cutter shaft, substantially as specified.

4. In a glue stock cutter, the combination of a series of rotary knives spaced and rigidly mounted on a shaft, a series of serrated disks spaced and rigidly mounted on a shaft, the edges of the serrated disk projecting between the series of rotary knives and alternating in position with the knives, and endless cords passing around the collars between the serrated disks, for conveying the glue stock to the knives, the knives and serrated disks being geared to revolve at different peripheral speeds, substantially as specified.

5. A washer and feeder for a glue stock cutter, the same being formed of an agitator for keeping the glue stock suspended and in motion and removing impurities therefrom, a glue stock cutter and a conveyer constructed to continuously carry glue stock from the washer to the cutter, substantially as specified.

PETER COOPER HEWITT.

Witnesses:

JNO. M. RITTER,
GEO. M. HOPKINS.