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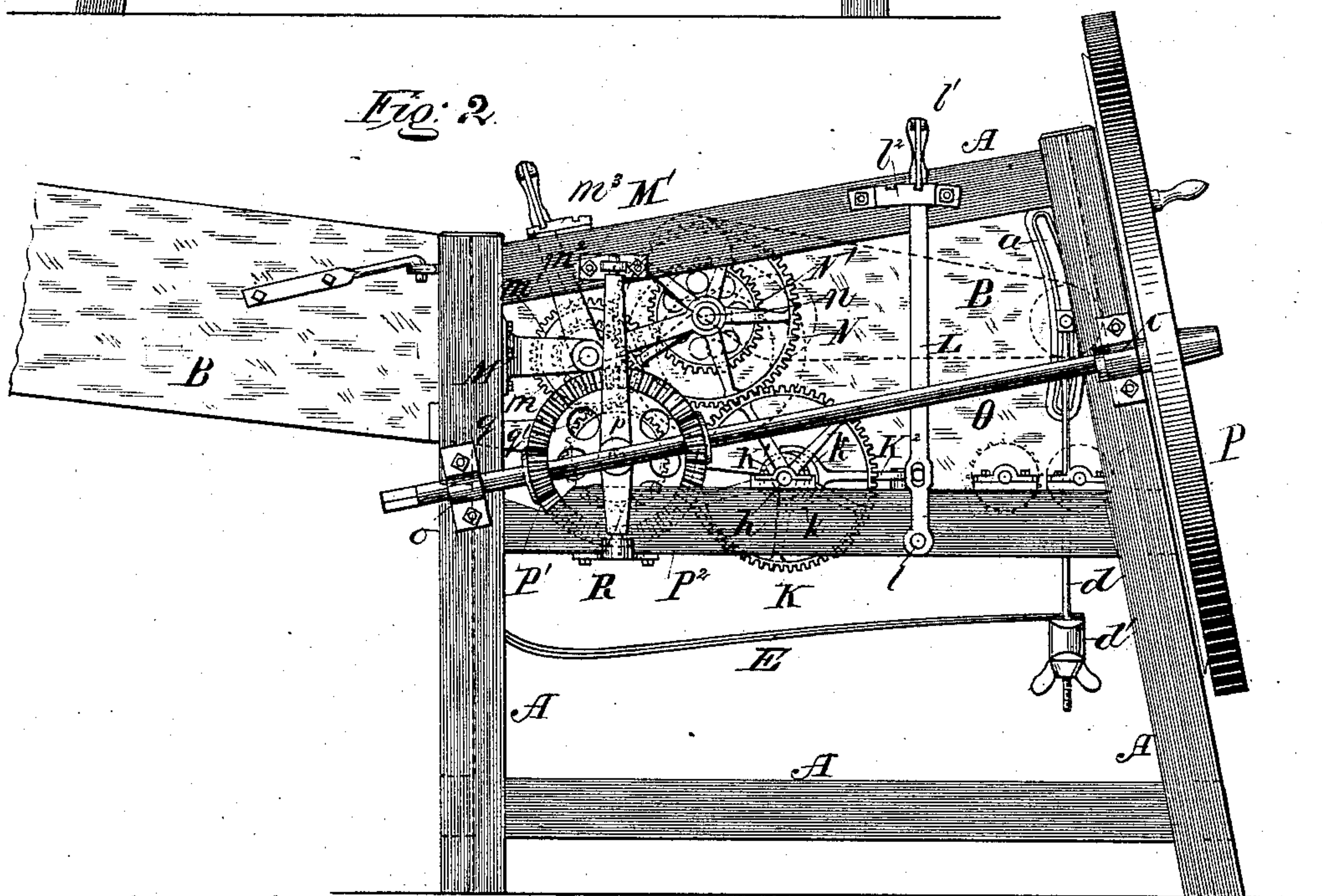
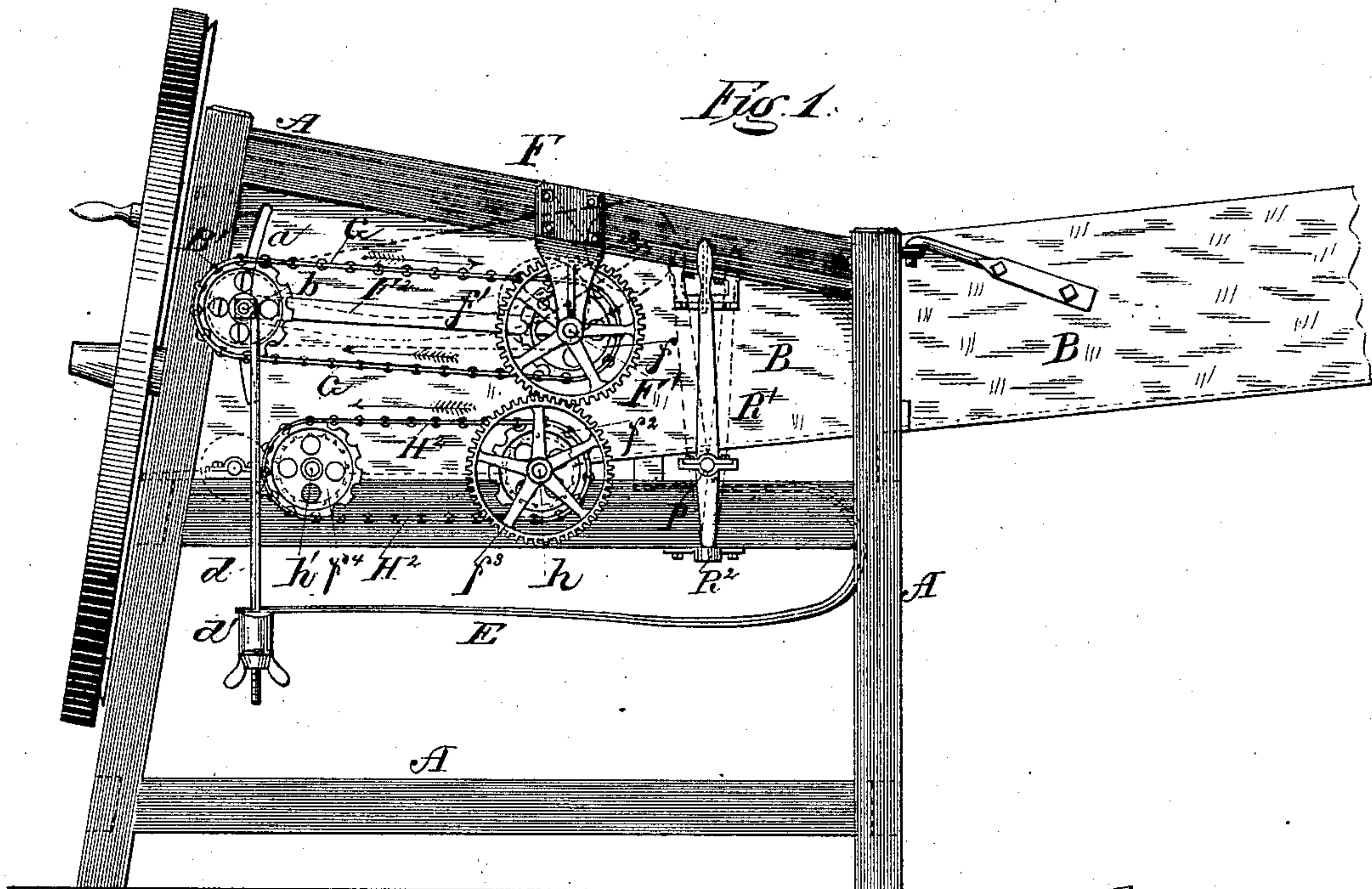
4 Sheets—Sheet 1.

P. FISHER.

FEED CUTTER.

No. 301,975.

Patented July 15, 1884.



Witnesses:

E. G.asmus
M. Haumheimer

Inventor:

Peter Fisher
by Stuart & Underwood

Attorneys.

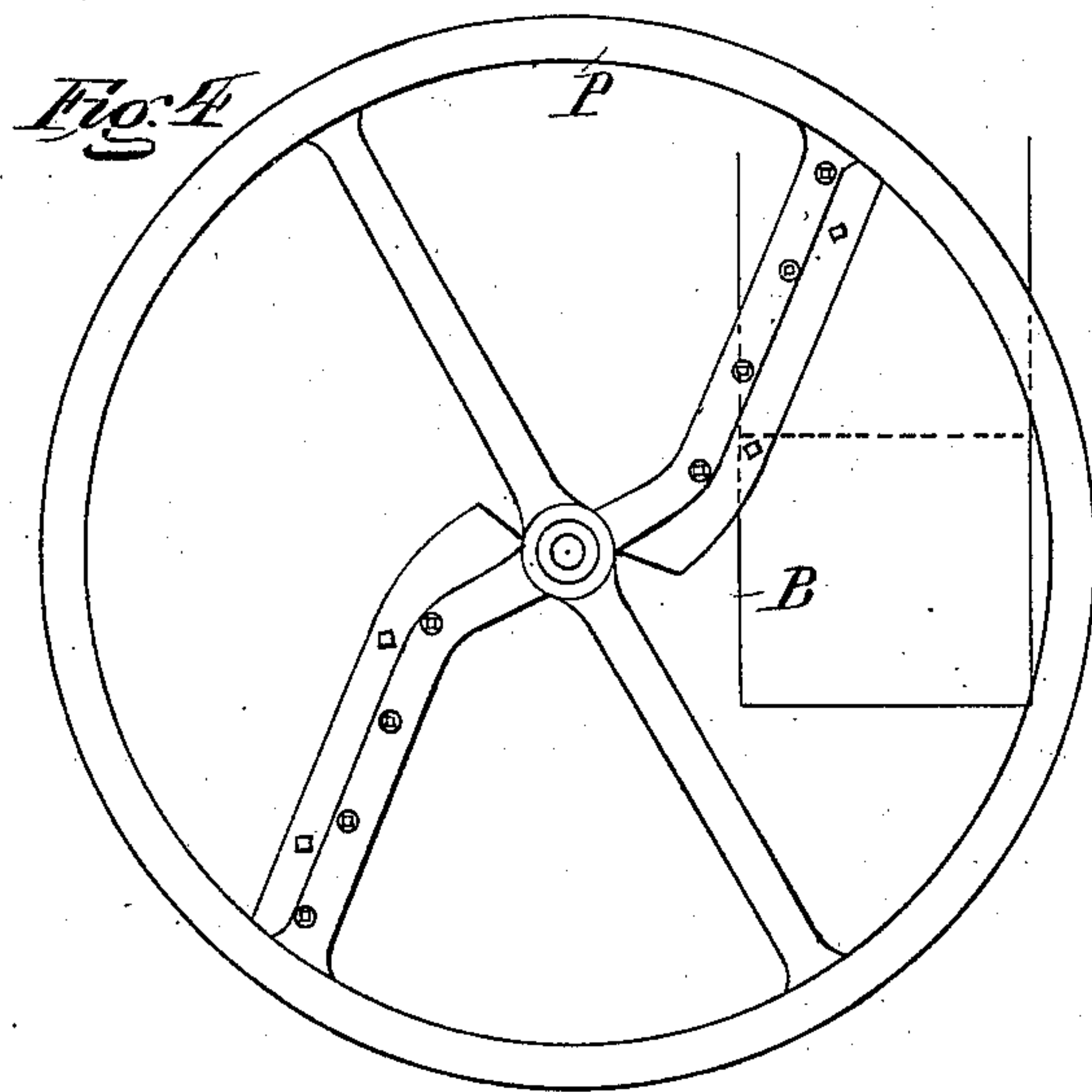
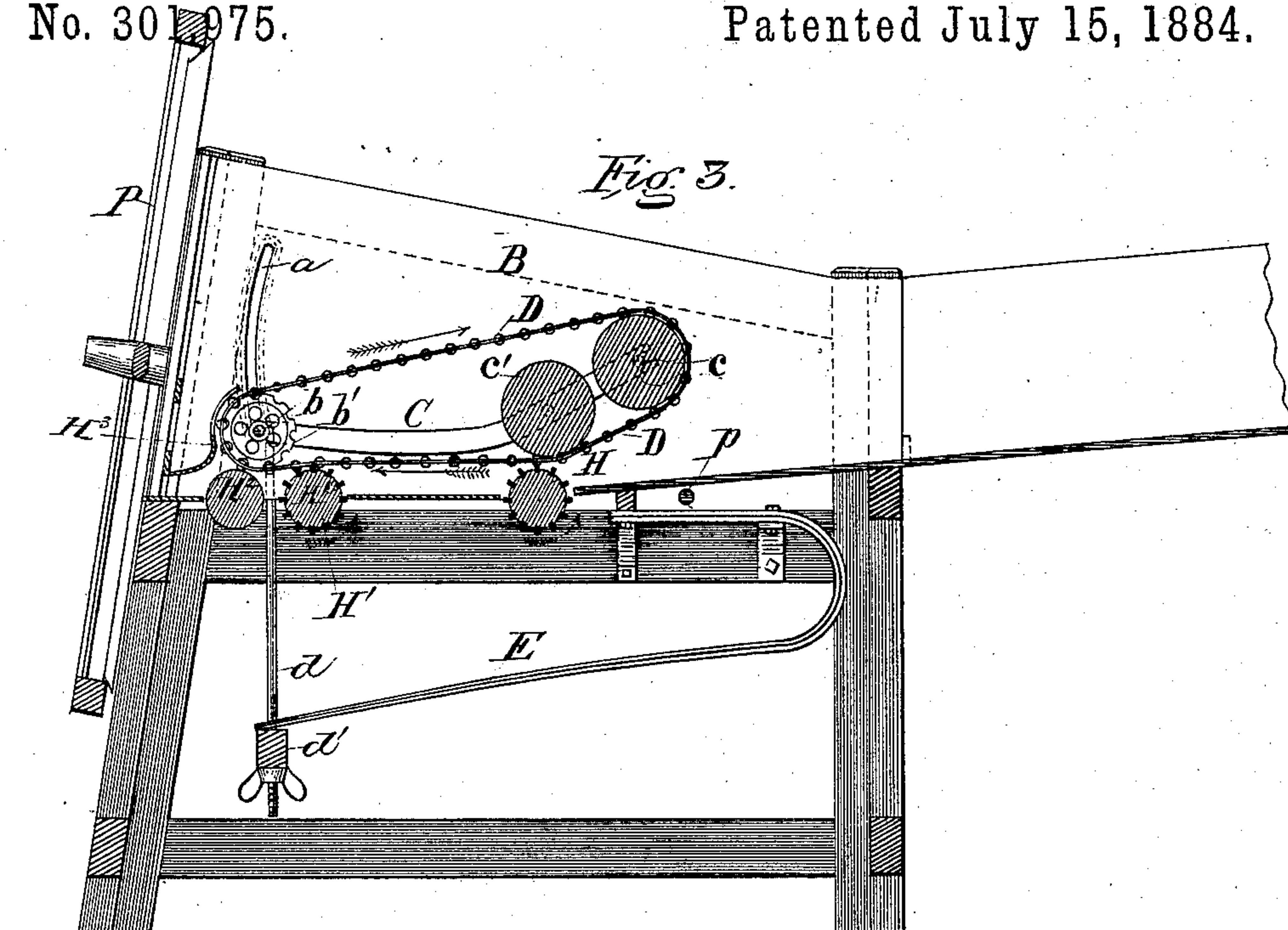
(No Model.)

4 Sheets—Sheet 2.

P. FISHER.
FEED CUTTER.

No. 301,075.

Patented July 15, 1884.



Witnesses:

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M. H. H. H. H.

Inventor:

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(No Model.)

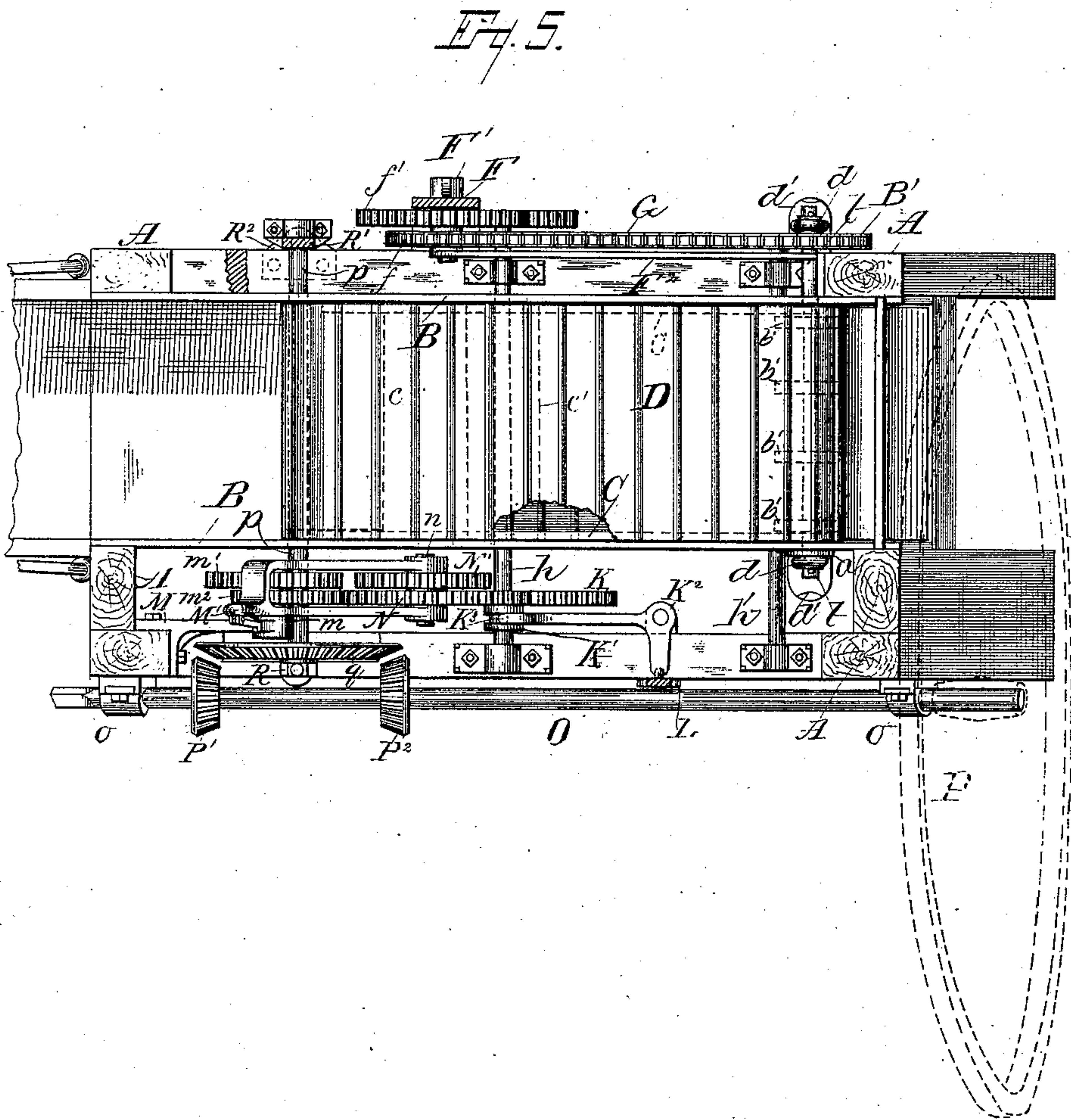
4 Sheets—Sheet 3.

P. FISHER.

FEED CUTTER.

No. 301,975.

Patented July 15, 1884.



Witnesses:

Edgar
M. Kaumheimer

Inventor:

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(No Model.)

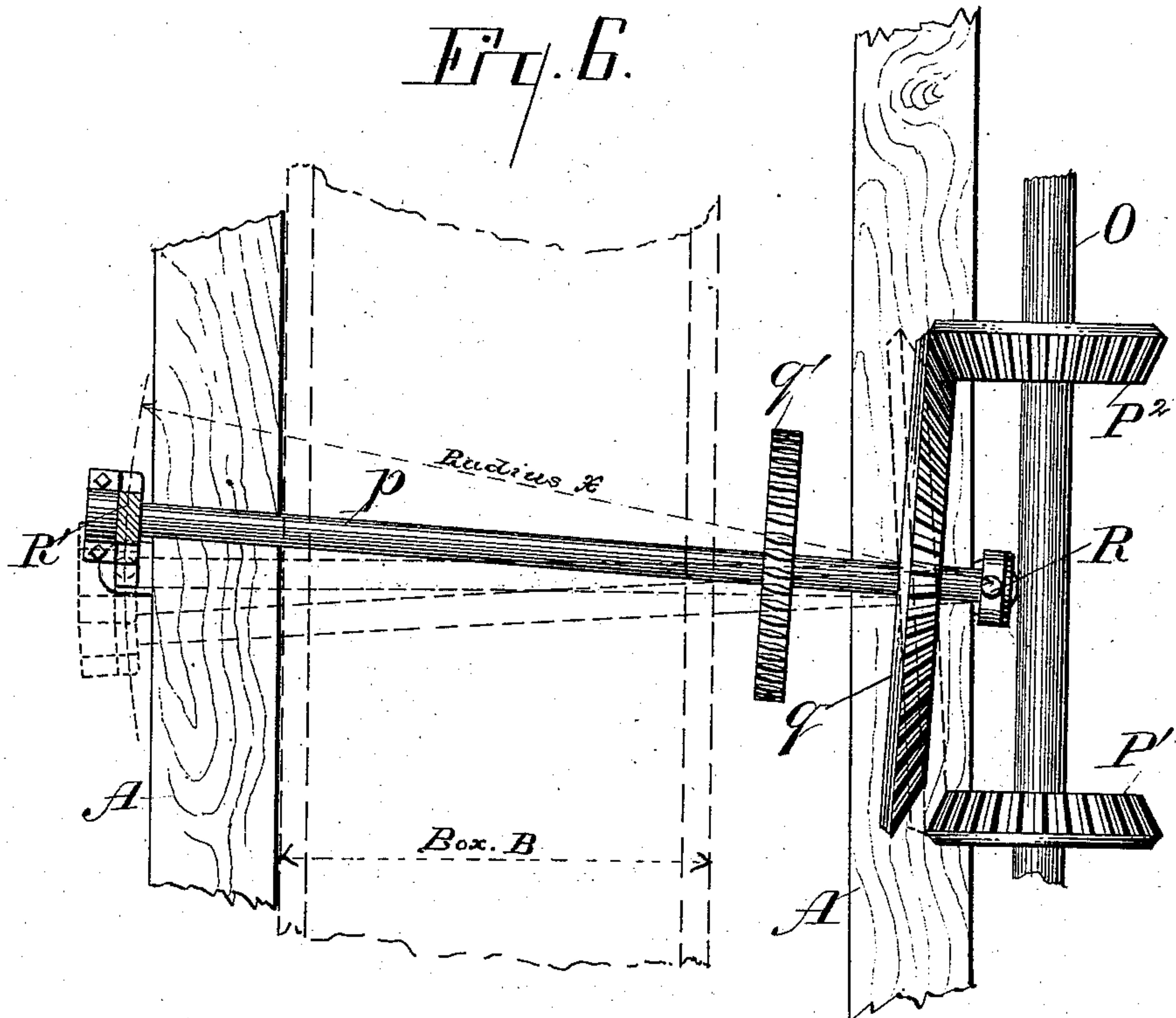
4 Sheets—Sheet 4.

P. FISHER.

FEED CUTTER.

No. 301,975.

Patented July 15, 1884.



Witnesses:

E. G. Arnus
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Inventor:

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UNITED STATES PATENT OFFICE.

PETER FISHER, OF OAK CREEK, WISCONSIN.

FEED-CUTTER.

SPECIFICATION forming part of Letters Patent No. 301,975, dated July 15, 1884.

Application filed July 23, 1883. (No model.)

To all whom it may concern:

Be it known that I, PETER FISHER, of Oak Creek, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Feed-Cutters; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to feed-cutters, and will be fully described hereinafter.

10 In the drawings, Figure 1 is an elevation of one side of my improved feed-cutter; Fig. 2, an elevation of the other side; Fig. 3, a vertical longitudinal section of my device, and Fig. 4 a detail. Fig. 5 is a plan view of my
15 device. Fig. 6 is a plan view of the driving-shaft connections.

A is the stand or frame of my machine, and B is the box thereof, in which are curved slots *a a*.

20 C is a frame, one end of which swings upon a shaft, *b*, that extends through the slots *a a* and carries pulleys *b'*.

c is a pulley, the trunnions of which rest in bifurcations in the ends of the side bars of
25 frame C, opposite those through which shaft *b* passes; and *c'* is an idler that is journaled between pulleys *b'* and *c*. The pulleys *b'* are notched on their peripheries, and I pass a belt, D, over them and pulley *c*, which belt
30 the idler *c'* serves to tighten, as shown in Fig. 3. The shaft *b* is provided on one of its ends with a sprocket-wheel, *B'*, and from each end of this shaft I suspend rods *d* to receive a
35 beam, *d'*, on which the free end of a spring, E, rests while the opposite end of this spring is firmly secured to the frame beneath the box B, as shown in Fig. 3.

F is a bracket, in which and the side of the box B a stud, *F'*, is journaled, and this
40 stud carries a sprocket-wheel, *f*, and cog-wheel *f'*; and *F''* is a bar through which the stud *F'* and shaft *b* pass, which bar braces them apart against the tendency of a belt, G, to draw them together.

45 H H' are toothed rollers, which are journaled in the frame A and project up through the bottom of the box, beneath the belt D, and the journal *h* of roller H carries a sprocket-wheel, *f''*, and cog-wheel *f'''*, while the sprocket-
50 wheel *f''* is connected by a belt, H², with another sprocket-wheel, *f''*, on shaft *h'*, as shown in Fig. 1 of the drawings. The journal of shaft

h, on its end opposite that which carries sprocket *f''*, is provided with a sliding cog-wheel, K, having a grooved hub, K', and a bell-crank
55 lever, K², having fingers on one end, is pivoted to the frame in such a position that the fingers will rest in the groove in hub K' and its other end will project out at right angles to the frame, to take into a slot in lever L,
60 which latter is pivoted to the frame at *l* and extends up to the top of the box, where it is provided with a pawl, *l'*, that engages with a notched bar, *l''*.

M is a bracket, the base of which is firmly
65 secured to one of the corner uprights of the frame A, and from this bracket a stud, *m*, projects in toward the box, and this stud forms the axle of a bell-crank lever, M', and pinions
70 *m'* *m''*. One end of lever M' projects up above the side of the box B, and is provided with a catch for engagement with a notched plate, *m''*, while its other end carries a stud, *n*, that forms the axis of two cog-wheels, N N'. The
75 main driving-shaft O, which is journaled in inclined bearings *o o*, carries the knife-wheel P on its highest end, and is squared on its lower end, and carries bevel-pinions P' and P², which engage with the teeth of the bevel-wheel
80 *q*; and the shaft *p*, which carries the bevel-wheel *q*, has keyed onto it the cogged pinion *q'*, which meshes with pinion *m'*, causing it to revolve pinion *m*, the teeth of which mesh with those of cog-wheel N', revolving it and its
85 companion N. The cogs of pinion *q'* are shaped as shown in Fig. 6, so that whatever position the shaft *p* may be moved to they will be adapted to work against those of pinion *m'* without the least jarring.

The cog-wheels N and K are shown in en-
90 gagement in Fig. 2 of the drawings, when the parts are in position for the maximum feed; but should a slower feed be required the cog-wheel K may be moved in by the bell-crank lever K² and upright lever L until it clears
95 cog-wheel N and passes under pinion N'. Then lever M' may be released from plate *m''* and its opposite end allowed to drop and carry the pinion N' into engagement with cog-wheel K. One end of the shaft *p*, that carries the bevel-
100 wheel *q* and the cogged pinion *q'*, is journaled in a vertical rocking bar, R, while its other end has its bearing in an upright lever, R', on the opposite side of the box, the lower end of

lever R' resting in the lug R^2 , while its upper end is locked in its adjustment in any convenient manner. When lever R' is in the position shown in full lines, Fig. 1, the face of gear-wheel q will be exactly parallel with shaft O , and there will be no contact between it and the bevel-pinions; but if the lever be moved into either of the positions shown in dotted lines, then the shaft p will be canted so as to throw the teeth of wheel q into gear with either pinion P' or P^2 , according as it is desired to feed to or from the knife-wheel. The pulley c and idler c' are both heavily weighted, either by being made of iron or of some lighter material in which lead or some other heavy material is embedded, and therefore they will press upon the stock and pack it through the belt D as it is carried to the knife-wheel by said belt and the rollers H H' ; and to guide it to the knife after it leaves the roller H' , I provide another roller, H^2 , and a shield, H^3 , the ends of which slide in grooves I in the sides of the box. In order that shaft b may carry the belt D evenly, I provide it with several pulleys b' ; but instead of several I may make one long pulley do the work.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a feed-cutter, the combination of the swinging frame C and the belt-carriers c c' 30 with the feed-rollers H and H' , and the transverse shaft b , carrying the notched pulleys b' b' , substantially as shown and described, and for the purpose set forth.

2. The combination, with the shaft b , carrying 35 notched pulleys b' , of the box having curved slots a , the chain D , idlers c' , pulley c , feed-rollers H H' , and spring E , as set forth.

3. The shaft p , having one bearing in rocking bar R and the other in a lever, R' , in 40 combination with the bevel-wheel q and driving-shaft carrying the bevel-pinions, and with gearing for communicating the motion of the driving-shaft to the moving parts of the machine, as set forth. 45

In testimony that I claim the foregoing I have hereunto set my hand, on this 11th day of May, 1883, in the presence of two witnesses.

PETER FISHER.

Witnesses:

H. G. UNDERWOOD,
M. KAUMHEIMER.