

(No Model.)

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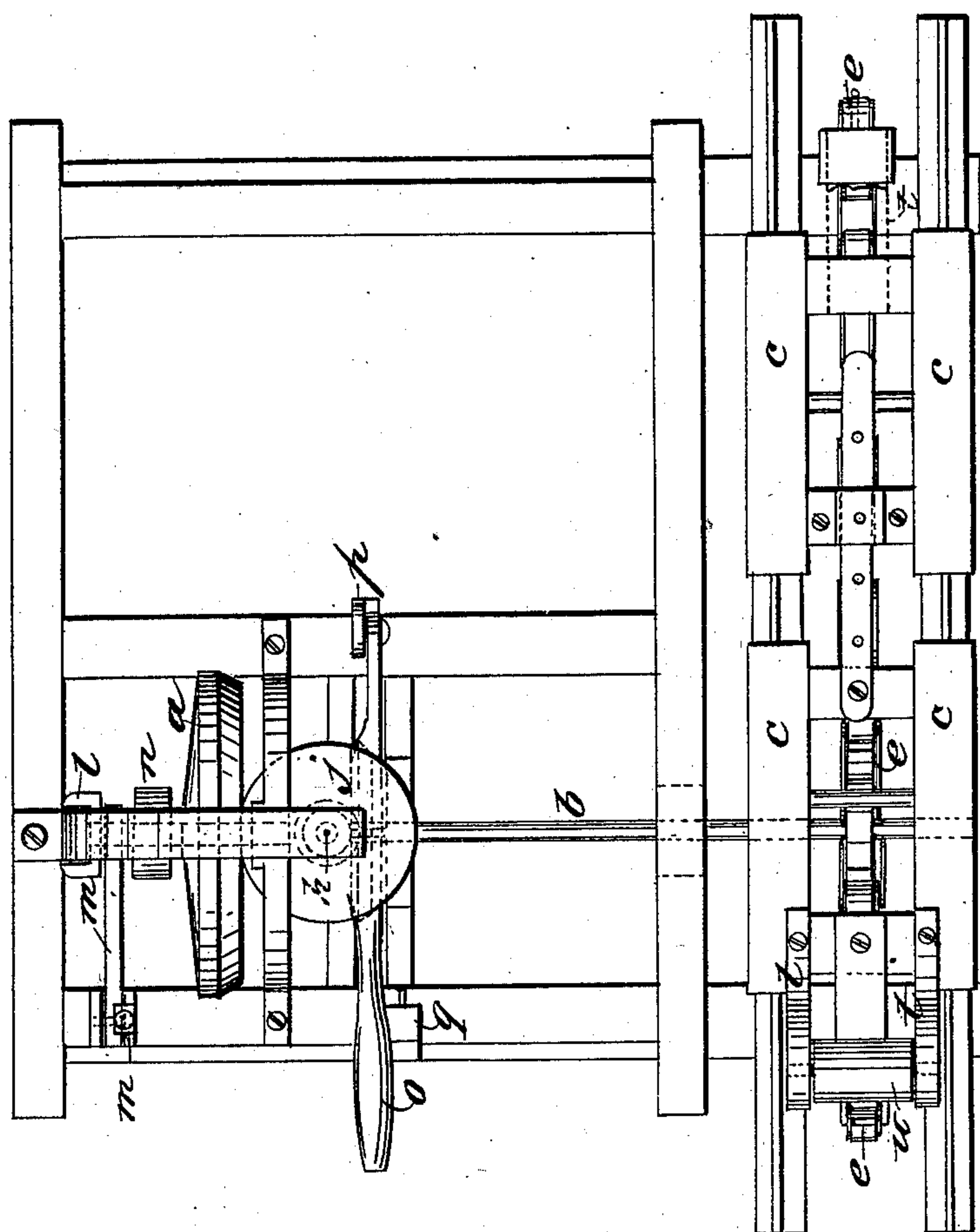
S. DICKSON.

SAW MILL FEED MECHANISM.

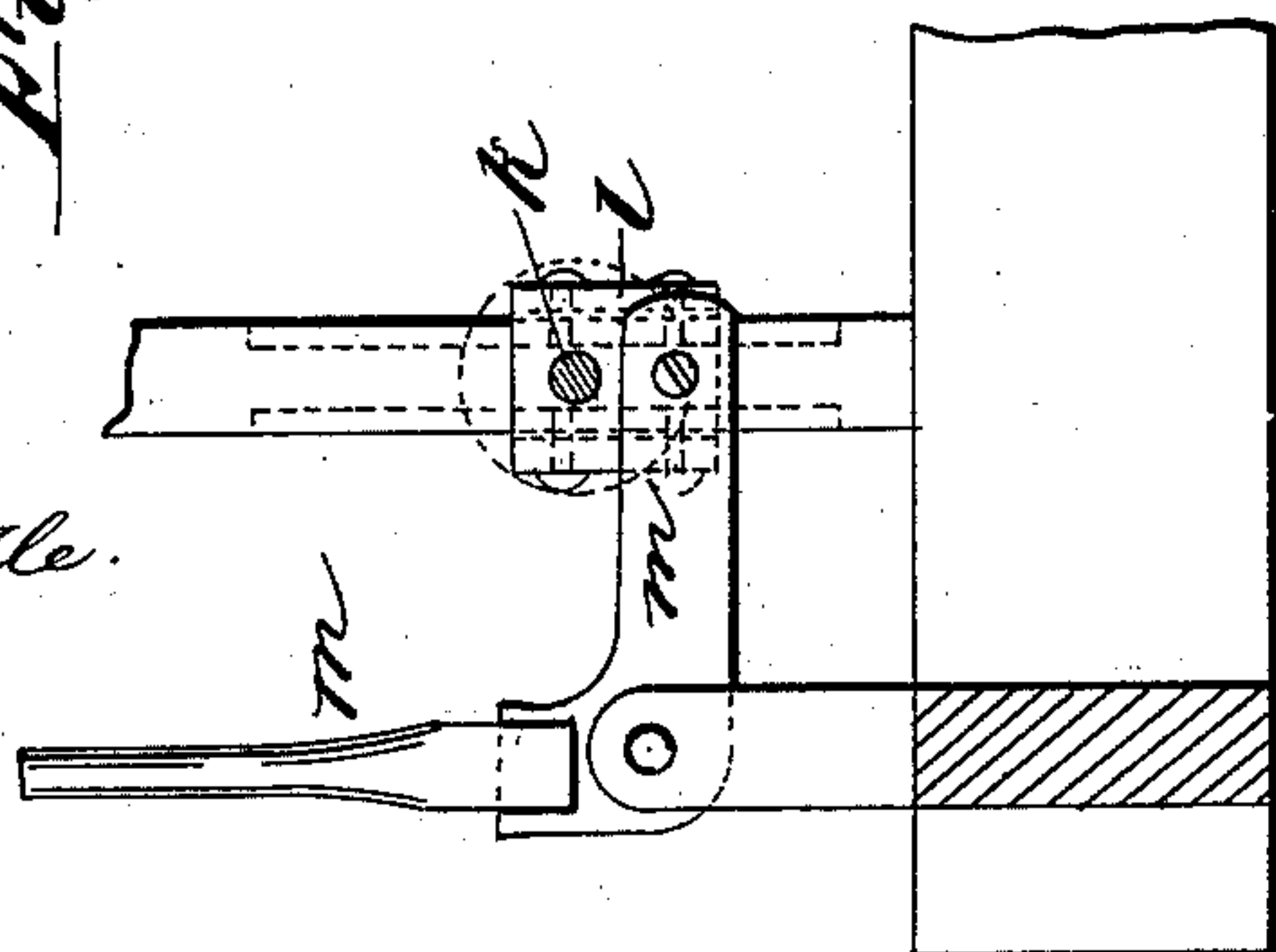
No. 294,208.

Patented Feb. 26, 1884.

*Fig. 1.*



*Fig. 2.*



WITNESSES:

*F. McArdle.*  
*C. Sedgwick*

INVENTOR:

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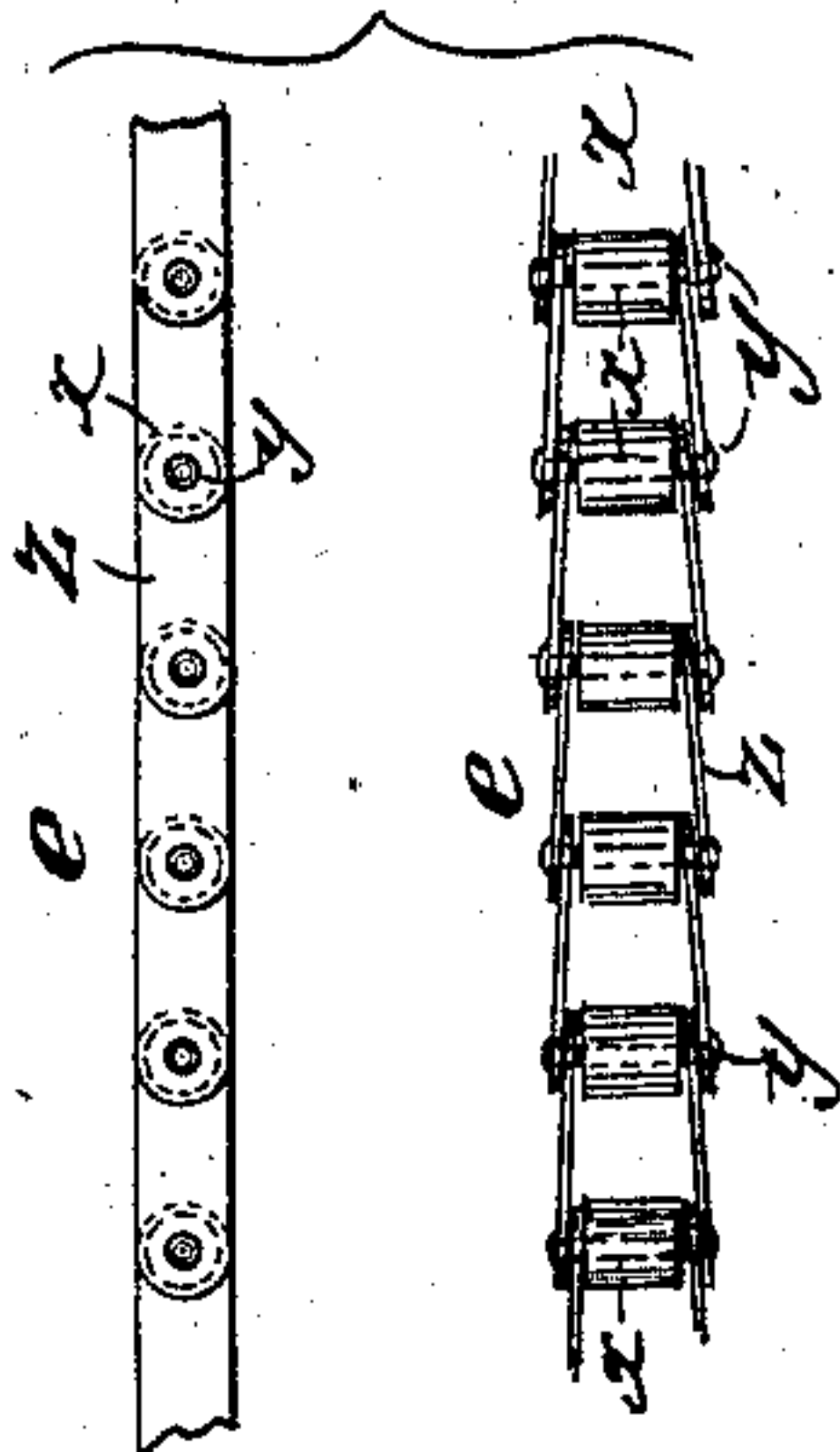
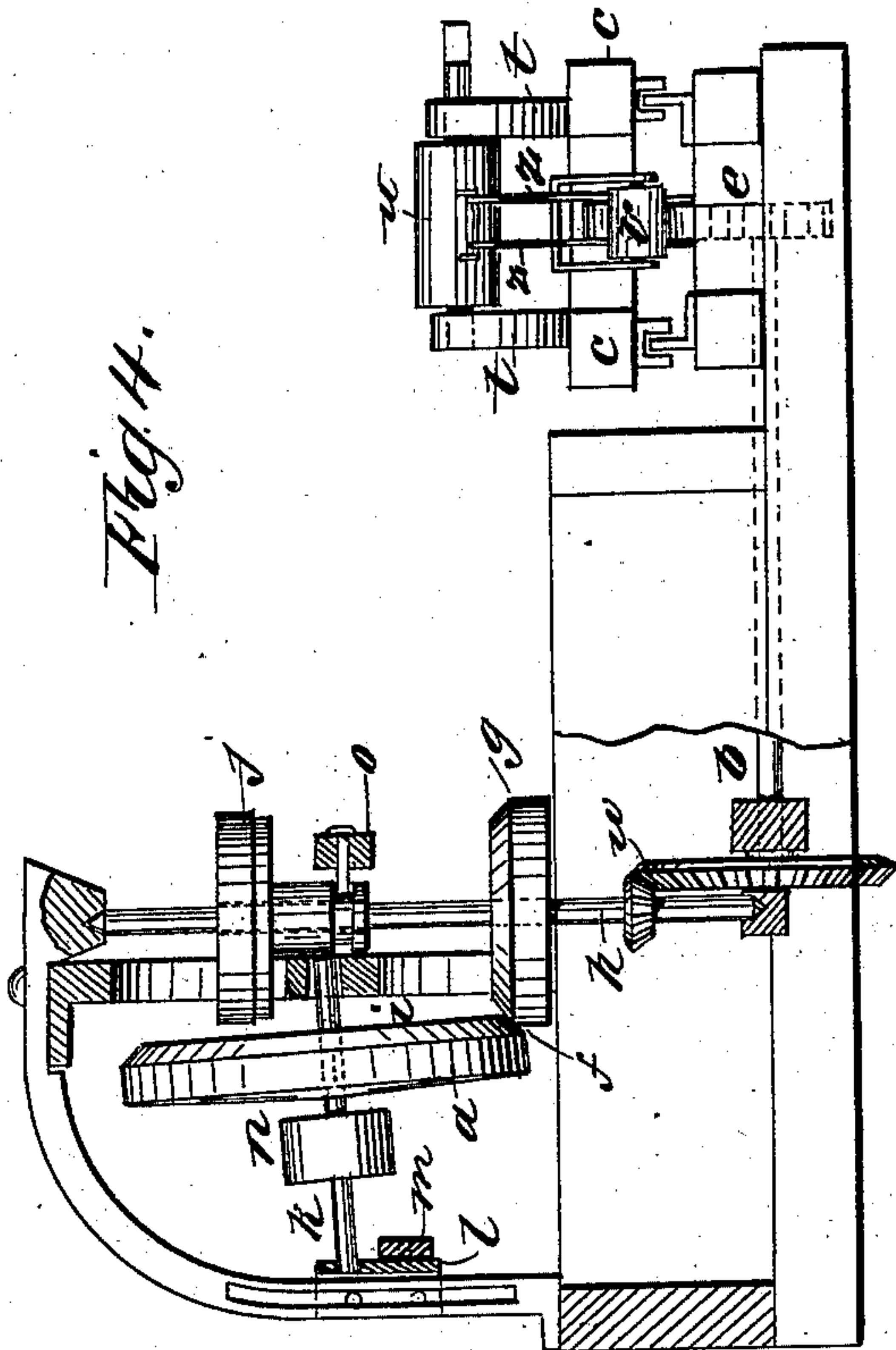
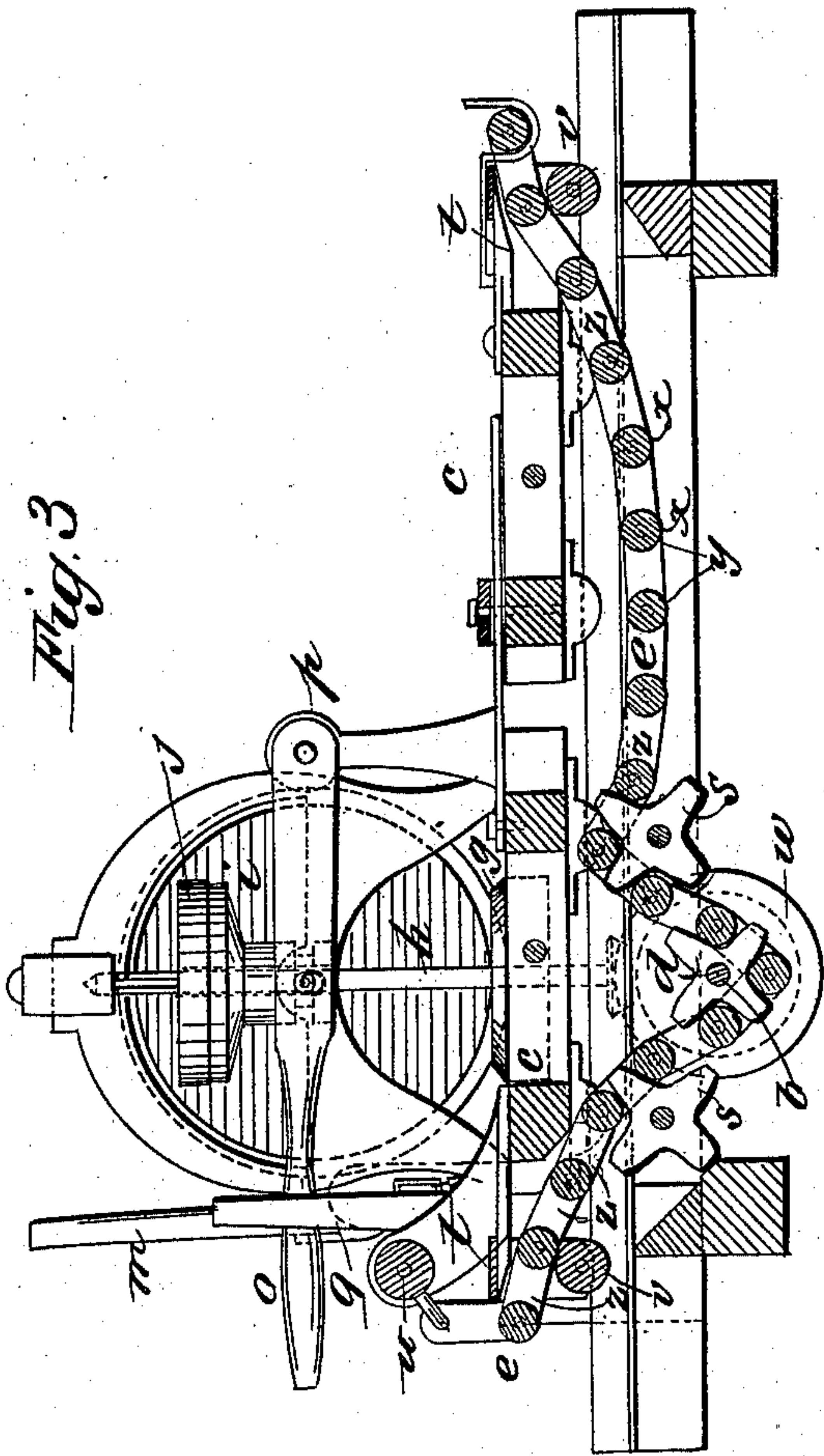
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2 Sheets—Sheet 2.

S. DICKSON.  
SAW MILL FEED MECHANISM.

No. 294,208.

Patented Feb. 26, 1884.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

SILAS DICKSON, OF MARCY, OHIO, ASSIGNOR OF ONE-THIRD TO SAMUEL MYERS, OF SAME PLACE.

## SAW-MILL-FEED MECHANISM.

SPECIFICATION forming part of Letters Patent No. 294,208, dated February 26, 1884.

Application filed November 19, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, SILAS DICKSON, of Marcy, Fairfield county, Ohio, have invented a new and Improved Saw-Mill-Feed Apparatus, of which the following is a full, clear, and exact description.

This invention pertains to improvements in saw-mill-feed apparatus; and it consists of the combinations and arrangements of parts, substantially as hereinafter fully set forth and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the feed-gear and log-carriage with my improvements. Fig. 2 is detail of the shifting device of the driving-wheel. Fig. 3 is a longitudinal section of the log-carriage and driving-chain and side elevation of the feed and reversing gear. Fig. 4 is a transverse section through part of the saw-frame, a front elevation of the feed-gear, and end elevation of the carriage. Fig. 5 is a side and top view of the chain employed for working the carriage.

The driving-wheel *a*, for working the feed and reversing shaft *b*, which gears with the log-carriage *c* by the sprocket-wheel *d*, has a bevel-face, *f*, to drive the friction-wheel *g*, placed below said driving-wheel on the shaft *h*, and said driving-wheel *a* has a flat side, *i*, to drive against the cylindrical face of the wheel *j*, placed on shaft *h* above the axis of the driver *a*. The shaft *k* of the driver has the bearing of its outer end fixed in a shifting box, *l*, connected with the shifting-lever *m*, by which the driver *a* may be swung up into contact with wheel *j*, to feed the carriage *c*, and down into contact with wheel *g*, to run the carriage back, said wheels *g* and *j* being turned in opposite directions, on account of being located on opposite sides of the driving-wheel *a*. Any suitable device will be employed to fasten the lever *m* up when set to press the driving-wheel *a* against the feed-wheel *j*; but the said wheel *a* will generally be held in contact with driving-back wheel *g* by hand. The shaft *h* is suitably geared with the driving-

shaft *b* by bevel-wheels *w*. The power is to be applied to the driving-wheel *a* by a belt, running on the pulley *n*. The feed-wheel *j* is fitted to the shaft *h* with a feather, allowing it to be shifted toward and from the axis of wheel *a* for varying the rate of the feed; and a lever, *o*, is connected to the hub of the said wheel *j*, and suitably fitted on a fulcrum, *p*, for being operated by hand. Said lever *o* will be connected to the post *q* with a pin or other suitable device, to hold the feed-wheel in the position to which it is set.

Instead of the usual toothed rack for driving the carriage, I propose to employ the pitch-chain *e* with the sprocket-wheel *d* for driving it, the chain being connected at its ends with the respective ends of the carriage *c*; and to insure the chain from slipping off the teeth of the sprocket-wheel *d*, I employ two idler sprocket-wheels, *s s*—one on each side of the driver *d*—over which and down therefrom the chain must run in going around the driver, so that the chain cannot slip off. I propose to connect the ends of the chain to the ends of the carriage by extension-beams *t*, projecting sufficiently to enable the carriage to run each way beyond the saw, for carrying the ends of the log clear of the saw by the chain which gears with the driver *d* at about the vertical plane of the center of the saw; and at one end I connect the chain to the extension-beams *t* by a roller, *v*, for taking up the slack of the chain from time to time. The chain is to have friction-rollers *x* on the pivot *y* of the links *z*, to facilitate the working of the chain freely on the teeth of the sprocket-wheels. The chain runs over rollers *v* at the ends of the carriage, to hold the chain up and prevent it from sagging too much thereat.

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

1. In a saw-mill-feed apparatus, the combination, with the log-carriage, of a chain having a series of frictional rolls at the pivotal connection points of its links, and connected to end extensions of said carriage by slack-taking-up rolls, the driving sprocket-wheel, and additional sprocket-wheels arranged one in a plane on each side and slightly above the



driving sprocket-wheel, substantially as and for the purpose set forth.

2. In a saw-mill-feed apparatus, the combination, with the log-carriage-operating chain and the chain-operating gearing, of the drive-wheel adapted to be shifted from one to the other of two wheels arranged upon a common shaft, gearing with the shaft of the driving sprocket-wheel of the log-carriage, substantially as and for the purpose set forth.

3. In a saw-mill-feed apparatus, the combination, with the log-carriage-operating chain and the chain-operating gearing, of the drive-wheel and additional wheels arranged upon a common shaft, gearing with the driving-sprocket-wheel shaft of the carriage, one of said latter wheels adapted to be shifted vertically, substantially as and for the purpose set forth.

4. In a saw-mill-feed apparatus, the combination, with the log-carriage-operating chain and the chain-operating gearing, of the drive-wheel and additional wheels arranged upon a common shaft, gearing with the shaft of the driving sprocket-wheel of the log-carriage, one of said latter wheels adapted to be shifted vertically, and the drive-wheel arranged to be shifted from one to the other of the latter wheels, substantially as and for the purpose set forth.

5. In a saw-mill-feed apparatus, the combi-

nation, with the log-carriage-operating chain and the chain-operating gearing, of the drive-wheel adapted to be shifted from one to the other of two wheels arranged upon a common shaft, gearing with the shaft of the driving sprocket-wheel of the log-carriage, and the lever, with one end connected to an adjustable bearing of the drive-wheel shaft, and having its other end fulcrumed a suitable distance from said adjustable bearing, and provided with an operating arm or handle, substantially as and for the purpose set forth.

6. In a saw-mill-feed apparatus, the combination, with the log-carriage-operating chain and the chain-operating gearing, of the drive-wheel, additional wheels arranged upon a common shaft, gearing with the driving-sprocket-wheel shaft of the log-carriage, one of said latter wheels adapted to be vertically adjustable, and the hand-lever connected about centrally to the hub of said vertically-adjustable wheel, and suitably fulcrumed and retained in position, substantially as and for the purpose set forth.

SILAS <sup>his</sup> X DICKSON.  
mark.

Witnesses:

NOAH STEHELTON,  
W. McMASTER.