(No Model.)

O. FACHMON.

DRAG SAW.

No. 285,982. Patented Oct. 2, 1883.

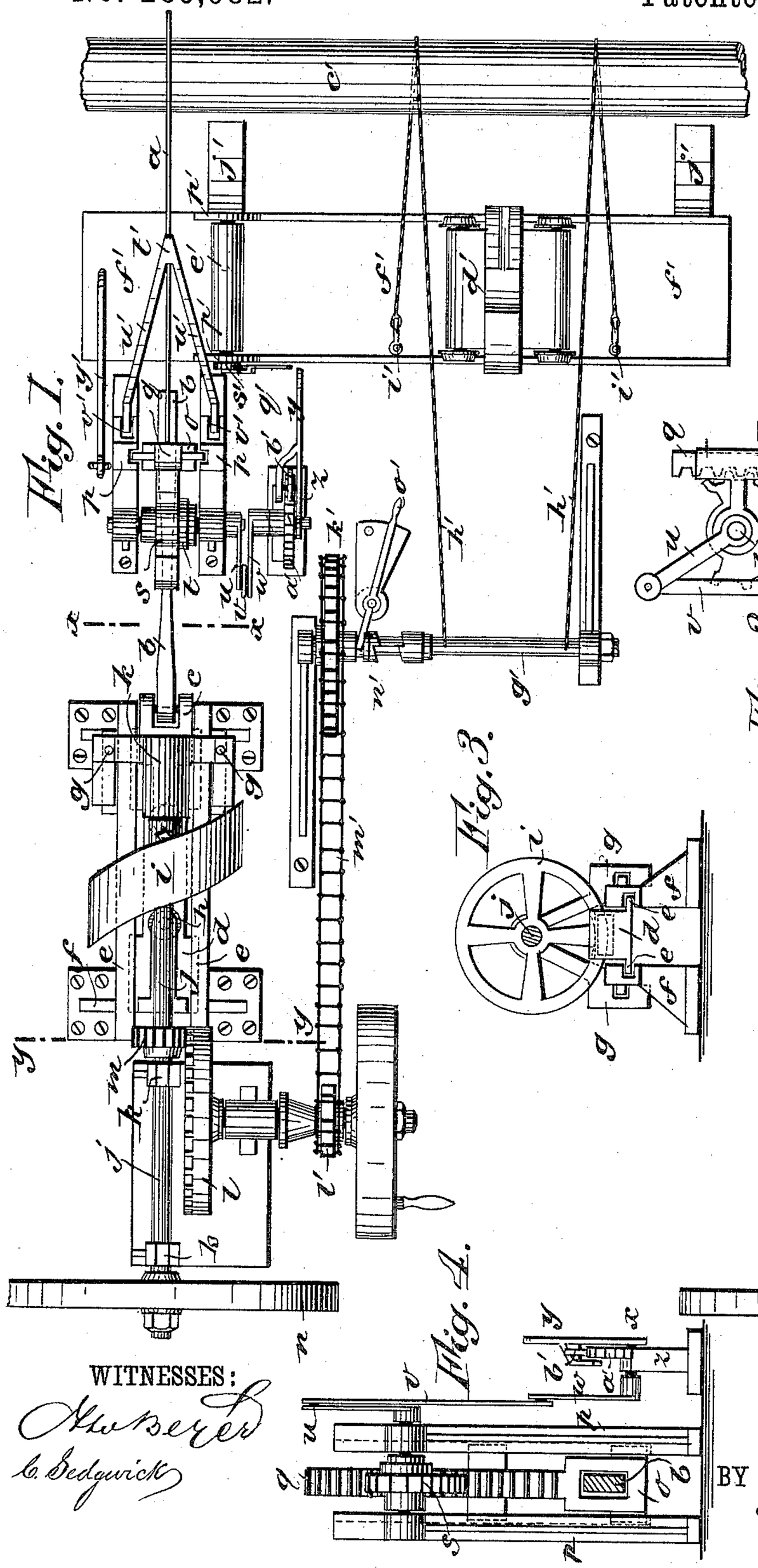

Fig. 1.

Fig. 2.

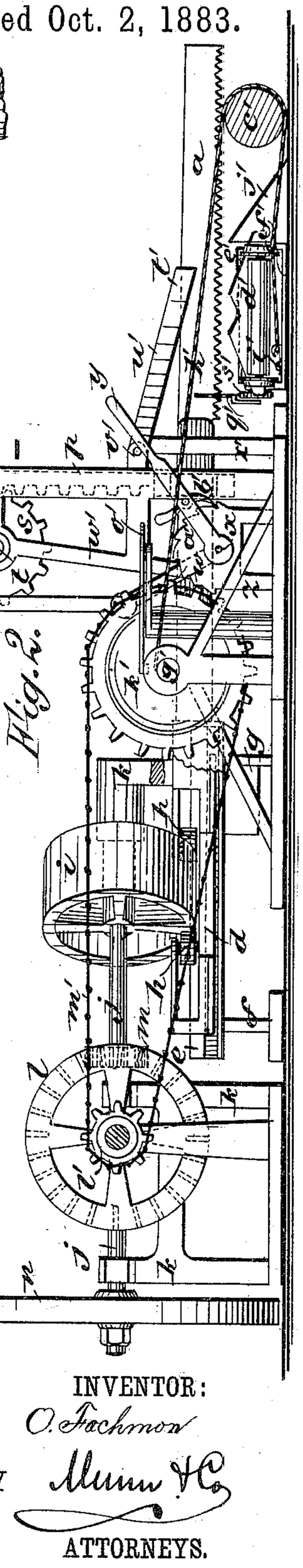

Fig. 3.

Fig. 4.

WITNESSES:

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OSWALD FACHMON, OF LINDSEY, OHIO.

DRAG-SAW.

SPECIFICATION forming part of Letters Patent No. 285,982, dated October 2, 1883.

Application filed May 26, 1883. (No model.)

To all whom it may concern:

Be it known that I, OSWALD FACHMON, of Lindsey, in the county of Sandusky and State of Ohio, have invented a new and Improved Drag-Saw, of which the following is a full, clear, and exact description.

My invention consists of a cam contrivance for working the saw, a lever device for raising and lowering the saw, a power apparatus for rolling the logs to the ways to be sawed, a lever contrivance to feed the logs to the saw, and a guide attachment for the saw, all contrived for the application of power to the driving of the saw, so as to have steadier motion of the saw, and so as to avoid the back-thrust that the drag of the saw causes, which is very injurious, especially when horses are used; and the log rolling and feeding and saw-adjusting devices are contrived with especial arrangement for convenience in manipulating them by the attendant, all as hereinafter fully described.

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

Figure 1 is a plan view of my improved machine. Fig. 2 is a side elevation. Fig. 3 is a section on line *y y*, Fig. 1. Fig. 4 is a section on line *x x* of Fig. 1.

The saw *a* is rigidly attached to the shank *b*, which is pivoted at *c* to the end of a sliding bar, *d*, arranged in horizontal slideways *e*, set upon any suitable stands, *f g*. The slide *d* carries friction-rollers *h* each side of an oblique cam-wheel, *i*, fitted on a horizontal shaft, *j*, fitted in suitable bearings, *k*, and having the power applied to it by the driving-wheel *l* and pinion *m*. This shaft also has a balance-wheel, *n*, by which the thrusts of the saw are almost wholly taken up, and thus the driving-gear is relieved of them. The saw-shank *b* works in a guide, *o*, which slides in vertical ways of the posts *p*, and has a toothed rack, *q*, with which a segmental toothed wheel, *s*, gears, which is mounted in bearings *t*, near the top of the posts, and has an arm, *u*, which is connected by a rod, *v*, with another arm, *w*, which projects from the fulcrum-pivot *x* of a lever, *y*, pivoted in the stand *z*, for raising and lowering the saw, said lever being provided with a stationary ratchet, *a'*, and a pawl, *b'*, to hold it in any position. This lever *y* may be used for applying pressure to the saw when required, besides raising and lowering the saw, and said lever is also used for holding up the saw when the logs *c'* are to be shifted along under the saw.

For rolling the logs onto the log-truck *d'* and the feeding-roller *e'* on the logways *f'*, I have a shaft, *g'*, with two ropes, *h'*, connected to it and hooking onto the logway at *i'* after passing around the log, so that when the shaft *g'* is revolved and the ropes wound upon it the log will be rolled up the skids *j'* onto the ways.

For turning the shaft *g'* a chain-wheel, *k'*, geared with a pulley, *l'*, on the driving-shaft by a chain, *m'*, is fitted on said shaft *g'*, to be connected by a clutch, *n'*, and lever *o'* whenever it may be required to do so.

The log-feeding roller *e'*, arranged across the logway in bearings *p'* at the saw, has a lever, *q'*, and ratchet *s'*, by which the attendant, standing where he works the levers *y'* and *o'*, can also work the feed-lever without moving out of his place, which, it will be seen, makes the machine very handy and easy to manage.

To guide the saw and steady it against lateral play or spring, I have contrived a guide for the back of the saw, consisting of the grooved point *t'* of a bar, *u'*, pivoted to the posts *p* at *v'*, so as to rest on and rise and fall with the saw, and thus guide it so as to work in a straight line. The posts *p*, that are set up in front of the logway for the guideways to the saw-guide *o*, are stayed by posts *w'*, set up at the back of posts *p*, for the support of the wheel *s*, and also at the front by the standards *x'*, extending from the base up to the lugs *v'*, thereby making a strong structure to resist the shocks of the logs in case they are rolled too far over the log-rests by the ropes *h'*, or when they may be pulled against the standards *x'* by the saw when the dogs *y'* may happen to work loose.

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

1. The combination, with a drag-saw, of a rigidly-attached shank, a sliding bar to which

said shank is pivoted, horizontal slideways for said bar, and an oblique cam-wheel, *i*, arranged between friction-rollers on the slide and on a shaft rotated by a gear, substantially as shown and described.

2. The combination, with the pivoted saw-shank of a drag-saw, of a vertically-sliding guide having a toothed rack, a segmental toothed wheel gearing with said rack and having a rigid arm, and a lever connected at its fulcrum by an arm and rod with the wheel-arm, whereby the saw may be raised and lowered, as described.

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Witnesses:
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