(No Model.)

D. M. OMWAKE & W. P. McGEE.

DRAG SAW.

No. 355,708. Patented Jan. 11, 1887.

Fig. 1.

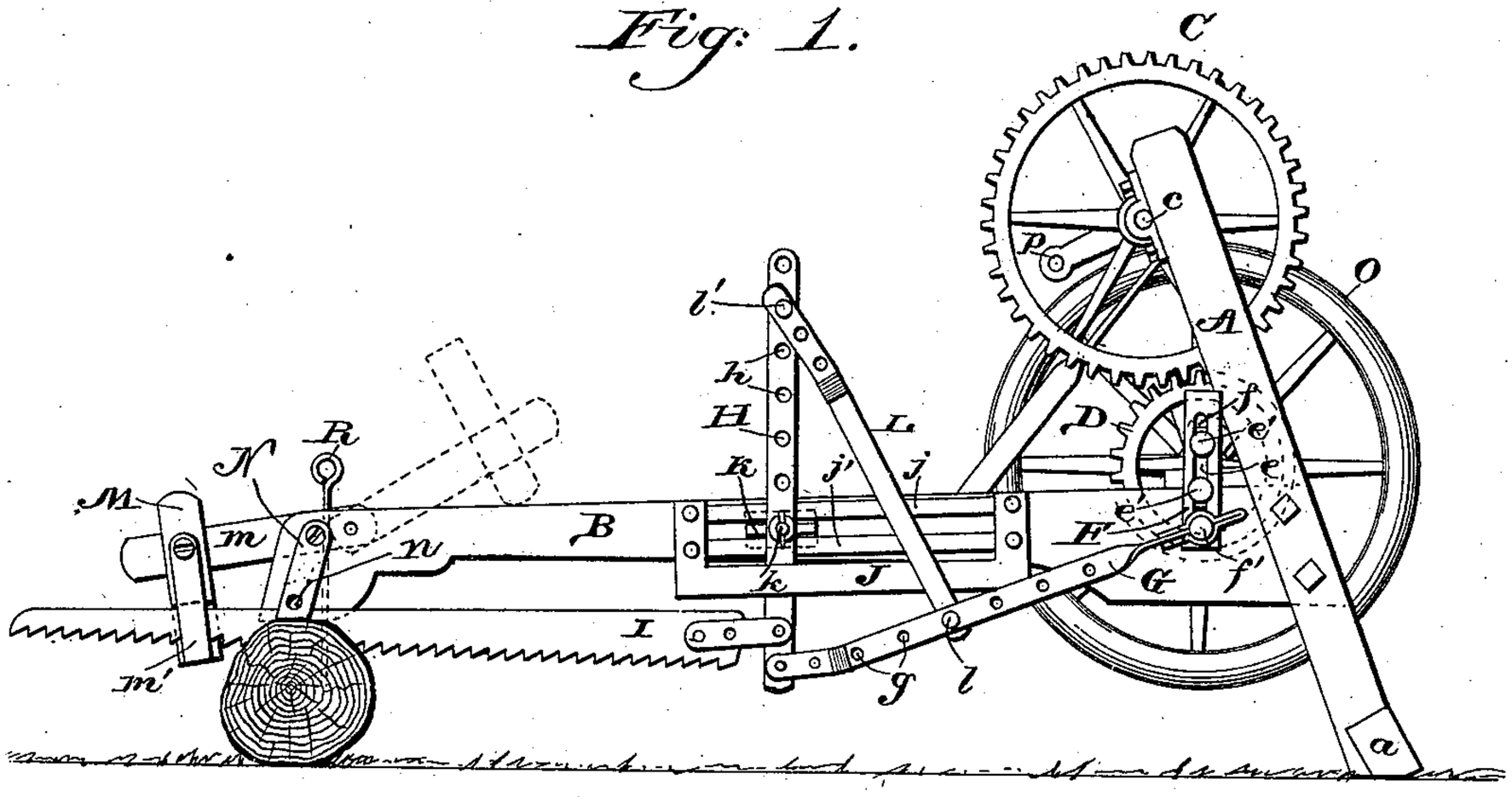
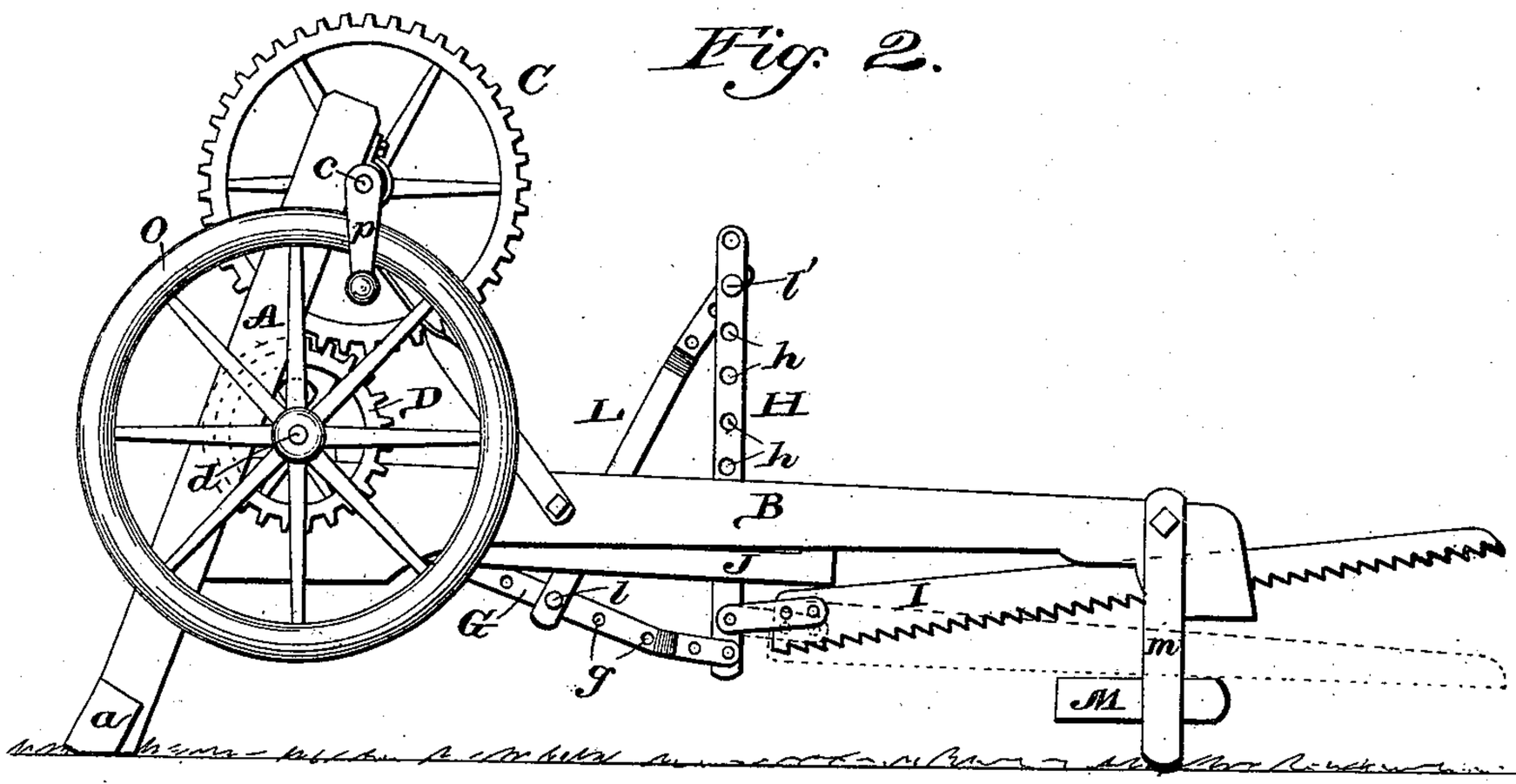


Fig. 2.



Witnesses

Percy C. Bowen.

Wm. N. Moore.

Inventors,

Daniel M. Omwake

Walter P. McGee;

By their Attorneys

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

DANIEL M. OMWAKE AND WALTER P. McGEE, OF ZULLINGER, PA.

DRAG-SAW.

SPECIFICATION forming part of Letters Patent No. 355,703, dated January 11, 1887.

Application filed July 22, 1886. Serial No. 208,767. (No model.)

To all whom it may concern:

Be it known that we, DANIEL M. OMWAKE and WALTER P. McGEE, citizens of the United States, residing at Zullinger, in the county of Franklin and State of Pennsylvania, have invented a new and useful Improvement in Drag-Saws, of which the following is a specification.

Our invention relates to that class of sawing-machines which are used for crosscutting logs, and in which the effective cutting movement of the saw is from the actuating mechanism, such machines being known as "drag-saws."

The objects of our invention are to produce a sawing-machine in which the speed of the saw shall exceed the speed of the power-movement; also, to vary the length and ease of the stroke and to take up all lost motion in the actuating mechanism.

A further object of our invention is to increase the feed of the saw and to cause it to run nearly level.

To the above purposes our invention consists in certain peculiar and novel features of construction and arrangement, as hereinafter described and claimed.

In order that our invention may be fully understood, we will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 is a side elevation of our improved drag-saw. Fig. 2 is a similar view of the same, showing the opposite side to that shown in Fig. 1.

In the said drawings, A designates the frame which supports the power-gearing of the machine, and B designates a bar or beam extending outward from said frame A. The union between frame A and bar B is such that said frame inclines obliquely toward said beam, and thereby exerts a downward pressure upon the latter, so as to assist the feed of the saw.

The frame A is bifurcated nearly throughout its length, and has at its lower end a base or foot, *a*, by which the frame is steadied.

In the upper end of standard or frame A is journaled a transverse crank-shaft, *c*, carrying a gear-wheel, C, which is located between the arms of frame A. Lower down upon the frame A is mounted a transverse shaft, *d*, carrying a gear-pinion, D, which meshes with the gear-wheel C. Upon one end of the shaft *d* is a plate, *e*, which carries at its ends two pins or studs, *e'*. These studs or pins work in a slot, *f*, which is formed in a plate, F, said plate F carrying at one of its ends a pin, *f'*, which works in the rear end of a link-bar, G. The forward end of this link-bar is pivotally connected to the lower end of an upright bar, H, and to the lower end of said bar H is also pivotally connected, just above bar G, the rear end of the saw I.

J designates a double U-shaped frame, which is attached to one side of beam B, and between the members of which are secured two parallel guide-bars, *j j'*.

The bar H, before alluded to, is provided with a suitable number of holes, *h*, through one of which extends the pin *k* of a slide, K, which works reciprocally between the guide-bars *j j'*. The bar G is also provided with a series of holes, *g*, and into one of these holes is inserted a pin, *l*, which secures the lower end of an oblique link, L, to bar G. The upper end of bar L is connected adjustably to the bar H by a pin, *l'*, which is inserted into one of the holes *h* of said bar. Upon one side of beam B is pivoted an arm, *m*, which carries at its free end a heavy block, M, as shown. At one side of this block M is secured a plate, *m'*, in such manner as to leave a space between the contiguous sides of the plate and the block.

When the saw is desired to cut with unusual speed, the arm *m* is turned outwardly and downwardly to the position shown in solid lines in Fig. 1, and the saw is caused to pass through the space between the opposing sides of the plate *m'* and the weight-block M. This causes the said weight-block to bear downwardly upon the saw, thus pressing the latter down in the kerf, and causing it to cut more deeply when it is reciprocated.

When no unusual speed is required of the saw, the block M is thrown back upon the beam B, out of the way, as indicated by dotted lines. When the saw is not in use, the weighted arm *m* is allowed to depend perpendicularly from its pivot, so as to serve as a foot for supporting the outer end of beam B, and it also supports the saw I when the latter is idle, as shown in dotted lines.

N designates a strap which is secured to the opposite side of beam B from the arm *m*. A hole is formed through the lower end of strap N, and a similar hole is formed through the

beam B, so that the saw being elevated into strap N, and a pin, *n*, being inserted into the corresponding holes in the strap and beam, the saw will be confined between said strap and beam when required.

O designates a fly-wheel on shaft *d*, and *p* designates the crank of shaft *c*, and it will be readily seen that when the crank is turned the saw will be reciprocated with greater or less length of stroke, according to the adjustment of the slip-crank *e* F of shaft *d*.

The machine is simple and durable in construction and reliable and rapid in operation, while the various adjustments of the parts are readily controlled.

In order to properly secure the outer end of beam B upon the log, a pin, R, is inserted through the end of said beam and driven into the log. A fly-wheel, O, is mounted upon shaft *d*, as shown, in order to render the action of the machine uniform.

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

The combination, with a reciprocating saw, a link-bar pivoted thereto, and a crank pivotally connected to said link-bar, of guide-bars *j j'*, perforated bar H, oblique bar I, connecting link G with bar H, and slide K, having its pin *k* adjustably connected to said bar H, substantially as set forth.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

DANIEL M. OMWAKE.
WALTER P. McGEE.

Witnesses:
D. M. GOOD, Jr.,
SIMON MICKLEY.