H. T. HUNTER.

Improvement in Log-Turners.

No. 131,956. Patented Oct. 8, 1872.

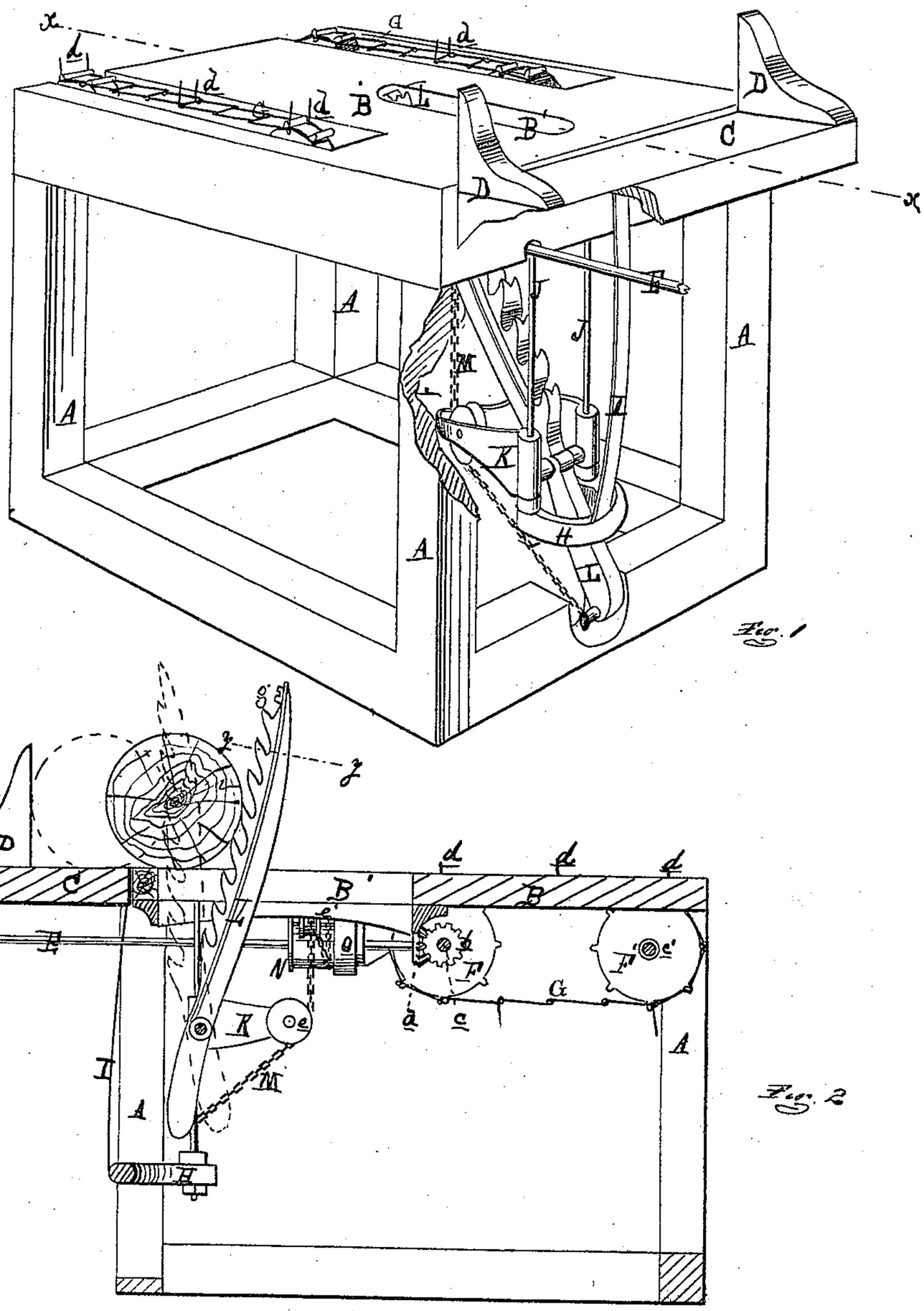

Fig. 1

Fig. 2

Fig. 3.

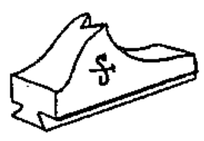

Fig. 4.

ATTEST:
H. L. Sprague
H. F. Eberts

INVENTOR:
H. T. Hunter
Per atty -
Thos. L. Sprague

UNITED STATES PATENT OFFICE.

HENRY T. HUNTER, OF SPRING LAKE, MICHIGAN.

IMPROVEMENT IN LOG-TURNERS.

Specification forming part of Letters Patent No. **131,956**, dated October 8, 1872.

To all whom it may concern:

Be it known that I, HENRY T. HUNTER, M. D., of Spring Lake, in the county of Ottawa and State of Michigan, have invented a new and useful Improvement in Log-Turners; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1 is a perspective view of my invention; Fig. 2 is a longitudinal vertical section on the line *x x* in Fig. 1; Fig. 3 is a cross-section of the turning-lever at *y y*, Fig. 2; and Fig. 4 is a perspective view of one of the lever-teeth, detached.

Like letters refer to like parts in the several figures.

This invention consists, mainly, in the construction and arrangement of certain parts for operating the log-turner, as will be fully described hereinafter.

In the drawing, A represents a portion of the frame-work of a saw-mill building, supporting the mill-floor; B, the saw-carriage; C, moves along an opening in the floor, or upon ways above it; D D are the knees of the saw-carriage. E is a line-shaft, rotating in bearings under the floor, and is placed crosswise of the carriage. At one end is a miter-gear, *a*, which meshes with a miter-pinion, *b*, on the shaft *c*, journaled at right angles with the shaft *a*. The pinion *b* is feathered on its shaft, and is thrown into mesh with the gear *a* whenever it is desired to rotate the shaft *c*. *c′* is a counter-shaft, parallel with the shaft *c* and nearly under the log-table, which is not shown. On the shaft *c* is a pair of chain-wheels, F, and on the shaft *c′* is a pair of similar wheels, F′. Over these wheels, and actuated by them, runs a pair of endless chains, G, their links at intervals having stout projecting studs *d d*, &c. Between these chains, it will be noticed that there is a slot, B′, in the mill-floor, extending nearly to the carriage. A saw-log being dumped from the table and these chains put in motion, it is evident that the log will be carried to the ends of the slots which the chains run in, and past the back end of the slot B′. Directly under the other end of this slot is suspended a U-shaped yoke or frame, H, by a brace, I, and two vertical guide-rods, J J, which engage with it at its open ends. On these rods are sleeved the ends of a cross-head frame, K, in the apex of which is pivoted a roller, *e*. In the jaws of the cross-head is pivoted the turning-lever L, serrated on its face above the fulcrum-pivots, and with a shorter arm below the pivots. To the lower end of the short arm of the lever a chain, M, is secured, which passes up behind the roller *e*, and has its other end secured to a drum, N, on the shaft E, on which it revolves loosely, first passing over a roller, *e′*, however, journaled to bearings under the floor-beams. On the shaft E is a friction-clutch, O, which may be caused to engage with the end of the drum N and give it motion, to wind up the chain M on it.

The friction-clutch being disconnected from the drum, the lever drops, of its own weight, to the position seen in Fig. 1. Now, if a log be carried over by the conveyers to a point between the ends of the slot B′ and the carriage, by throwing the clutch into gear with the drum the lever will be raised, coming up behind the log, and, gradually assuming a vertical position as it rises, will roll the log forward to the carriage, as seen in Fig. 2. In like manner it may be used for turning the log on the carriage after "slabbing."

The lever is, of necessity, made of iron, and toothed to prevent slipping. Such levers have heretofore been used, but operated by different means; if one or more of the teeth were broken, the whole lever was rendered useless and had to be replaced. This difficulty I lessen, or rather the tendency of the teeth to break, by making them of the form of a circular-saw tooth, and, by making them separate and detachable from the lever, reduce the cost of replacing them. This form of tooth does not tear the timber, as the lever slides down after turning the log, as others do.

In Figs. 3 and 4 will be seen the form of the tooth *f*, and the method of securing the teeth in the lever, by making a dovetail groove in the face of the latter, and a dovetail tenon on the base of the tooth. When the

teeth are in place they are secured by a screw, *g*, at the top of the groove through the end of the lever.

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

1. The construction and arrangement of the yoke H, brace I, guide-rods J J, cross-head K, rollers *e e'*, lever L, chain M, drum N, and clutch O or its equivalent, substantially as and for the purpose set forth.

2. The lever L, when provided with movable teeth *f*, as shown and set forth.

HENRY T. HUNTER.

Witnesses:

ALLEN C. ADSIT,

JOHN B. PERHAM.