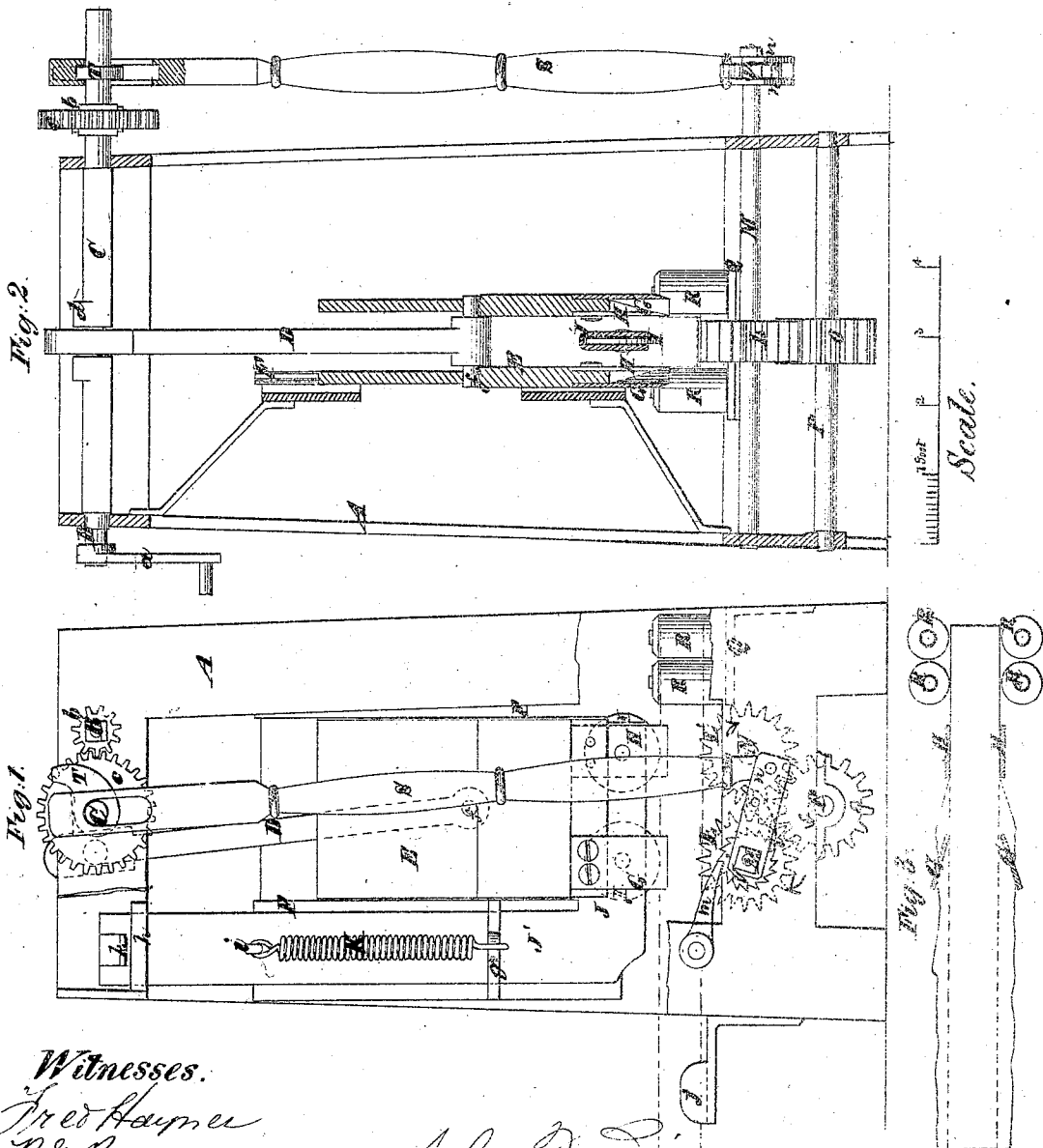


JOHN P. DIRNER.

Improvement in Machine for Dressing Railway Ties.

No. 119,829.

Patented Oct. 10, 1871.



Witnesses.
Fred Hayner
R. R. Rabun

John P. Dirner
per *Amos Combs*
Attorney

UNITED STATES PATENT OFFICE.

JOHN P. DIRNER, OF HONESDALE, PENNSYLVANIA.

IMPROVEMENT IN MACHINES FOR DRESSING RAILWAY TIES.

Specification forming part of Letters Patent No. 119,829, dated October 10, 1871.

To all whom it may concern:

Be it known that I, JOHN P. DIRNER, of Honesdale, in the county of Wayne and State of Pennsylvania, have invented a new and useful Machine for Dressing Railway Ties; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing forming a part of this specification.

This invention consists in a machine of novel construction, composed mainly of a system of oblique and parallel reciprocating cutters and a feeding apparatus, whereby rough logs are dressed with two flat faces, for use as railroad ties.

In the accompanying drawing, Figure 1 is a side view of the machine, showing its frame partly broken away to expose the working parts to view. Fig. 2 is a central transverse section of the same, and Fig. 3 is a plan of a partly-dressed tie and knives and rollers.

Similar letters of reference indicate corresponding parts in all three figures.

A is the frame of the machine, which is of rectangular form, and has supported in bearings in its upper portion the driving-shaft B, one end of which is provided with a crank, *a*, and the other with a pinion, *b*, that gears with a spur-wheel, *c*, on a shaft, C. This shaft C has at the middle of its length a double crank, *d*, which is connected by a rod, D, with the reciprocating cutter-head E, to which the lower end of said rod is pivoted by apin, *f*. This cutter-head is of open, box-like construction, of a width not less than the intended thickness of the tie to be produced, and it slides vertically in guides F F, provided on the inner side of the frame A. It has secured to the forward portion of its lower edge oblique cutters G G, which cut obliquely into and chip the sides of the log, and has secured to the rear portion of the same edge parallel cutters H H that cut and trim off the previously-chipped portions of the log, and so produce flat and parallel faces. Arranged between the knives are pressure-rollers I I, whose journals have their bearings in a frame, J, having an upright stem, J', that slides vertically within one fixed guide, *g*, attached to the forward one of the guides F F, and within another fixed guide, *h*, on the upper portion of the frame, and has formed on its upper end a stop, *k*, that comes in contact with the latter guide and prevents the frame from moving too

far. Secured to the guide *g* is one end of a spring, K, the other end of which is secured to a pin, *i*, on the stem of the frame J. L L' are feed-rollers arranged under the pressure-rollers on shafts M and N, supported in bearings in the lower portion of the frame A; said wheels being geared together by a wheel, O, on a shaft, P, which is also supported in the lower portion of the frame A. At the front of the machine, in line with the feed and pressure-rollers, is a guide, *j*, through which the rough logs to be trimmed or dressed are fed to the said rollers, and in rear of the rollers there is a platform, Q, on which there are arranged vertical rollers R R, between which the finished ties are passed from the machine. The shaft M, on which the feed-roller L is arranged, has a ratchet-wheel, V, on one of its ends, and on each side of said wheel there is a link or plate, *n*, both of which are pivoted at their other ends to a rod, S, and have pivoted to them a spring-pawl, *l*. On the adjacent portion of the frame A is a stop-pawl, *m*, that prevents the ratchet-wheel and its shaft from turning when freed from control of its pawl *l*. The rod S connects the feed-rollers' shafts with the shaft C, and its upper end is of yoke construction for the reception of a lifting cam, T, on the end of the said shaft C. To trim or dress logs for ties they are fed through the guide J on to the feed-rollers L L', and under the pressure-rollers I I, and as the machine is set in operation by imparting rotary motion to the main shaft B the forward obliquely-arranged knives G G chip the log, as shown in Fig. 3, and parallel rear ones H H cut and trim the chipped portions off and produce two opposite smooth faces on the log. After each stroke of the knives the cam T lifts the rod S, and by means of its pawl *l* operates the ratchet-wheel V, and thereby rotates the feed-wheels so as to carry the log forward before the next stroke of the knife, and the operation is continued till the log is dressed throughout its whole length.

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

The combination of the oblique cutters G G, the parallel cutters H H having reciprocating motion, and a feeding apparatus, substantially as described, for the purpose set forth.

Witnesses: JOHN P. DIRNER.

W. H. DIMMICK,
GEO. HOFFMAN.

(125)