(No Model.)

N. W. MORTORFF.

SAW STRETCHING MACHINE.

No. 419,699. Patented Jan. 21, 1890.

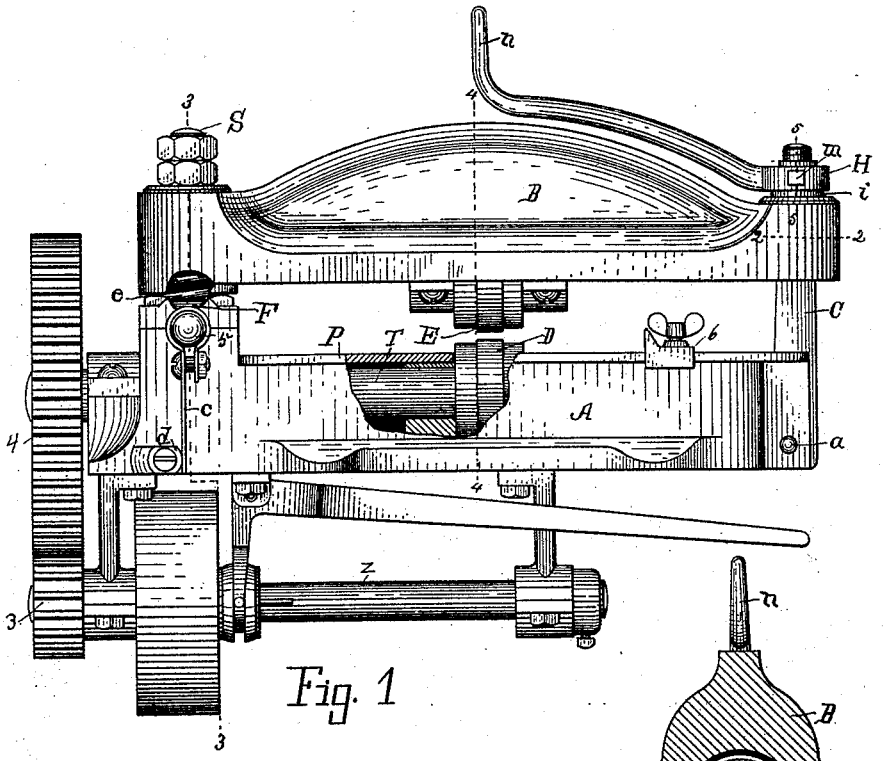

Fig. 1

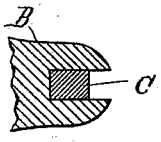

Fig. 5

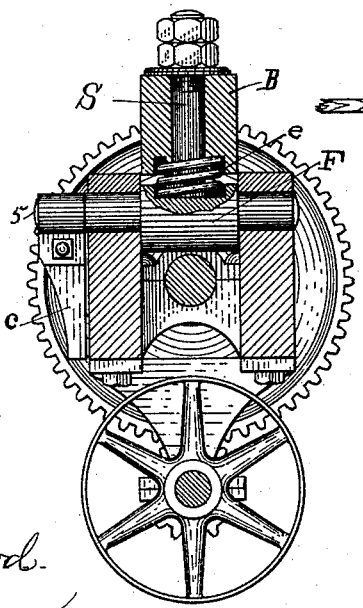

Fig. 3

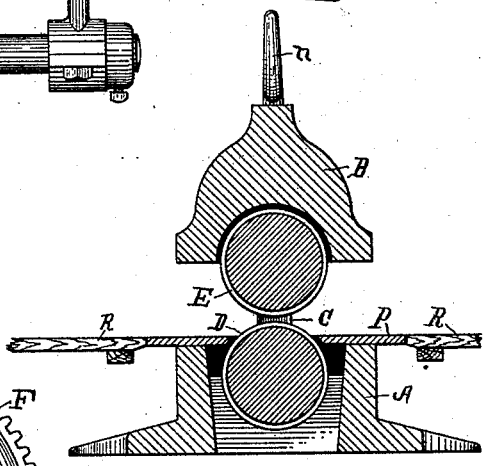

Fig. 2

Fig. 4

Witnesses:
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UNITED STATES PATENT OFFICE.

NOAH W. MORTORFF, OF JENNINGS, MICHIGAN.

SAW-STRETCHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 419,699, dated January 21, 1890.

Application filed September 13, 1889. Serial No. 323,830. (No model.)

To all whom it may concern:

Be it known that I, NOAH W. MORTORFF, a citizen of the United States, residing at Jennings, county of Missaukee, State of Michigan, have invented a new and useful Saw-Stretching Machine, of which the following is a specification.

This invention relates to that class of machines for stretching saws in which are employed the adjustable rolls between which the saw is passed for the purpose of stretching and straightening the saws, and thereby dispenses with the old process of hammering.

The object of this invention consists in certain improvements, hereinafter described and claimed, designed to facilitate the construction and operation.

In the drawings forming a part of this specification, Figure 1 is the side elevation with parts broken away. Fig. 2 is a section on line 4 4 in Fig. 1, looking from a point at the left. Fig. 3 is a section on line 3 3 in Fig. 1, looking from a point at the right. Fig. 4 is a section on line 5 5 in Fig. 1; and Fig. 5 is a section on line 2 2 in Fig. 1, looking from a point above said line.

Referring to the lettered parts of the drawings, A is the frame-work of the machine, and P is the top plate of said frame. The lower roll is shown at D, the shaft of which roll has bearings in the frame-work A in the ordinary manner, and is driven by the power-shaft Z through the medium of the gears 3 and 4; but so far as the particular means for driving the rolls are concerned it is a matter of choice.

At B is an arm pivoted on bolt *s* in a manner to swing laterally, said bolt projecting upward from the rocking block F, Fig. 3, and said block being hinged to the frame A at 5. By means of this construction the arm can be swung up or down on the hinge 5 and swung laterally in either direction. One object in swinging said arm laterally is to remove it out of the way when not using the machine in cases where the plate P forms a part of the work-table R R, as in Fig. 2.

Between the rocking block F and the pivoted end of the bar B is a spring *e* on the bolt S, Figs. 1 and 3, the effect of which spring is the raising of the arm B when the other end is released to free the saw.

The upper roll E has bearings in the arm B above the roll D. The pivoted end of the arm B is held down against a spring-resistance by nuts screwed on the bolt S. The other end of the arm B is provided with an open vertical slot, as in Fig. 5.

At C is a latch pivoted at the lower end at *a* to the frame A, so as to be swung up and down to engage said slot and to be disengaged therefrom, (see Figs. 1 and 5,) and thus hold said arm in place during the operation of running the saw between the rolls E D, and to release said bar when desiring to swing the bar laterally. The upper end of the latch C is screw-threaded, and a lever *n*, having an internally-screw-threaded end H, is adjustably screwed onto the end of the latch C, Fig. 1, and holds the rolls at a proper distance apart.

The object of the open slot in the arm B for connection with the latch C is in order that the latch may be disengaged from said arm without screwing the lever *n* entirely off from the end of said latch. The hole in the end H of the lever *n*, as here shown, is not screw-threaded except indirectly, as in Fig. 4, but may be thus constructed, if preferred.

The lever *n* is attached onto an internally-screw-threaded collar by means of the set-screw *m*, which set-screw extends into an annular groove in said collar. By means of this construction the lever can be used as a guide, so as to enable the operator to preserve a uniform pressure of the rolls on different points on the surface of the saw. To illustrate, the lever *n* may be screwed down a proper distance, and then the lever be set parallel with the arm B by loosing the set-screw *m*, turning said arm to the desired position, as in Fig. 1, then tightening the set-screw again. Thus the saw may be released and moved and the rolls be brought to bear on it again by swinging the lever *n* one way and another and bringing it back to its position parallel with the arm B. The exterior surface of the periphery of the raised portion of the roll which bears against the saw is flat transversely instead of being convexed, as heretofore, for which reason the saw can be stretched close up to the teeth.

At 6 in Fig. 1 is illustrated the ordinary guide.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a saw-stretching machine, the combination of the frame bearing the lower roll and the arm bearing the upper roll, said arm being hinged to tilt vertically and pivoted to swing laterally, substantially as set forth.

2. In a saw-stretching machine, the combination of the frame bearing the lower roll, the arm bearing the upper roll and having the open slot in one end, the other end of said arm being hinged to tilt vertically and pivoted to swing laterally, the latch pivoted to said frame and adapted to engage the slot in said arm, and the lever screwed onto the top of said latch for clamping the rolls against the saw, substantially as set forth.

3. In a saw-stretching machine, the combination of the frame bearing the lower roll, the rocking block hinged to said frame and having the upper projecting bolt, the spring on said bolt, and the arm pivoted on the bolt above said spring, and a detachable latch for engaging a slot in said arm, substantially as set forth.

4. In a saw-stretching machine, the combination of the frame having the latch, the laterally-swinging arm adapted to be held by said latch, the threaded collar on the upper end of the latch, and the clamping-lever attached to the collar by the set-screw, substantially as set forth.

In testimony of the foregoing I have hereunto subscribed my name in presence of two witnesses.

NOAH W. MORTORFF.

Witnesses:
L. C. WEST,
B. C. FREEMAN.