

(No Model.)

W. McLEAN & E. DAVIES.
SAW GUMMER.

No. 544,067.

Patented Aug. 6, 1895.

Fig. 1.

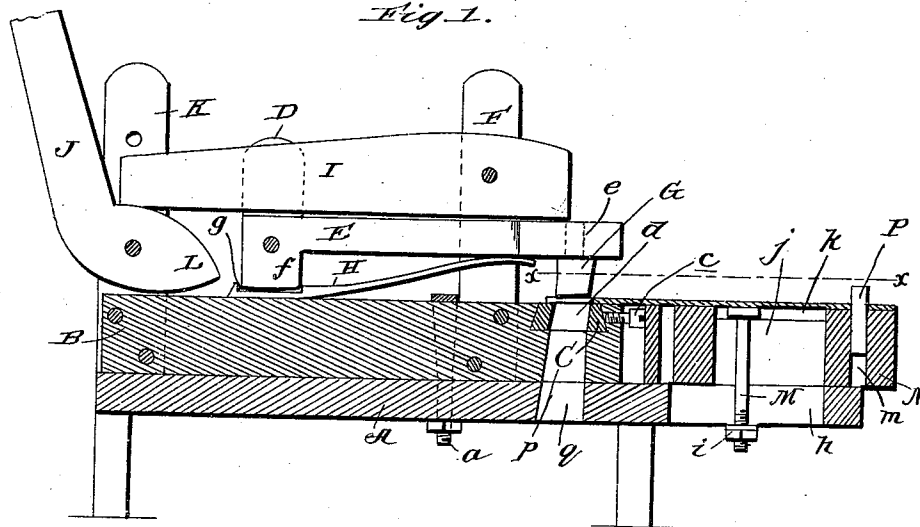


Fig. 2.

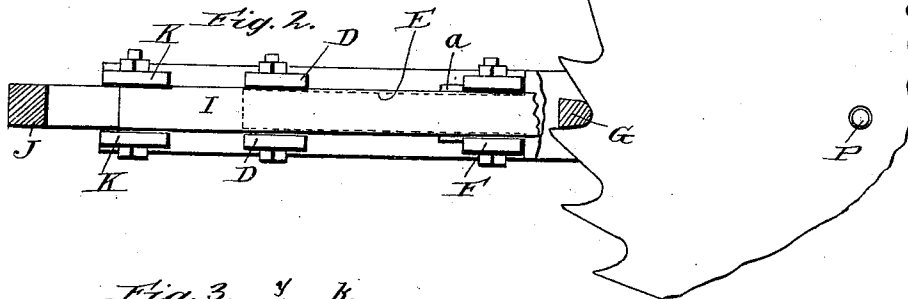


Fig. 3.

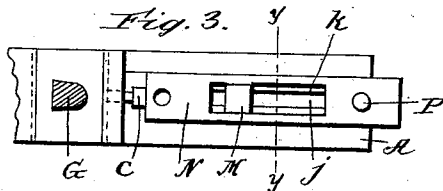


Fig. 4.

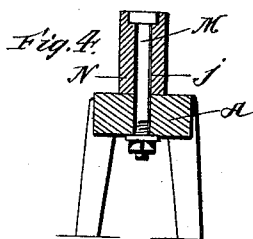
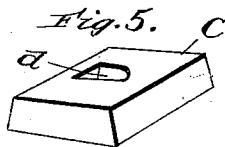


Fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM MCLEAN AND EDWARD DAVIES, OF TIE SIDING, WYOMING.

SAW-GUMMER.

SPECIFICATION forming part of Letters Patent No. 544,067, dated August 6, 1895.

Application filed April 16, 1895. Serial No. 545,956. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM MCLEAN and EDWARD DAVIES, citizens of the United States, residing at Tie Siding, in the county of Albany and State of Wyoming, have invented certain new and useful Improvements in Saw-Gummers; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to improvements in saw-gummers or devices for cutting away the plate of a saw to deepen the interdental spaces thereof; and it consists in the peculiar construction, novel combination, and adaptation of parts hereinafter described, and particularly pointed out in the claim appended.

In the accompanying drawings, Figure 1 is a vertical longitudinal section of our improved gummer. Fig. 2 is a top plan view, partly in section, of the same with a saw in position to be gummed. Fig. 3 is a horizontal section taken in the plane indicated by line *x x* of Fig. 1. Fig. 4 is a transverse section on line *y y* of Fig. 3, and Fig. 5 is a perspective view of the block which supports the saw and receives the punch after it has cut away the saw-plate.

Referring by letter to said drawings, A indicates the table of our improved gummer, which is preferably of the proportional length and width illustrated.

B indicates a bed of less length than the table, which is mounted on said table and connected thereto by a clip *a* or other suitable means.

C indicates a block of dovetail shape in cross-section, which is arranged in a corresponding seat in the enlarged forward end of the bed B and is secured therein by a set-screw C and is provided with a vertical opening *d*, and D indicates uprights, which are suitably connected to opposite sides of the bed B at an intermediate point in the length thereof and rise therefrom, as illustrated. Between these uprights D is pivoted one end of an arm E, which extends forward between two uprights F and is provided adjacent to its forward end with an aperture *e* to receive the shank of the punch G, which may be secured in the arm in any suitable manner. The said

punch-carrying arm E is provided at its connected end with a depending portion *f*, (see Fig. 1,) and this depending portion is designed to take into the recess *g* in the spring H, which is designed to return the free end of the arm to its normal position after it has been depressed, so as to secure said spring in position.

As will be readily observed the spring H is secured in position by the element against which it presses—viz., the arm E—without the aid of any other device and in such a manner that said spring may be readily removed and replaced by a new one when damaged or broken. Said spring, however, engages the arm E adjacent to the free end thereof, and is, therefore, on account of the leverage afforded by said arm, subjected to but little strain.

I indicates a lever, which is fulcrumed between the forward uprights F above the arm E and is designed to engage said arm adjacent to its free end and depress the same, and J indicates a hand-lever, which is fulcrumed between a pair of uprights K at the rear end of the bed B and rests under the rear end of lever I, as shown. This lever J is provided with a cam L, which rests beneath and engages the rear end of lever I, and it will therefore be observed that when the power end of said lever J is depressed the rear end of the lever I will be raised, while the forward end of the said lever I, together with the forward end of arm E, will be depressed, so as to force the punch carried by said arm through the saw-plate, as will be presently described. As will be readily obvious the two levers J and I, combined with the arm E, afford a very powerful leverage, and the punch may therefore be moved downward with great force and power with the exercise of but little effort on the part of the operator, which is an important desideratum.

After the punch G has been forced downwardly and through the saw-plate, as just described, and pressure is removed from the power end of the lever J, the spring H will return the punch-carrying arm and the other parts to the position shown in Fig. 1, so as to permit of the saw-plate being readily adjusted to bring another interdental space beneath the punch.

As better illustrated in Fig. 1 the portion

of the table A forward of the bed B is provided with a longitudinal vertically-disposed slot *h*. This slot *h* is designed to receive the connecting-bolt M of the adjustable saw-rest N, which bolt is provided with a head at one end and a nut *i* at its opposite end, so as to enable it to adjustably fix the rest with respect to the punch *i*, as will be presently described.

10 The saw-rest N is provided with a longitudinal vertically-disposed slot *j* to receive the bolt M and with a groove *k* to receive the head of said bolt, and it is also provided adjacent to one or both of its ends with a vertically-disposed aperture *m* for the reception of a pin P, which is designed to take through the central aperture of a circular saw when the same is placed on the rest, as shown, and serve as a pivot-post for said saw, so as to permit of it being readily adjusted or turned to bring its several interdental spaces beneath the punch. As the rest N is capable of adjustment, the pin P may be moved toward or from the punch G to suit saws of various sizes and may be adjustably fixed at various distances therefrom. The provision of the slot *j* in the saw-rest N and the connection of the said saw-rest N to the table also permits of the rest being adjusted and adjustably fixed, so as to hold the saw or the saw-teeth at various angles to the punch.

15 In practice the rest N is adjusted and adjustably fixed before or after the saw is placed in position, as is most desirable, so as to bring the interdental spaces of the saw beneath the punch and above the opening *d* in the block G. The lever J is then depressed when the punch will cut away the saw-plate, so as to enlarge the interdental space. This operation is repeated, the saw being turned after each depression of the punch until all of the interdental spaces have been enlarged, when the saw may be readily removed and a new one placed on the rest N, if desired.

20 The cuttings from the saw-plates will fall

through the opening *d* in the block C, and through the aligned openings *p q* in the bed and table into a suitable receptacle placed to receive them.

As the interdental spaces of saws vary in size and shape we contemplate providing several punches G of various shapes and sizes and several blocks C, having holes *d* of various shapes and sizes, in conjunction with our improved gummer. These punches G and blocks C will be used interchangeably to suit the shape and size of the interdental spaces of the saws to be gummed.

Having described our invention, what we claim is—

In the saw gummer described, the combination of a bed, uprights D, rising from the bed, the arm E, pivoted between said uprights and having the depending portion *f*, at its connected end, a punch carried by the free end of said arm, uprights F, arranged in advance of the uprights D, the lever I, fulcrumed adjacent to its forward end between the uprights F, above the arm E, and having its rear end extending to the rear of said arm, uprights K, arranged in rear of the uprights D, the hand lever J, fulcrumed between the uprights K, below the rear end of the lever I, and having the cam portion L, adapted to engage the under side of said lever I, and the spring H, having the recess *g*, receiving the depending portion *f*, of the arm E, and interposed between said depending portion and the bed; said spring bearing at its forward end against the under side of the arm E, adjacent to the free end thereof, all substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM McLEAN.
EDWARD DAVIES.

Witnesses:

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