

SAW TOOTH SETTING DEVICE.

944,729.

Fig 1

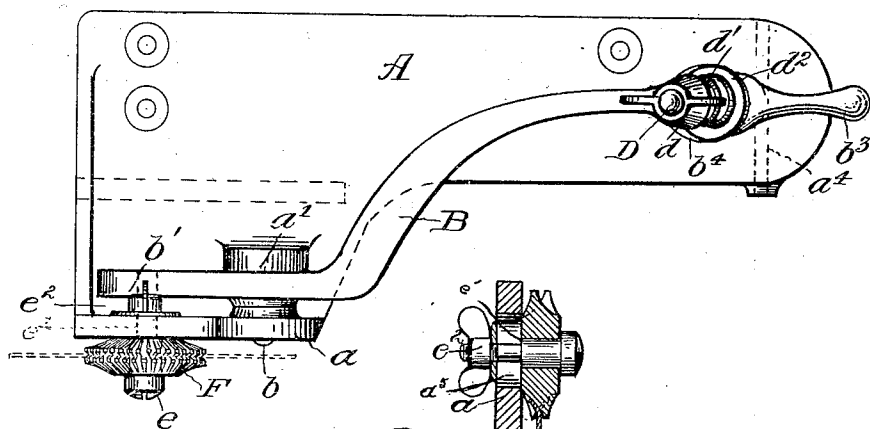


Fig. 5

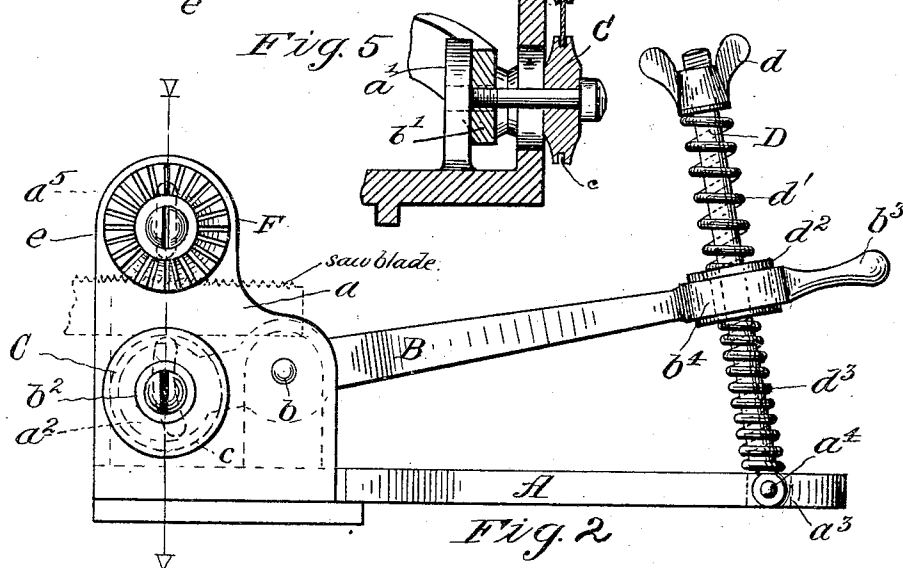


Fig. 3

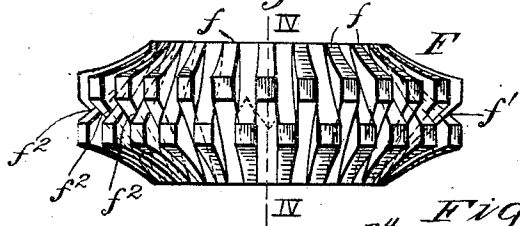


Fig. 4

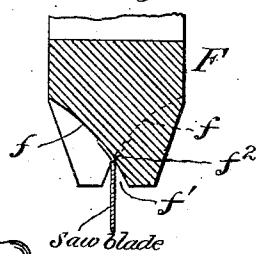
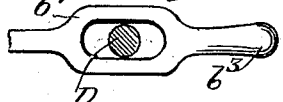


Fig. 6



Witnesses:

J. C. Turner
Frank Knecht

Inventors:
B. Foley and
G. Wright,

By *W. Merkel*
their Attorney;

UNITED STATES PATENT OFFICE.

HUGH B. FOLEY, OF CLEVELAND, OHIO, AND FREDERICK G. WRIGHT, OF SEATTLE, WASHINGTON.

SAW-TOOTH-SETTING DEVICE.

944,729.

Specification of Letters Patent.

Patented Dec. 28, 1909.

Application filed June 22, 1908. Serial No. 439,752.

To all whom it may concern:

Be it known that we, HUGH B. FOLEY and FREDERICK G. WRIGHT, citizens of the United States, residents of Cleveland, county of Cuyahoga, and State of Ohio, and Seattle, county of King, and State of Washington, respectively, have invented a new and useful Improvement in Saw-Tooth-Setting Devices, of which the following is a specification, the principle of the invention being herein explained and the best mode in which we have contemplated applying that principle, so as to distinguish it from other inventions.

Our invention relates to saw teeth setting devices, its object being to provide a simple and efficient mechanism for the setting operation.

Said invention consists of means herein-after fully described and particularly set forth in the claim.

The annexed drawing and the following description set forth in detail, certain mechanism embodying the invention, the disclosed means constituting but one of various mechanical forms in which the principle of the invention may be applied.

In said annexed drawing:—Figure 1 is a plan of a machine embodying our invention. Fig. 2 is a front elevation of same. Fig. 3 is a plan, on an enlarged scale, of the setting member. Fig. 4 is a broken axial section taken upon the line IV—IV, showing a saw-blade in the position relative thereto which it occupies while the setting member is operating upon the teeth; Fig. 5 represents a vertical section taken upon the plane indicated by the line V—V, in Fig. 2. Fig. 6 is a detail plan of the end of the operating lever.

An upright or standard a is formed integral with the main frame A and adjacent to one edge thereof. Adjacent to this standard is a second standard a' and in these two standards is seated a pivotal pin b which forms the fulcrum for a lever B . The arm b' of the lever carries a screw-pin b^2 which projects through a slot segmental a^2 formed in the standard a . That portion of the pin projecting outside of the standard is of plain cylindrical or unthreaded formation and forms a journal for the wheel C . This wheel is formed with a peripheral groove c , Fig. 5, and freely rotates upon its journal. The opposite end of the lever B is formed

with a handle b^3 and adjacent to the latter is an enlarged portion b^4 formed with an elongated hole therethrough, as shown in Fig. 6. Through this hole projects a rod D whose lower end is seated in an elongated opening a^3 in the frame, shown in dotted lines in Fig. 2, and is pivoted upon a pin a^4 passing through said opening. The upper end of the rod is threaded and provided with a thumb-nut d . Intermediate of the thumb-nut and the enlarged portion b^4 is interposed a spring d' whose lower end bears upon a loose washer d^2 seated upon such portion b^4 . In a similar manner a lighter spring d^3 is interposed between said enlarged portion and the frame, as shown in Fig. 2. By so pivoting the rod D , the latter is allowed to adjust itself within the limits required, to such changes in angularity as may be imparted to handle B during the ordinary course of its operation.

Vertically above the slot a^2 in the standard a is formed a second slot a^5 , Fig. 5, through which passes a bearing-screw e provided with a shoulder e' , by means of which latter and a nut e^2 the said screw may be secured in various positions in said slot. The cylindrical portion of said screw forms a journal for the setting member F , the latter being therefore free to rotate upon such journal. This member is formed with a plurality of transverse slots f , which form a V-shaped groove f' , successive slots being cut in opposite directions and inclining as shown in Fig. 3. These slots present a series of successively arranged and abutting surfaces of opposite inclination, alternate surfaces having the same inclination, each two adjacent surfaces having a point in common as f^2 , f^2 , Fig. 3. All of the points common to adjacent surfaces lie in the circumference of a circle having its center in the axis of the setting member. The width of the slots is such as to bring these points a distance from each other equal to the pitch of the teeth of the size of saw which this member is adapted to set, as will be readily understood. A different setting member is provided for each saw having teeth of different pitch. These members are removed from or placed upon the journal-pin e when desired.

When it is desired to set the teeth of the saw, the nut d is turned to reduce the tension at spring d' , the handle b^3 being thereby raised by spring d^3 so as to lower the

wheel C. The blade is then placed with its smooth edge in the groove of this wheel and nut *d* screwed down upon spring *d'* so as to depress lever B, raise wheel C and cause 5 teeth of the latter to project into the lowermost grooves *b'* of the setting member, as indicated in dotted lines in Figs. 1 and 2. In this position the two lowermost successively arranged inclined or wedge-surfaces engage opposite sides of two adjacent 10 teeth simultaneously and impart thereto a set in opposite directions, as indicated in Fig. 4. By grasping one end of the blade after being placed as described, and drawing it longitudinally, all of the teeth may be 15 subjected to a similar setting operation successively, the wheel C and the setting member F rotating freely during this operation. The spring *d'* is of a strength such that the 20 required force may be exerted thereby to properly hold the saw-blade in engagement with the setting-member. By arranging the springs and the lever as described, the latter is capable of yielding, so that any binding 25 ing of the blade between the two rotating members which might occur as a result of any variation in the depth of the saw-blade will be prevented, the lever B yielding sufficiently to permit of a portion of the saw-blade of increased depth to pass readily between the said members. Any diminution 30 of such depth is compensated for by the

force exerted by the spring *d'*. The wheel C may be caused to press the blade into member F with varying degrees of force, by 35 turning the thumb-screw *d*, as will be readily understood. The function of spring *d'* is merely to raise the end of the lever and depress the guiding wheel C when thumb-nut *d* is turned to reduce the tension of 40 spring *d'*.

What we therefore distinctly claim and desire to secure by Letters Patent is:—

In a saw tooth setting device, the combination of a suitable frame; a freely rotatable 45 setting member mounted upon said frame; a spring-actuated lever pivotally mounted upon said frame; a grooved roller so mounted upon said lever that it will freely rotate in opposition to and in yielding 50 engagement with said setting member; and means comprising the regulation of the pressure on the springs for adjusting such lever into operative position.

Signed by me, this 10th day of April, 1908. 55
HUGH B. FOLEY.

Attested by—

A. E. MERKEL,

LENA A. DIRLAUR.

Signed by me, this 15th day of April, 1908.

FREDERICK G. WRIGHT.

Attested by—

IVAN L. HYLAND,

E. B. GRAVLYN.