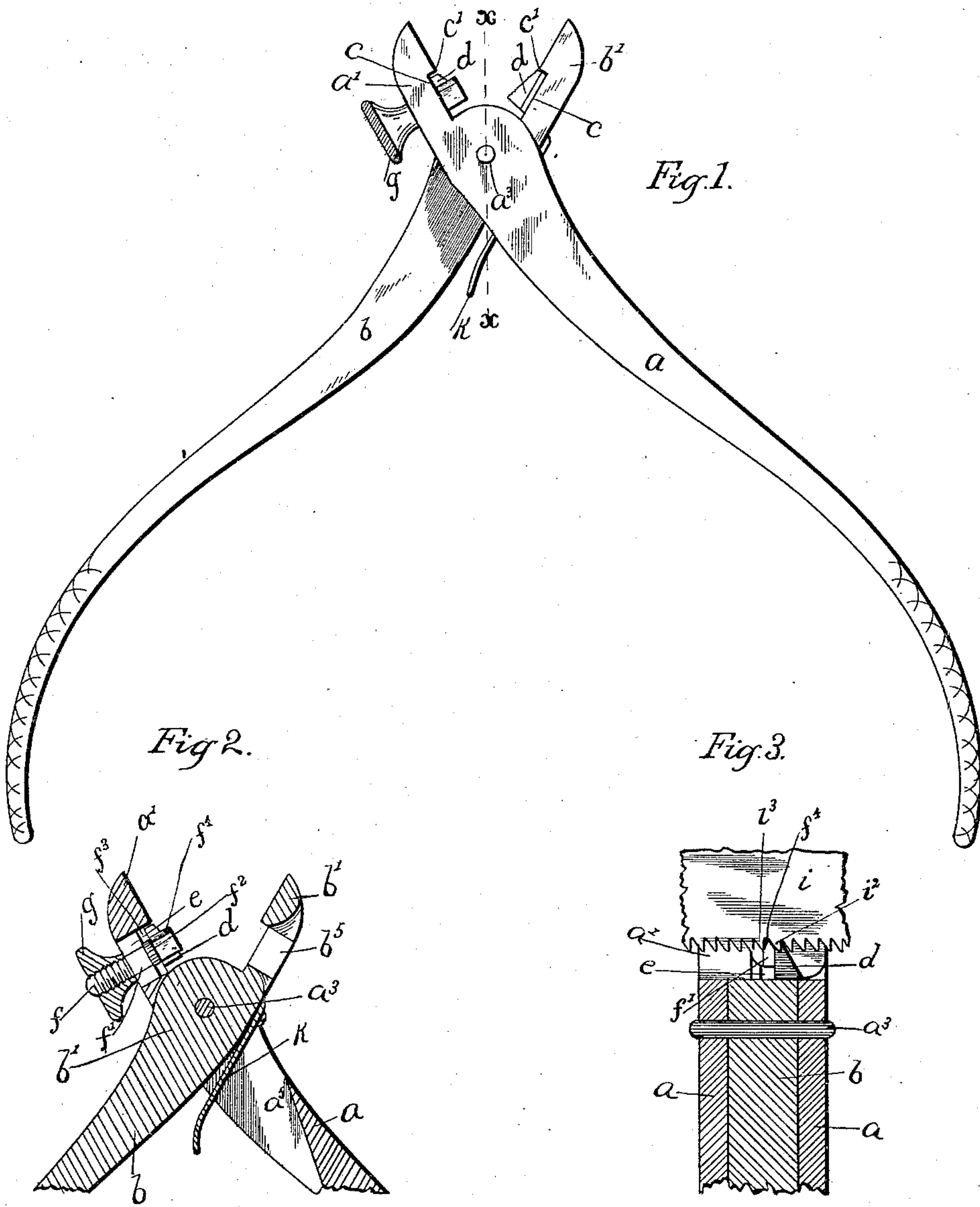


(No Model.)

G. LUTZ.
SAW SETTING DEVICE.

No. 473,515.

Patented Apr. 26, 1892.



Witnesses

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GEORGE LUTZ, OF LANCASTER, OHIO.

SAW-SETTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 473,515, dated April 26, 1892.

Application filed April 29, 1891. Serial No. 390,966. (No model.)

To all whom it may concern:

Be it known that I, GEORGE LUTZ, a citizen of the United States, residing at Lancaster, in the county of Fairfield and State of Ohio, have invented a certain new and useful Improvement in Saw-Setting Devices, of which the following is a specification.

My invention relates to the improvement of saw-setting devices; and the objects of my invention are to provide a superior device of this class by means of which two teeth of a saw may be set at one movement; to so construct the same as to admit of the teeth being set without warping or bending the saw-blade out of its proper plane; to provide an improved adjustable support for the saw-blade, by means of which the degree of set imparted to the saw may be regulated, and to otherwise provide an operative and reliable device of this class. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my improved saw-setting device, showing the jaws open. Fig. 2 is a central sectional view taken through the clamping-jaws and showing the setting-dies in elevation thereon, and Fig. 3 is a sectional view taken on line *xx* of Fig. 1 and showing a portion of a saw-blade in position for setting the teeth thereof.

Similar letters refer to similar parts throughout the several views.

My improved saw-setting device is of the hand-operating class, and consists, as shown, of two oppositely-located curved arms or handles *a b*, said handle portions being provided, respectively, with jaws or heads *a' b'* at their upper ends. Through an opening in the slightly-enlarged base of the jaw *a'* passes the slightly-enlarged base of the jaw *b'*, said jaw-bases being fulcrumed upon a transverse pin *a³*. The lower portion of the inner face of each of the jaws *a' b'* is, as shown at *c*, depressed beyond the surface of the upper portion thereof throughout the width of the jaws to form transverse shoulders, as indicated at *c'*.

d represents the tooth-setting die projections, one of which is formed integral with the inner face of each of the jaws *a' b'* within the depression *c* thereof. These die heads or projections are substantially in the form of isosceles triangles and are arranged, respectively,

on opposite sides of the centers of the widths of the jaws, their inner vertical sides being brought opposite and a short distance from each other when the two jaws are closed together. As shown in the drawings, the inner faces of the dies are slightly roughened. From their upper smaller end each of the dies is inclined or gradually thickened inward to its lower and wider portion.

Formed through the depressed portion of the jaw *a'* is a vertical slot *e*, the inner side of said slot being in line with the vertical side of the die *d* of that jaw.

f represents an adjustable saw-supporting pin or gage, which has its rear or outer portion screw-threaded, as shown, and which has its forward portion flattened, as shown at *f'*. This flattened portion of the pin *f* is provided at the center of its length with a circular shoulder *f²*. The flattened portion *f'* of the pin *f* extends within the jaw-slot *e*, the pin-shoulder *f²* bearing loosely in vertical guideways *f³* in the inner walls of said jaw-slot *e*. The inner or forwardly-projecting end of the flattened portion of the pin *f* is in frictional contact with the vertical side of the die *d* of the jaw *a'*. The upper edge of the inwardly-extending end of the pin *f* is sharpened, as shown at *f⁴*. The pin or gage *f* is adjustably supported in the above-described position by means of a suitable thumb-nut *g*, which screws upon the outer threaded end of said pin and is adapted to clamp against the rear side of the jaw *a*. The jaw *b'* is, as shown in the drawings, provided in its depressed portion with an opening *b⁵*, said opening being at a point opposite the die *d* of the opposite jaw *a'*.

k represents a spring-strip, which has its upper end rigidly secured to the rear side of the jaw *a'* at the base thereof and which has its lower end extending downwardly through the opening *a⁵* of the jaw-arm *a*, the lower end of said spring-strip being bent outwardly from the arm *b* and adapted, when the jaws are closed, to be compressed by the contact therewith of the solid portion of the arm *a*.

The operation of my device is as follows: The saw-supporting pin or gage *f* having been adjusted by loosening the thumb-nut *g* and raising or lowering the saw pin or gage the desired height within the slot *e*, the toothed edge of the saw-blade *i* is made to rest upon

the sharpened upper edge of the inner end of the pin *f*, said sharpened edge engaging with one of the saw-teeth notches, as shown in Fig. 3 of the drawings. In supporting the saw-blade in this position it will be observed that one of the teeth to be set, which is indicated at *i*², will bear upon the upper portion of the inner face of the die *d* of the jaw *a'*. The area of surface of the tooth to be set which is thus made to bear against the inner face of the die *d* of the jaw *a'* is, as will be seen, regulated by the degree of elevation given the saw-blade by the gage *f'*. The jaws being then pressed together, it will be observed that the next succeeding tooth (indicated at *i*³) will be similarly brought into contact with the upper portion of the opposite die *d*. By compressing the arms *a b* it will readily be seen that two teeth of the saw-blade will be pressed in opposite directions by said dies, thus setting two of the saw-teeth at one movement. This having been accomplished, the saw-blade is moved horizontally two notches and the operation above described repeated. It will readily be seen that by raising or lowering the supporting-pin *f* in the slot *e* a less or greater portion of the saw-teeth will be subjected to the action of the dies, thus admitting of the set of the teeth being regulated in a simple and convenient manner. The position of the saw-teeth to be set may be viewed through the opening *b*⁵ of the jaw *b'*.

From the construction herein shown and

described it is obvious that a simple, inexpensive, and reliable form of saw-setting device is produced, and that, owing to the corresponding pressure of the dies and jaws in opposite directions, the usual warping or twisting of the saw-blade during the setting operation is obviated.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a saw-setting device, the combination, with the jointed arms *a b*, their jaws *a' b'*, the latter having inner face-depressions *c*, of dies *d*, formed integral with said jaws and having triangular inclined setting-faces, as described, substantially as and for the purpose specified.

2. In a saw-setting device, the combination, with the jointed arms *a b*, their jaws *a' b'*, each of the latter having inner face-depressions *c*, a vertical slot *e*, formed, as described, in jaw *a'*, of dies *d*, formed integral with said jaws and having triangular inclined setting-faces, the adjustable pin *f*, passing and projecting loosely through slot *e*, having its inner portion flattened and its outer portion rounded and threaded, and a thumb-nut *g* on said threaded portion, substantially as described.

GEORGE LUTZ.

In presence of—

HENRY SNYDER,
HENRY SEARS.