J. OHLEN.

Insertible Saw-Tooth.

No. 221,602. Patented Nov. 11, 1879.

Fig. 1.

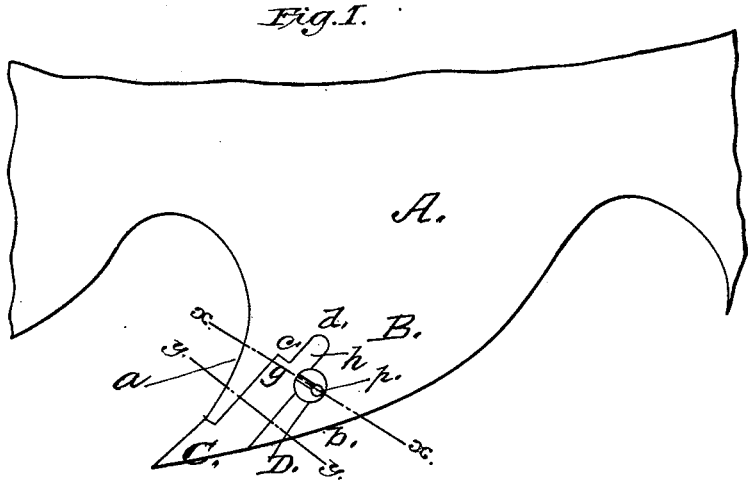


Fig. 2.

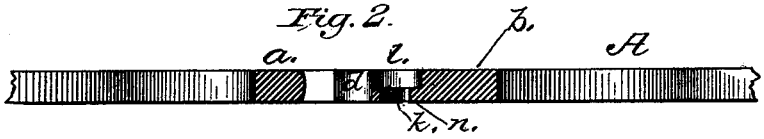


Fig. 3.

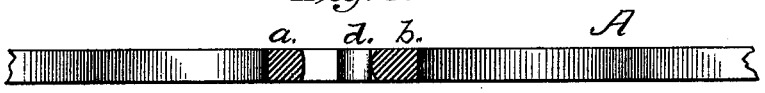


Fig. 4.

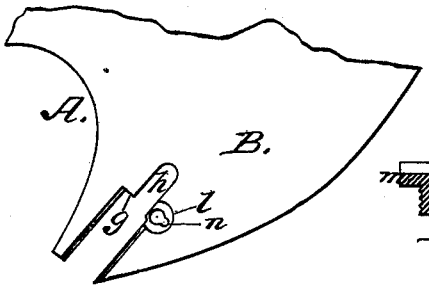


Fig. 5.

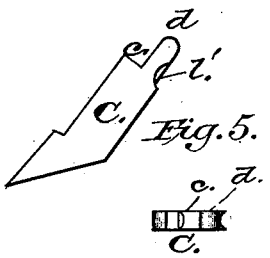
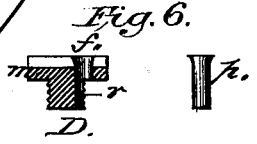


Fig. 6.



WITNESSES

John A. Ellis,

Frank J. Masi.

INVENTOR

James Ohlen,

by E. W. Anderson

his ATTORNEY

UNITED STATES PATENT OFFICE.

JAMES OHLEN, OF COLUMBUS, OHIO.

IMPROVEMENT IN INSERTIBLE SAW-TEETH.

Specification forming part of Letters Patent No. **221,602**, dated November 11, 1879; application filed September 29, 1879.

To all whom it may concern:

Be it known that I, JAMES OHLEN, of Columbus, in the county of Franklin and State of Ohio, have invented a new and valuable Improvement in Insertible Saw-Teeth; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

Figure 1 of the drawings is a representation of a plan view of a portion of a saw illustrating my invention. Figs. 2 and 3 are sectional views thereof, taken through lines *x x* and *y y*, respectively; and Figs. 4, 5, and 6 are details.

This invention has relation to saws in which the teeth are inserted; and it consists in the construction and novel arrangement of the screw-holes in the plate, the enlargement on one side of the plate for the head of the screw, the key-groove on one side of the threaded portion, the large headed screw having a key-groove in its threaded portion and a hole through its head for the key, and the arc-shaped recess on one side of the tooth to receive one edge of the screw-head and form the complement of its seat, substantially as specified.

In the accompanying drawings, the letter A designates the plate of the saw, having the projecting portions B for the teeth, such portions having an upper or forward branch, *a*, and an under or rear branch, *b*, separated by a space in which the tooth is received, and forming the tooth-seat.

The front branch, *a*, is provided near its upper end with a projecting shoulder, *c*, beyond which a narrow recess, *d*, extends up into the blade or plate, as shown in the drawings.

The inner faces of the branches *a* and *b* are convex transversely as far as the shoulder *c* in front and the screw-hole in the rear, beyond which point said edges are plain.

C indicates the tooth, which is elongated and extends up into the seat of the plate, its lateral edges *e* being concave to correspond with the convex inner edges of the seat-branches, and engage therewith.

The tooth is provided with a stop-shoulder, *g*, to engage with the shoulder *c* of the tooth-seat, and beyond this shoulder with a narrow projection, *h*, which extends up into the narrow part *d* of the tooth-seat.

Opposite the shoulder portion *c* on the opposite or rear branch of the tooth-seat is formed a screw-hole, consisting of a small threaded aperture, *k*, on one side and a large recess, *l*, on the other side of the blade, to receive, respectively, the threaded portion and the large disk-shaped head *m* of the screw. On the side of the threaded portion *k* farthest removed from the tooth-seat a groove, *n*, is made to receive one end of a key-pin, *p*, the other end of said pin extending through a hole, *f*, in the head of the screw D, which is also provided on its threaded portion with a groove, *r*, forming the complement of the key-groove *n* of the plate.

In the rear edge of the upper portion of the tooth, on one side thereof, is formed an arc-shaped recess, *l'*, forming the complement of the recess *l* of the blade, and receiving one side of the screw-head *m* when the screw is inserted, after seating the tooth firmly up against the shoulder or stop *c*. Then the key-pin being driven in through the head *m* between the threads of the screw and screw-aperture, the tooth is firmly secured and ready for work.

I am aware that various devices engaging both the tooth and the blade have been used for securing said teeth in the blades, and therefore I do not make any broad claim thereto.

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

The combination, with the double-branched tooth-seat *a b*, of the blade, having on one side of the rear branch a large recess, *l*, and a threaded aperture, *k*, with a key-groove, *n*, on the opposite side thereof for the tooth-seat, of the tooth C and its arc-shaped recess *l'*, forming the complement of the recess *l*, the screw D, having the perforated disk-shaped head *m* engaging the recesses of the tooth and blade, and grooved at *r* to form the complement of the key-groove for the key-pin, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JAMES OHLEN.

Witnesses:
CARROLL J. HOLLOWAY,
DAVID F. MCNAGHTON.