(No Model.)

J. SMITH.

SAW

No. 298,709. Patented May 13, 1884.

Fig. 1.

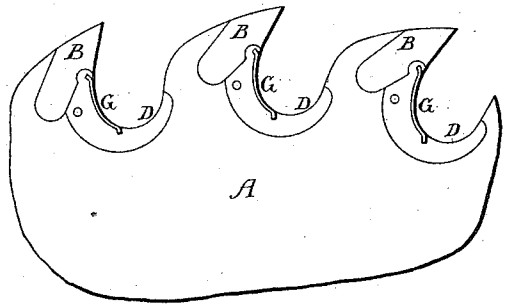


Fig. 2.

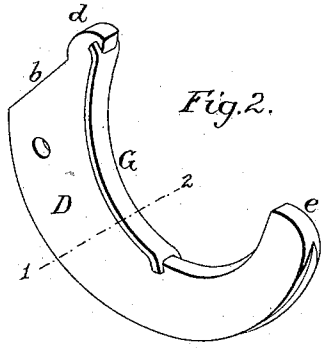


Fig. 3.

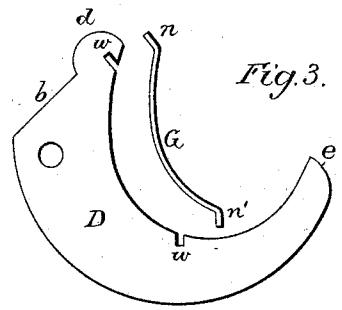


Fig. 4.

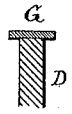


Fig. 5.

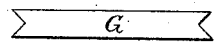


Fig. 6.

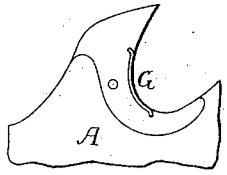
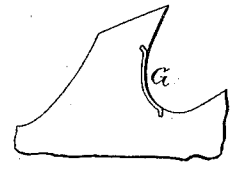


Fig. 7.



Witnesses
John E. Parker
James F. Jobin

Inventor
John Smith
by his Attys
Howson & Sons

N. PETERS. Photo-Lithographer. Washington, D. C.

UNITED STATES PATENT OFFICE.

JOHN SMITH, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HAMILTON DISSTON, HORACE C. DISSTON, WILLIAM DISSTON, AND JACOB S. DISSTON, ALL OF SAME PLACE.

SAW.

SPECIFICATION forming part of Letters Patent No. 298,709, dated May 13, 1884.

Application filed January 28, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN SMITH, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Saws, of which the following is a specification.

My invention, although applicable to crosscut and other saws, is mainly intended for circular saws; and my invention, which is fully described hereinafter, consists of the combination, with the saw-blade, of a steel strip adapted to the throat of a tooth, and secured at both ends to the blade, or to an attachment thereto, the object of the strip being to clear away the sawdust from the kerf made in lumber by the saw, and the strip being an economical substitute for the kerf-clearers made by swaging the metal at the throat of a tooth.

In the accompanying drawings, Figure 1 is a side view of part of a circular saw with my improved kerf-clearer; Fig. 2, a perspective view, drawn to an enlarged scale, of the cutter-retainer shown in Fig. 1 and the kerf-clearer attached to the said retainer; Fig. 3, a view of the retainer and of the kerf-clearer detached therefrom; Fig. 4, a section on the line 1 2; Fig. 5, a face view of the kerf-clearer detached from the retainer; Fig. 6, a view of the kerf-clearer applied to an insertible tooth differing from that shown in Figs. 1, 2, and 3; and Fig. 7, a view of the clearer applied to the tooth of an ordinary saw.

I will in the first instance refer to Figs. 1, 2, 3, 4, 5.

In recesses in projections of the saw-blade A are fitted the cutters B, each cutter having a groove on its rear edge adapted to a corresponding rib on the rear edge of the recess, and part of the front edge having a V-shaped rib to fit into the groove in one end, *b*, of the retainer D, the grooved inner edge of which is fitted to a ribbed socket in the blade, this retainer having at one end a projection, *d*, to fit into a notch in the cutter, and the opposite end, *e*, fitting against a shoulder on the blade.

The above description will apply to saws heretofore made.

Heretofore it has been the practice to swage the concave edge of the retainer in the throat of a tooth, so as to form on each side a rib for clearing away the sawdust from the kerf made in lumber by the saw. This swaging is a tedious and costly operation, which I avoid by securing the bent strip G, of steel in the present instance, to the retainer. This is done by bending the opposite ends of the strip and tightly fitting the bent ends *n n'* into notches *w w* cut in the retainer. The strip, possessing slight elasticity may be contracted and then so applied to the retainer that when the strip is released the bent ends will enter or can be forced into the notches against the said bent ends of the strip; and to prevent possibility of lateral displacement these ends may be notched, as shown in Fig. 5, the bottoms of the slots *w* corresponding with these notches; or the edge of this strip may be otherwise recessed. The strip becomes, when secured in its place, a kerf-clearer, for, the strip being wider than the retainer is thick, two ribs are presented, one on each side, for clearing away the sawdust from the kerf made by the saw in the lumber. The kerf-clearer, which may be removed by a suitable instrument (or by blows) from the retainer, is not restricted in its application to saws having removable cutting-bits and retainers, as shown in Fig. 1. It may, for instance, be secured to an insertible tooth of the character shown in Fig. 6, or it may be attached to a tooth forming part of the blade of an ordinary saw, as shown in Fig. 7, the object being to secure this strip at some point within the throat or gullet of the tooth, whether the tooth be a permanent part of the saw-blade, as in Fig. 7, or insertible, as in Fig. 6, or as shown in Fig. 1, and while in most cases there will be kerf-clearers for every tooth of the saw, it is not essential that this should be the case in every instance. There may be a clearer for every second tooth or every third tooth.

It is essential, in carrying out my invention and for the permanent attachment of the clearer, that both ends should be immovably secured to the saw-blade, or to such attachments thereto as I have described above. In Fig. 1, for instance, the clearer is firmly secured at both ends to the retainer D alone, and is entirely

free from the cutting-bit B, my invention differing in this respect from that described in Patent No. 211,029, granted December 17, 1878, to J. B. Luce, in which patent is described a spring secured near one end only to the blade, the opposite end being free and serving to aid in retaining the cutting-bit in place.

I claim as my invention—

The combination, with a saw-blade, of the strip or kerf-clearer G, adapted to the throat of a tooth, and fitted at each end into a slot in the blade, or in any of the within-described attachments thereto, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN SMITH.

Witnesses:
JOHN M. CLAYTON,
HUBERT HOWSON.