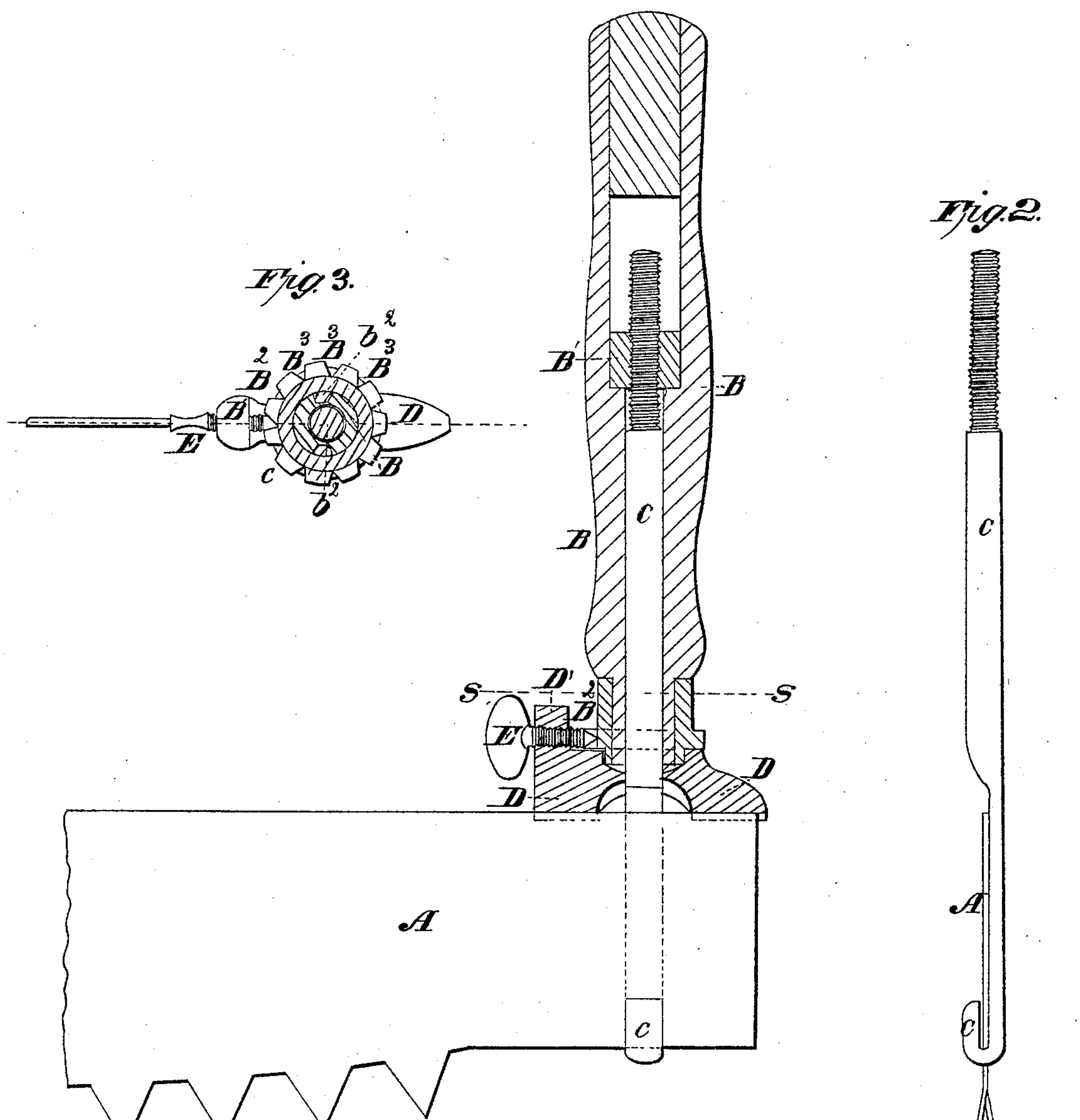
E. Andrews,

Saw Handle.

No. 58,569. Patented Oct. 9, 1866.

Fig. 1.



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AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

EMANUEL ANDREWS, OF WILLIAMSPORT, PENNSYLVANIA.

IMPROVEMENT IN MODES OF SECURING CROSSCUT-SAWS TO THEIR HANDLES.

Specification forming part of Letters Patent No. **58,569**, dated October 9, 1866.

To all whom it may concern:

Be it known that I, EMANUEL ANDREWS, of Williamsport, in the county of Lycoming, in the State of Pennsylvania, have invented certain new and useful Improvements in Handles and Mountings for Crosscut-Saws; and I do hereby declare that the following is a full and exact description thereof.

It is frequently necessary to detach handles from saws, to allow the withdrawal of the saw endwise from a log, in consequence of the settling or bending downward of the log at that point. Means have been provided for effecting this with great facility; but they are objectionable on account of the liability of the handle to become loosened in the course of the ordinary work. My invention is intended to obviate this difficulty.

The common plan is to receive the end of the saw in a longitudinal slot in a screw-bolt, and to screw down the handle upon the screw-bolt, so as to press with the end of the handle or with a metal ferrule upon the upper edge of the saw. When the handle is to be removed, the handle is simply turned around a few times, so as to raise it on the slotted bolt, and thus liberate the saw.

My invention consists in providing a convenient movable stop or dog, which shall lock the handle after it has been screwed down firmly, and thus retain it beyond a possibility of becoming loose. When it is desired to remove the handle, the first step is to remove the stop; then the handle may be readily unscrewed.

It also consists in a novel form of that part of the bolt which seizes the saw, the same being open on one side, or hook-formed, to allow of more convenient operation in cases where the end of the saw has become battered or otherwise distorted.

I will first describe what I consider the best mode of carrying out the invention, and will afterward point out the features which I claim as new.

The accompanying drawings form a part of this specification.

Tints are employed to distinguish parts, and do not indicate difference of materials. The material of all the tinted parts may be iron.

Figure 1 is a side elevation, partly in section, showing an end of the saw with the handle in position. Fig. 2 is an end view of the saw and hook-bolt. Fig. 3 is a horizontal section on the line S S in Figs. 1 and 2.

Similar letters of reference indicate like parts in all the figures.

A is the blade of the saw. B is a handle of wood. B^1 is a nut of metal firmly fixed therein, and B^2 is a metallic ferrule, firmly fitted on the lower end, and prevented from turning thereon by the internal projections b^2, as seen in Fig. 3. The exterior of this ferrule B^2 is provided with notches, as indicated by B^3.

C is a hook-bolt, adapted to seize the lower edge of the end of the saw, and to draw the handle down thereon by the action of its screw-threads in the nut B^1, as will be obvious.

D is a casting surrounding the bolt C below the ferrule B^1. This casting may be notched to afford a better bearing to rest on the upper edge of the saw; and its upper face, as also the lower face of the ferrule B^2, may be finished in a lathe, or otherwise, to allow them to turn upon each other more smoothly.

D′ is an arm extending up from one side of the casting D. E is a pointed thumb-screw, tapped through the arm D′, and adapted to fit into either of the notches, B^3.

The casting D serves to take hold of the upper edge of the saw. The hook-bolt C takes hold of the lower edge of the saw, and the saw is tightly held between these parts whenever the handle B is screwed down and the thumb-screw screwed in so as to lock in one of the notches B^3. In this condition of the parts the handle may be exposed to all the strains, including the torsional strains frequently given by the hands in operating it, without any liability of loosening it. To remove the handle it is necessary, first, to unscrew the thumb-screw E to a sufficient extent to withdraw its point from the notch B^3, in which it previously stood. Then, on applying the hands strongly to the handle B, and twisting it around a few times, the hook-bolt C is lowered, and the saw is no longer pressed between the hook and the piece D. The handle may now be slipped off from the end of the saw and the saw withdrawn.

The frequently-occurring cases in lumbering where the saw-kerf closes above the saw, in

consequence of the settling or bending downward of the log at the point being sawed, involves a necessity for frequently removing the saw by withdrawing it endwise through the log, or risking its destruction by the rolling of the log in an attempt to elevate it; and it is found unavoidable, in the severe labor of sawing, to give twisting-strains to the handle sufficient to loosen the handle of the saw, as ordinarily applied; and the tendency to loosen the handle annoys and increases the labor of the workmen. My invention, as above described, completely overcomes the difficulty by the use of the arm D′ and screw E, arranged to lock the handle, as represented.

I do not confine myself to the use of a screw as locking means. It is easy to arrange a turning cam or sliding bolt or spring-dog, or various other devices, actuated by spring or otherwise, as substitutes therefor.

The screw-bolt C may, if preferred, be simply slotted like the screw-bolts ordinarily employed in holding saws; but I prefer to give it the hook form represented. I make the part which takes hold of the saw in the same form as one side and end of the ordinary slotted bolt, but little stouter, so that my bolt possesses all the strength and rigidity of the solid bolt, and is easier to construct and is more reliable. In the manufacture of a slotted bolt there are liable to be imperfections in the welding which injure the strength of the bolt at the top in where it enters the handle, where the transverse strain is the greatest. My bolt is made without any slot, and may be made of steel, if preferred. By the employment of my hook form of bolt I am able to operate after the end of a saw has become bent or battered, so as to entirely prevent its use with an ordinary slotted bolt. The ordinary slotted bolt can be used in connection with the other parts, and with such arrangement some of the advantages of my invention will be realized.

Having now fully described what I consider the best mode of applying my improvement, what I claim as my invention, and desire to secure by Letters Patent, is as follows:

1. The removable stop E and series of holding-places B^3, arranged for joint operation in fastening and liberating a saw-plate, A, substantially as and for the purpose herein specified.

2. A saw-handle, B, so arranged as to allow the removal and introduction of the saw-blade A by a turning and lateral movement, without the necessity for passing the end of the blade through the bolt, all substantially as and for the purpose herein specified.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

EMANUEL ANDREWS.

Witnesses:
EMIL VOSSNACK,
D. L. FREEBORN.