

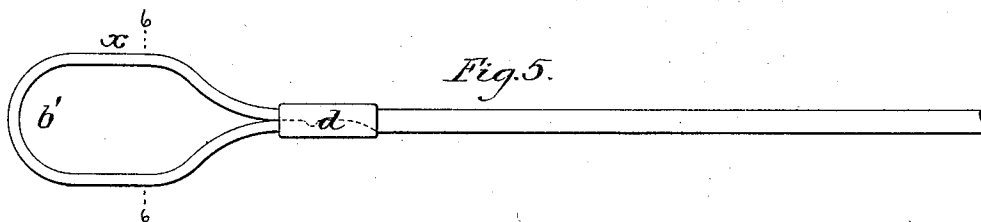
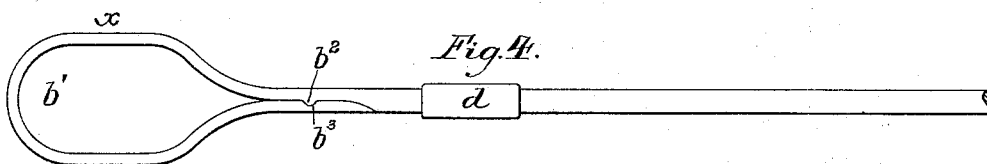
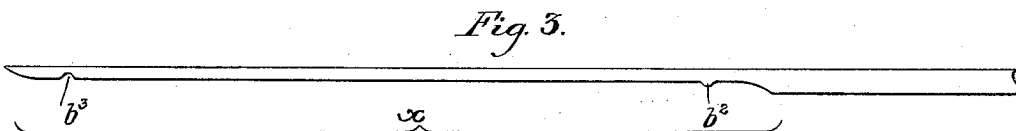
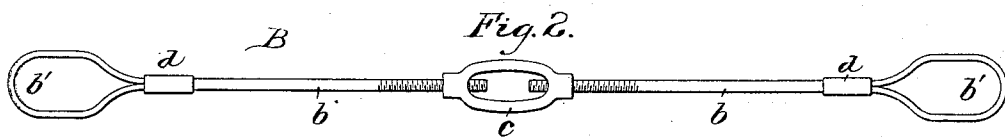
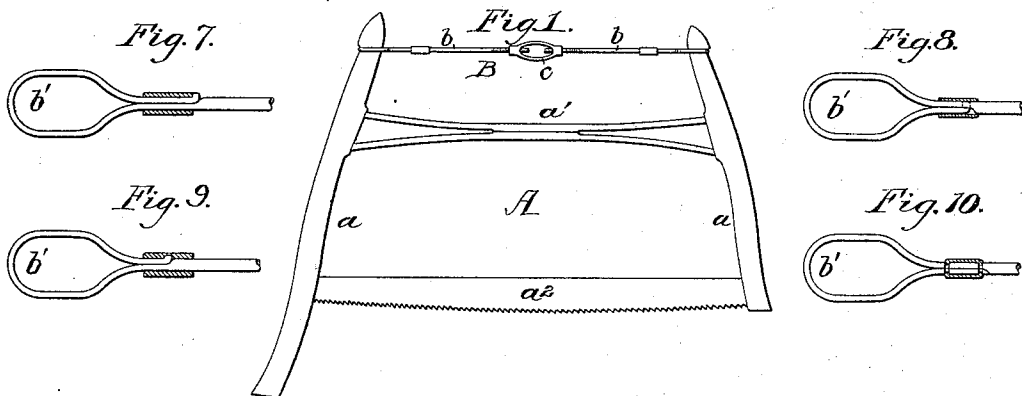
No. 607,712.

Patented July 19, 1898.

W. SMITH & E. F. SHAW.  
STRAINER ROD FOR WOOD SAWS.

(Application filed July 14, 1897.)

(No Model.)



Witnesses:  
Charles De Cou.  
Wm. A. Barr.

Inventors:  
William Smith  
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by their Attorneys  
Howman & Howman

# UNITED STATES PATENT OFFICE.

WILLIAM SMITH AND EDWIN F. SHAW, OF PHILADELPHIA, PENNSYLVANIA,  
ASSIGNORS TO THE HENRY DISSTON & SONS, INCORPORATED, OF SAME  
PLACE.

## STRAINER-ROD FOR WOOD-SAWS.

SPECIFICATION forming part of Letters Patent No. 607,712, dated July 19, 1898.

Application filed July 14, 1897. Serial No. 644,513. (No model.)

*To all whom it may concern:*

Be it known that we, WILLIAM SMITH and EDWIN F. SHAW, citizens of the United States, and residents of Philadelphia, Pennsylvania, have invented certain Improvements in Strainer-Rods for Wood-Saws, &c., of which the following is a specification.

The object of our invention is to construct a strainer-rod for wood-saws which will withstand the strains to which it is subjected and which can be readily and cheaply manufactured.

In the accompanying drawings, Figure 1 is a side view of a wood-saw, illustrating our invention. Fig. 2 is a plan view of the strainer-rod detached. Fig. 3 is a view of one end of the blank after being flattened. Fig. 4 is a view of one end of the blank after being bent to form the loop. Fig. 5 is a view showing the bent loop and the sleeve in position. Fig. 6 is a section on the line 6 6, Fig. 5; and Figs. 7, 8, 9, and 10 are views of modifications of the invention.

Referring to the drawings, A is an ordinary wood-saw commonly used for sawing cord-wood.

$a$   $a$  are the end bars, and  $a'$  the cross-bar, forming the frame.

$a^2$  is the saw-blade, and B is the strainer-rod, to which our invention especially relates, it being understood, however, that the strainer-bar can be used on other saws and in other places without departing from our invention.

Heretofore it has been a difficult matter to obtain a strainer-rod which would withstand the strains to which it is subjected without making a cumbersome and expensive article. By our invention, however, we have reduced the cost of manufacture considerably and at the same time making a very substantial and neat rod.

$b$   $b$  are the two sections of the rod, having screw-threads at their abutting ends, and these two sections are united by a turnbuckle  $c$  of the usual construction. The loops  $b'$  on each rod are adapted to pass over the end bars  $a$  of the frame and rest in notches therein. The blank for these rods is made of iron or low-steel wire cut to the proper length, and the portion  $x$  is passed through suitable

rolls or dies, having one of the rolls or dies flat and the other concaved, so as to form the blank with one side straight and the other side curved, as shown in the cross-section, Fig. 6, in order that it may adapt itself more readily to the flat sides of the saw-frame. At the same time that the blank is flattened the rolls or dies also form a projection at  $b^2$  and a recess at  $b^3$ , so that when the flattened portion  $x$  is bent in the form of a loop, as shown in Fig. 4, the projection will enter the recess, so as to lock the parts against longitudinal movement when the sleeve  $d$ , which is simply a piece of tubing cut to the proper length, is slipped over the end, as shown in Fig. 5.

In order to secure the sleeve in a fixed position at the joint, we compress the sleeve upon the rod by a suitable press, so that it will be impossible to remove the sleeve after being once set in position without first destroying it. The sleeve forms a positive lock, so as to prevent the end which forms the loop from pulling out when the rod is strained.

In some instances the sleeve may be simply driven on instead of slipped on and compressed without departing from the main feature of the invention.

The notch and projection may be dispensed with, and as a substitute therefor the free end of the blank may be turned up at the back of the sleeve, as shown in Fig. 7, or the rod may be perforated, as shown in Fig. 8, and the end of the rod may be turned so as to enter the perforation, as shown in Fig. 8, or the blank may be formed as shown in Fig. 9, in which case a two-part sleeve may be passed over and secured in position either by pressing or by rivets, and in some instances a groove may be formed on each side of the joints, as shown in Fig. 10, and the sleeve slipped over the joint and its ends turned down into the grooves, preventing the sleeve moving longitudinally and also locking the end of the blank in position.

The free end of the loop may be secured to the rod by welding, brazing, or riveting, with or without the sleeve; but we prefer the method illustrated and described.

We claim as our invention—

1. The combination in a strainer-rod for wood-saws, of a rod having a reduced and

flattened end, said end being bent to form a loop, with the flattened portion on the inside, the other end of the loop being bent and resting against the rod, with a sleeve confining the free end of the loop to the rod, and means for preventing the free end of the loop being drawn out of the sleeve, substantially as described.

2. The combination in a strainer-rod for wood-saws, of a rod having a reduced and flattened end, the end being bent so as to form a loop with the flattened portion on the inside, a projection on one portion of the rod and a recess in the other so that the projection will fit in the recess when the rod is bent, with a sleeve confining the free end to the rod and the projection within the recess, substantially as described.

3. The combination in a strainer-rod for wood-saws, of a round rod reduced at one end so as to form a flattened surface on the inside, a loop formed by bending the flattened end of the rod some distance away from the round portion leaving a flat section against which the free flattened end of the rod is clamped, a projection on one part entering the recess on the other part, with a confining-sleeve, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

WILLIAM SMITH.  
EDWIN F. SHAW.

Witnesses:

THOS. SHALLCROSS, Jr.,  
WARREN P. RAWSON.