

Stanley Sargent Model Shop Tools: Prototype Successor to Shaw's Patent Planes?

James R. Gillis

Here it is at only the second post of this blog and I've gone off the subject of Stanley Model Shop tools in my collection to discuss a Sargent prototype plane that joined the collection recently. This plane (Figure 1) suggests that Sargent was considering a successor to its Shaw's Patent line of planes. As with the Shaw's Patent planes, this plane allows the frog to be moved forwards and backwards to adjust the size of the mouth. The frog adjustment mechanism is different from that of the Shaw's Patent planes and the body profile is unique among Sargent planes.



Figure 1 Sargent prototype plane

Before proceeding, a quick review of Shaw's patent Sargent planes. John H. Shaw was issued Patent No. 824,954 on July 3, 1906, assigned to Sargent and Company for "a plane in which the frog may be adjusted longitudinally and clamped in place after the bit is clamped to the frog" (Figure 2). The primary claim of the patent is for "a novel construction by which the adjustment of the frog may be made from the rear after the bit is secured to the front face of the frog." As seen in Figure 2, an advantage of the Shaw's patent configuration is that the frog may be adjusted to

narrow or widen the mouth without affecting the depth at which the cutter (“bit” in the words of the patent) setting or requiring it to be removed. According to the patent his is done by loosening two vertical screws “O” shown in the lower part of the figure and turning the horizontal adjusting screw “No 3” shown in the upper part of the figure and then tightening the two vertical screws. There are two disadvantages to this configuration: First, there is a screw through the frog under the cutter into the body of the plane (not shown in the figure, but approximately at “E” in the upper part of the figure). When this screw is secured tightly, a great deal of force is required to move the frog. The cutter must be removed to loosen this screw, negating the claimed advantage of not affecting the cutter setting. Second, the two vertical lock screws “O” at the rear of the frog are awkward to access with a regular screwdriver. The screwdriver must be inserted at an angle into the slots in the screws with the consequent danger of slipping out of the slots and damaging the screw heads.

No. 824,954.

PATENTED JULY 3, 1906.

J. H. SHAW.
PLANE.

APPLICATION FILED APR. 17, 1903.

2 SHEETS—SHEET 1.

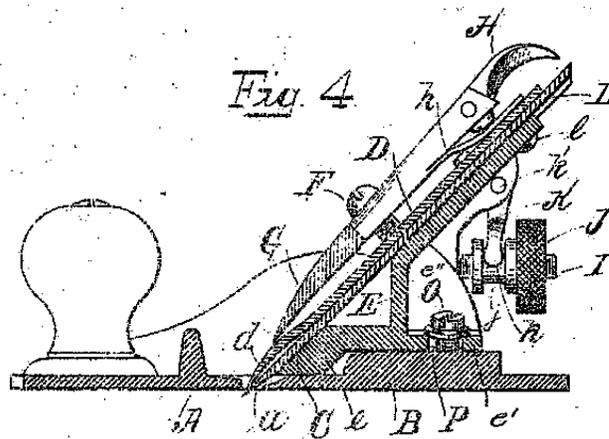
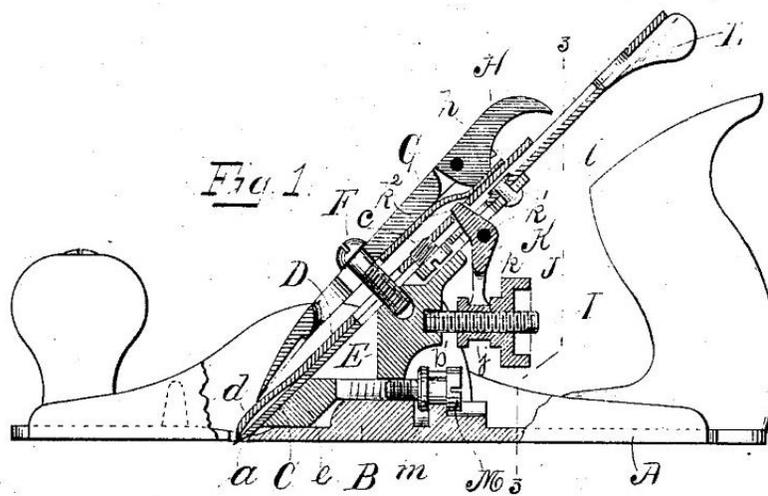


Figure 2 Shaw's patent plane

Sargent Shaw's patent planes were manufactured from approximately 1906 to 1918 in sizes from the 7 inch long No. 7 with 1 5/8 inch wide cutter to the 24 inch long No. 24 with 2 5/8 inch wide cutter [1].

Returning to the Sargent prototype plane (Figure 1), its sole is 9 inches long from the toe to end of the lug under the handle and 2 1/8 inches wide. It has a 1 3/4 inch wide cutter. The sole is 1 inch longer than that of the typical Sargent bench plane with a 1 3/4 inch wide cutter and is the length of the typical Sargent bench plane with a 2 inch wide cutter. The mahogany handle and front high knob, the Sargent logo on the lever cap and on the cutter, and the 1 1/8 inch cutter adjusting nut suggest that this prototype dates from the 1920s or 1930s. The cutter adjusting nut appears to be solid brass; most standard Sargent cutter adjusting nuts are brass coated steel. The threaded rod for the cutter adjusting nut is loosely threaded into the frog and has a left hand thread.

Figure 3 shows the body and bottom of the frog of the plane. The frog is mounted to the body with two screws rather than three as on Shaw's Patent planes. Similar to the Shaw's Patent planes, a slotted pedestal on the body engages a slotted adjusting screw in the frog to vary the mouth width. The base of the frog rests in a milled channel on the body, a feature absent from the Shaw's Patent planes. This prevents the frog from moving side to side or twisting and the milled channel is the same concept used for mounting the frog on Stanley Bed Rock planes.

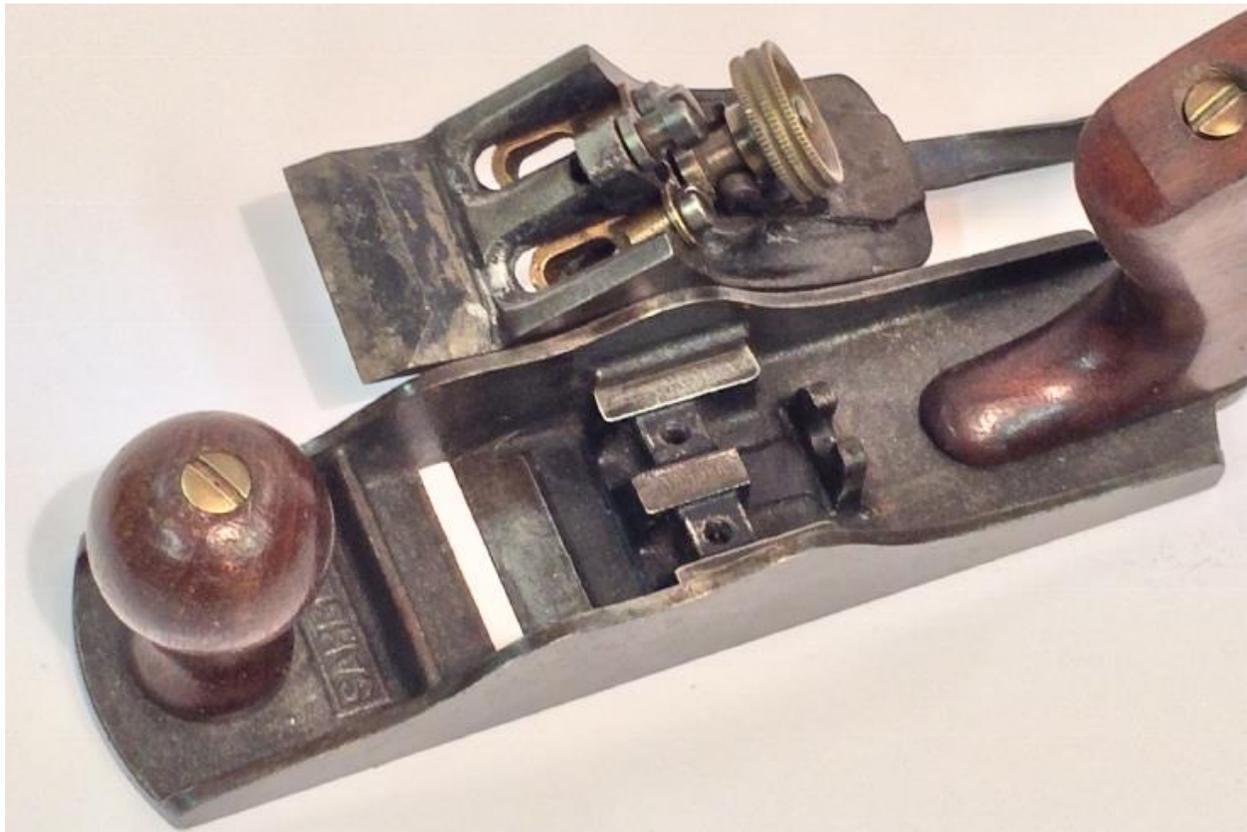


Figure 3 Prototype plane body and frog

The inside of the body and the frog of the Sargent prototype plane are japanned with a thin coat of japanning. The front of the top of the handle has been clipped, apparently to provide clearance for the frog and lateral adjuster; but this was unnecessary because there would have been no interference even if the handle had not been clipped.

The prototype frog is compared with a Shaw's Patent frog in Figure 4 and Figure 5. Primary differences between the two aside from the more modern profile of the prototype frog are in the configuration for mounting the frog to the body. The Shaw's Patent frog is mounted with three screws, two in the rear of the frog, and one under the cutter. The prototype frog uses two screws through brass pads under the cutter. Each brass pad is fastened to the frog with a steel screw and brass washer. Loosening the screw and twisting the pad allows it to be removed from the frog.



Figure 4 Upper sides of Shaw's Patent frog (left) and prototype frog (right)

Perhaps the function of these pads was to provide a low friction bearing surface so that the frog could be adjusted fore and aft using the frog adjusting screw without having to remove the cutter and loosen the frog mounting screws. However, the brass pads are tapered to match the roughly 15 degree downhill slope of their bearing surface on the frog (see the inset in Figure 4 for details of the brass pads). This would have allowed only very limited fore and aft movement of the frog without the frog either being wedged in place when adjusted forward or becoming loose when adjusted backward. This binding or loosening of the frog during adjustment would have happened even if the screws holding the brass pads to the frog were loosened. Note that this problem would have been eliminated if the frog had been built to have



Figure 5 Under sides of Shaw's Patent frog (left) and prototype frog (right)

the portion under the brass pads parallel to the mounting surface on the body of the plane. One wonders why Sargent chose this sloped configuration for the frog and brass pads when a parallel configuration combined with the milled guides for the frog would have resulted in a more readily adjustable mouth opening without danger that the frog would be twisted sideways.

The cutter of the prototype plane is marked with the trademark shown in Figure 6, which was used by Sargent in the 1920s and 1930s. This generic trademark does not indicate a plane number as is common on many original cutters. The lack of a plane number is common on Sargent replacement cutters. The letter B is overstruck on SARGENT. I believe that I have seen this before, but cannot remember where and am curious about its significance.



Figure 6 Markings on cutter

An observation: There are several prototype and salesman's sample planes by Sargent and Stanley in my collection. Almost all of those by Stanley are in pristine condition and show few signs of use. All of those by Sargent have been put to use as user tools, and some none too well cared for, as evidenced by general wear, paint spatters, dings, worn japanning, and occasional rust. A speculation on this observation: Perhaps Stanley held their prototypes and salesman's samples more closely before they got into collector's hands while Sargent let theirs go out the door to users when they were done with them. Or, maybe, just the effects of a small sample size.

If you have additional information or comments about this or other Sargent prototypes, please contact me at jamesgillis5@gmail.com or reply to this blog. I look forward to hearing from you.

References

- [1] D. Wilwol, *The Sargent Hand Plane Reference Guide for Collectors & Woodworkers*, Don Wilwol, 2017, p. 40.

