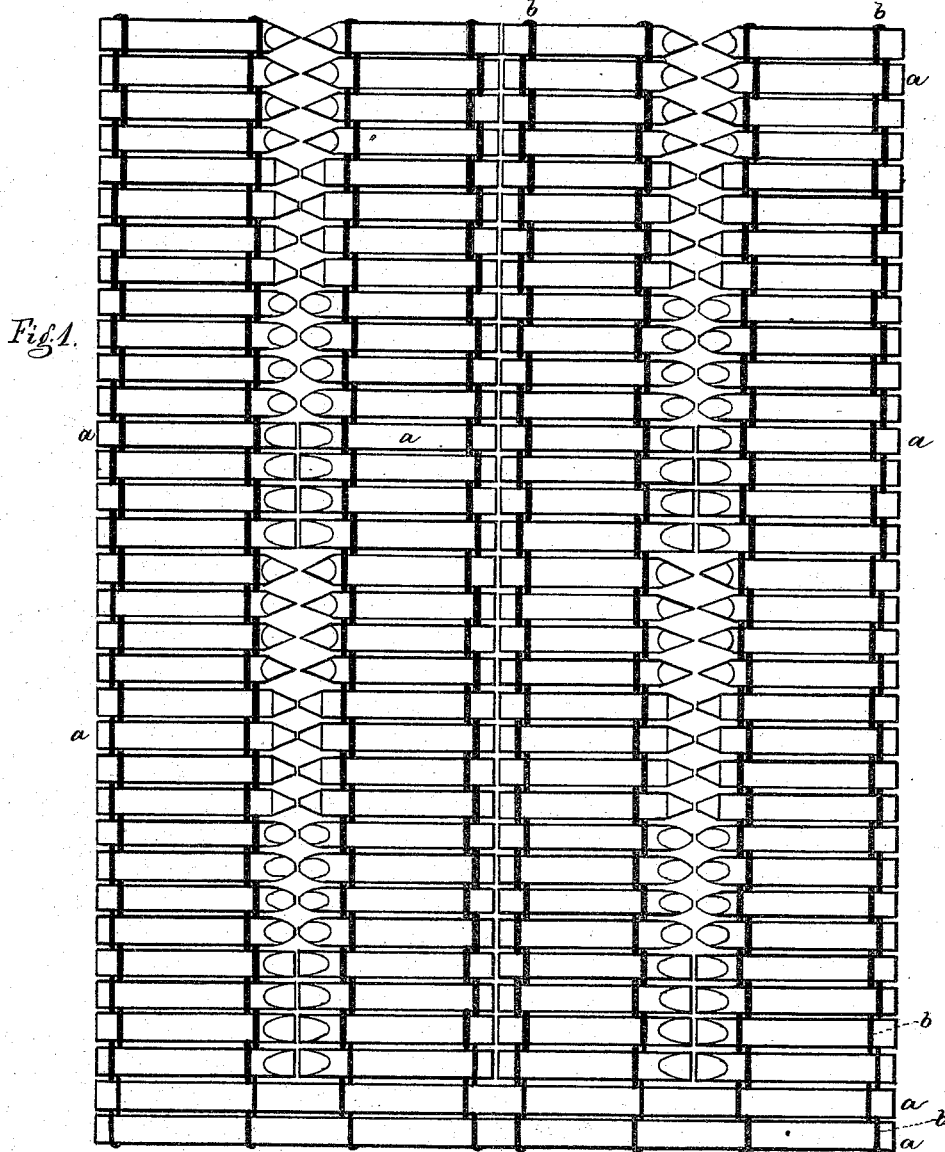
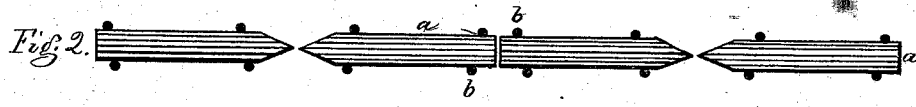


B. F. STURTEVANT.

Process for Manufacture of Sole-Fastenings.

No. 162,971.

Patented May 4, 1875.



Witnesses.  
*L. H. Latimer.*  
*Wm. Pratt.*

Inventor.  
*Benjamin F. Sturtevant*  
PER *Corody & Gregory* Attys.

# UNITED STATES PATENT OFFICE.

BENJAMIN F. STURTEVANT, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN PROCESSES FOR MANUFACTURE OF SOLE-FASTENINGS.

Specification forming part of Letters Patent No. 162,971, dated May 4, 1875; application filed March 6, 1875.

*To all whom it may concern:*

Be it known that I, BENJAMIN F. STURTEVANT, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improved Process in the Manufacture of Sole-Fastenings, of which the following is a specification:

In the United States Letters Patent, No. 159,777, granted to me February 16, 1875, I have described as a new manufacture a series of sole-fastenings united into a long strip or ribbon or web by means of threads, in which strip the fastenings may be said to take the place of the woof, and the threads the place of the warp, of a woven fabric, as by reference to said patent will more fully appear.

My present invention is designed to facilitate and cheapen the production of such strips and sole-fastenings, and it consists of the following process:

Rods, pins, or strips of wood or of metal, or of other suitable material, of size and shape of cross-section suitable for sole-fastenings, are prepared of considerable length, sufficient to make two or more lengths of sole-fastenings, and are woven into a web by being interlocked with or interlaced by several threads or fine wires, or other suitable material, acting as a warp, said rods being the weft or woof. The weft-rods may be of considerable length—about twelve inches will be a convenient length in practice; and if sole-fastenings are to be prepared therefrom of half an inch in length, then the weft-threads should be so disposed as to make twenty-four warp-lines arranged in pairs, each pair arranged so as to escape the edges of the narrow ribbons or strips, into which the wide web is to be cut as the last operation in my process, the cutting action being such as to form heads and points of desirable shape on each fastening. Stated in other words, my process consists, first, in forming a web of such width that it may be cut into two or more narrow webs, in which web the woof is of wooden rods, or of wire or wire-like material, of any suitable substance, and of size and form of section adapted to form sole-fastenings, and in which the weft is of threads or of fibrous material, or of very fine wire, so arranged that the

lines of weft will not be in the lines of the edges of the narrow strips to be formed by the second operation in the process, which is the severing of the woof or weft in such manner that narrow strips or webs are formed having one or more weft-threads uniting the woof parts, and in which each individual part of the woof may have a point of any desired shape and degree of acuteness, and will be of any determined length adapted for a sole-fastening nail or peg.

In the drawing, illustrative of my process, the woof *a a* and weft *b b b b* are shown exaggerated in size. The woof is exhibited as of length sufficient to form four separate narrower strips, in each of which the woof is united by two lines of weft. At one end of Figure 1 the woof is shown as continuous. Through the rest of the woof a central cut is shown, making the heads of two webs of peg-fastenings. Where such fastenings are of wood, this cut will be advantageously made by a circular saw. When chisel-shaped points are called for they may be made by the action of such cutters as will remove material along the central line of the web to be severed into two parts; or such chisel-points may be made in whole or in part by pressure. Various forms of points may be made on each individual part of the woof after being cut into narrow webs, and such points may be made by compression of the material, or by removal of it, or both by removal and compression, and for such purpose any of the mechanism heretofore described by me in other patents may be used.

I claim—

That improvement in the art or process of forming sole-fastenings consisting of forming a web, substantially as set forth, and then dividing such web into two or more narrow webs of suitable lengths for fastenings, substantially as described.

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

BENJ. F. STURTEVANT.

Witnesses:

J. B. CROSBY,  
G. W. GREGORY.