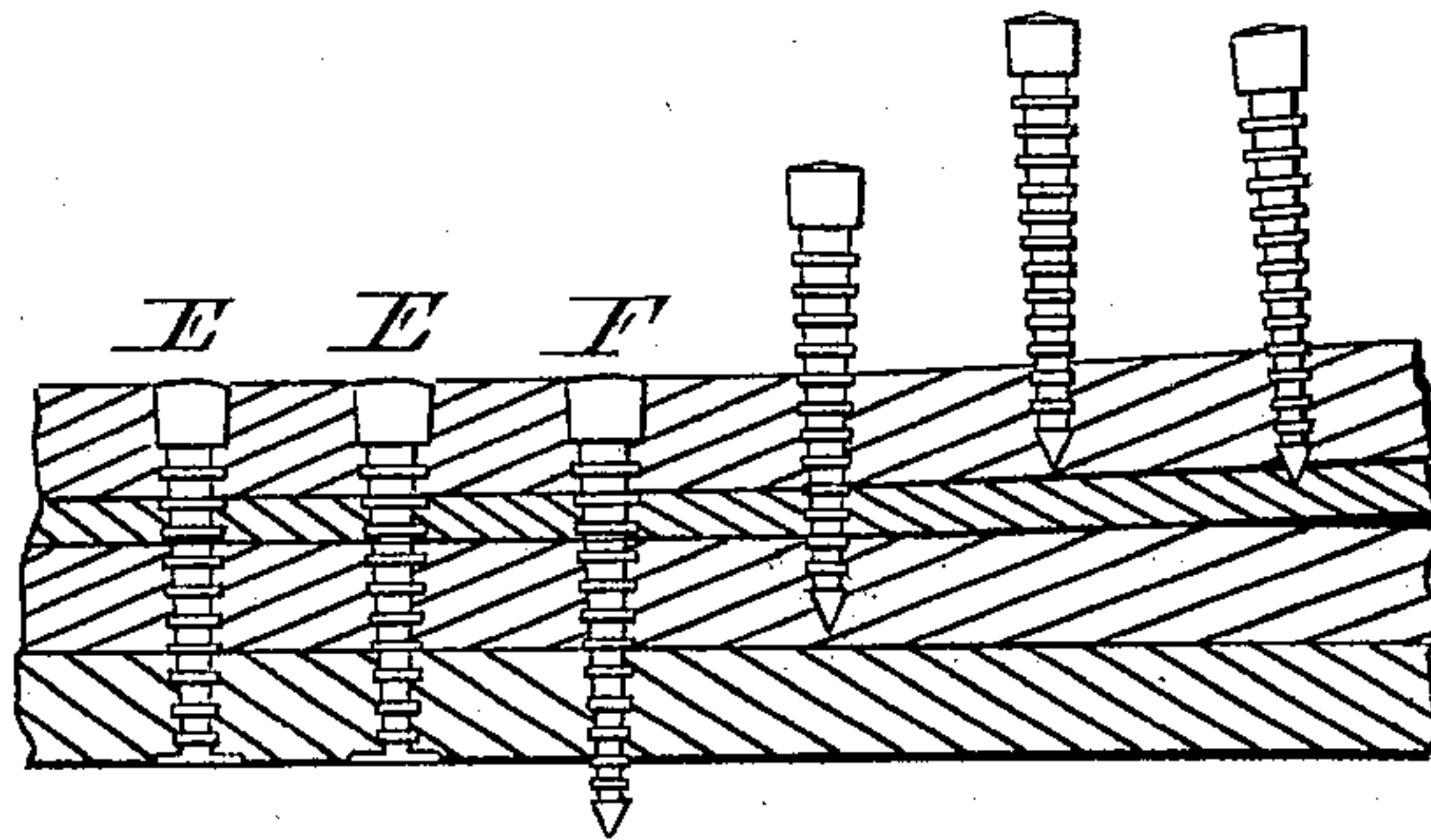
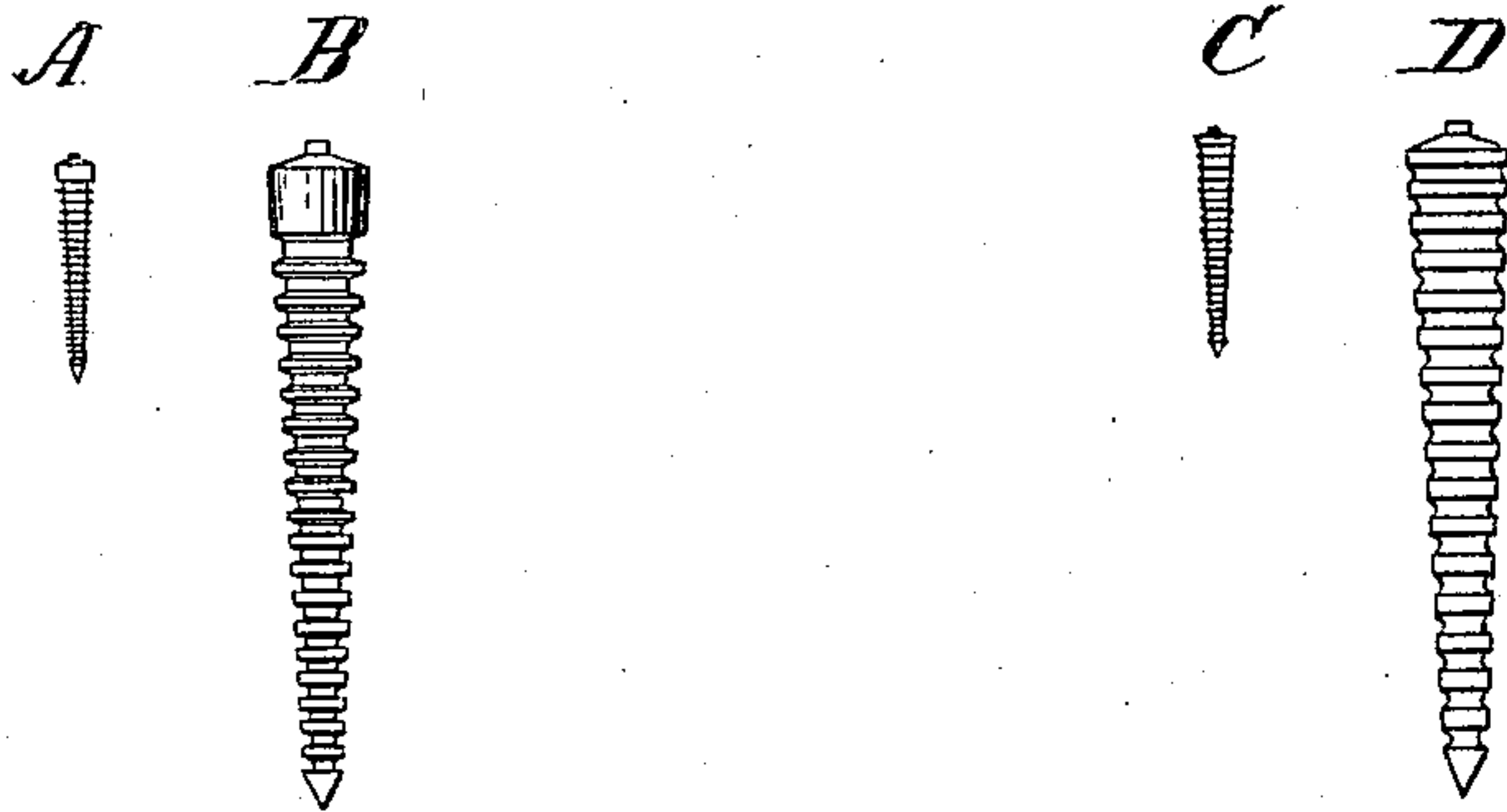


L. GODDU.  
Nails for Sole Fastenings.

No. 169,257.

Patented Oct. 26, 1875.



Witnesses:

*W. H. Wagner*  
*J. H. Rutherford*

Inventor:

*Louis Goddu*  
*By Johnson & Johnson*  
*his Atty.*

# UNITED STATES PATENT OFFICE.

LOUIS GODDU, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE AMERICAN  
CABLE-SCREW-WIRE COMPANY, OF SAME PLACE.

## IMPROVEMENT IN NAILS FOR SOLE-FASTENINGS.

Specification forming part of Letters Patent No. **169,257**, dated October 26, 1875; application filed  
September 20, 1875.

### CASE A.

*To all whom it may concern:*

Be it known that I, LOUIS GODDU, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Nails for Sole-Fastenings; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to the construction of nails designed principally to be used in the manufacture of boots and shoes, and to be driven either by hand or machine, and with or without the use of an awl.

Nails made for the purpose of uniting soles to uppers of boots and shoes have been made of various shapes, and possessing more or less utility.

It is believed by those conversant with this branch of industry that no nail patented prior to this possesses all the essential qualities needed to make a perfect nail.

A nail, to be what is required, should possess, among other things, the following essential features: First, it should be capable of being driven, if desired, without any hole being first made by an awl; or, if the hole is made, it need be only very small. It should have an indefinite clinching-point, great holding power, and show a perfect head after being driven.

My design is to produce a better nail as a sole-fastening than any that has yet, to my knowledge, been used in the trade. In carrying out this object I prefer, for this purpose, a cylindrical nail, because it is easier made, and this shape being preferable in the finish of a boot or shoe. I do not use, in this nail, a shouldered head to prevent its working into the foot when the shoe is being worn. I obtain a symmetrical head, however, by leaving the nail the full thickness of the wire at its largest end, and slightly convex on its head-

surface, from which point a symmetrical taper is formed, terminating at the other end of the nail at a point in direct line with the center of the head. On the surface of the shank I form a series of corrugations or grooves, or, if desired, a series of short combs, forming a rack of horizontal parallel circular fins, commencing at or near the head of the nail. These corrugations extend to the extreme point, as near as practicable, the depth and size of these corrugations being preferably deeper and broader near the head, and diminishing in size as they come near the point.

The leather embeds itself easily into the corrugations, no violent disruption of the fiber being caused by driving the nail, while its tapering conical point allows it to clinch easily and perfectly, whether it is driven through a sixteenth or quarter of an inch, or even more.

This nail holds equally well, whether it has a long or short clinch, and if driven so that the point barely comes through, without any clinch at all, it is almost impossible to draw it out. Corrugations are far preferable to a thread as a holding device, from the fact that no amount of turning in any direction serves to disengage the nail from its hold on the leather, which is not the case with the screw-thread.

This nail is driven with less power, maintains its vertical direction through the leather, has a stronger clinch, of more indefinite extent, greater holding power, and more symmetrical head, than any nail which I have ever seen.

I make the nail slightly convex on its head-surface, so that the blows, by driving, shall not destroy the perfect symmetry of the head, but leave, after finishing, a perfectly spherical head.

The drawings show such a nail in elevation, A; an enlarged view thereof, B. C shows a nail, with corrugations covering the entire surfaces of the shank; D, an enlarged view thereof; E, a nail driven and clinched in a piece of leather; F, a nail driven without being clinched.

I have searched for nails possessing the



qualities aforestated, and, not being able to find any, I believe they are not in use, and that my nail is new to the trade.

I have described my nail with special reference to sole-fastenings. It is, however, equally applicable for uniting different layers of leather for pouches, hose, &c., as well as articles of paper and wood.

The indefinite clinching-point is obtained by having it symmetrical with the shank of the nail, which, being of cylindrical tapering form, will clinch at the point, without regard to any particular extent of projection of such point beyond the surface of the stock into which it may be driven.

The corrugations may be horizontal grooves of the form shown in B and C, or truncated cones or fins, as may be deemed best; but the spaces between the cones or fins must decrease, both in width and depth, from the head to the point.

I do not claim, broadly, a tapering nail composed of a series of connected conic frustums, with an elongated point-forming apex; but my invention is specifically set forth in the following claims.

I claim—

1. A shoe-nail consisting of a cylindrical head, conical shank, and a series of horizontal parallel grooves or corrugations, extending from the base of the head to the point of the nail.

2. In a boot or shoe nail, the combination of a cylindrical head, having a spherical surface, a conical shank, terminating at a point in line with the center of the head, and horizontal parallel grooves or corrugations, with a clinching-point of indefinite length symmetrical with the conical body.

3. In a boot or shoe nail, the grooves or corrugations, diminishing in depth and width from the head to the point of a cylindrical tapering body.

In testimony that I claim the foregoing I have hereunto affixed my signature in presence of two witnesses.

LOUIS GODDU.

Witnesses:

N. S. HOTCHKISS,  
A. W. ADAMS.