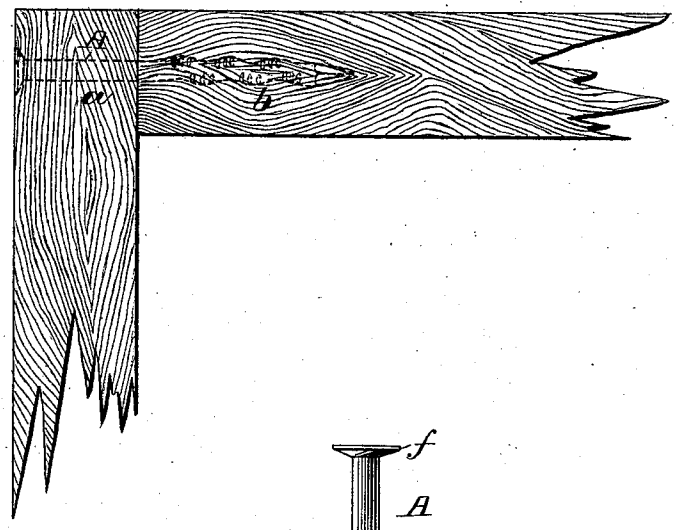
(No Model.)

J. E. EMERSON & T. MIDGLEY.

BARBED AND CORRUGATED WIRE NAIL.

No. 372,844. Patented Nov. 8, 1887.

Fig. 1.



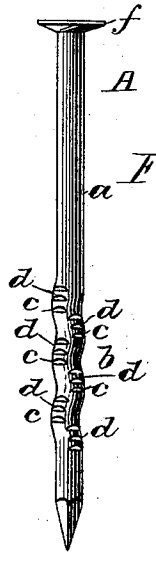


Fig. 2.

Witnesses
Wm. J. Tanner
Wm. C. Dyer.

Inventor
James E. Emerson
Thomas Midgley
By their Attorneys
Johnston, Reinehl & Dyer

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

JAMES E. EMERSON AND THOMAS MIDGLEY, OF BEAVER FALLS, PENNSYLVANIA.

BARBED AND CORRUGATED WIRE NAIL.

SPECIFICATION forming part of Letters Patent No. 372,844, dated November 8, 1887.

Application filed August 15, 1887. Serial No. 246,999. (No model.)

To all whom it may concern:

Be it known that we, JAMES E. EMERSON and THOMAS MIDGLEY, citizens of the United States, residing at Beaver Falls, in the county of Beaver and State of Pennsylvania, have invented certain new and useful Improvements in Barbed and Corrugated Wire Nails; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to wire nails, and has for its object an improvement on the wire nails now in common use, whereby the nails will hold more securely in the wood in which they are embedded.

The invention will be hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, which form a part of this specification, Figure 1 represents two pieces of wood secured together by a nail of our invention, and Fig. 2 is a side view of a nail.

Reference being had to the drawings and the letters marked thereon, A represents a nail, the upper portion, *a*, of which is a plain smooth cylindrical body and extends to or about the center of the length of the nail. The lower portion *b* of the nail is corrugated, as shown, and the projections *c* are provided with barbs or niches *d*, which may be formed in one or more rows of two or more barbs or niches. The lower portion or end *e* of the nail is also a plain smooth cylindrical body, and is in the same plane as the portion *a*.

The barbs or niches *d* are cut from the upper part or head *f* of the nail, and are inclined toward its point, so that as the nail is driven or forced into wood of any kind the latter is not torn or seriously "ragged," but the barbs or outer wall of the niches catch to the wood as the nail is being drawn out.

By the construction of nail shown the wood into which it has been driven will shrink around the corrugations and niches or barbs in the nail and hold the nail more firmly than when a plain smooth body is formed.

The nails may be of any size, from the smallest used to spikes.

Having thus fully described our invention, what we claim is—

1. A wire nail having a plain smooth body portion and a corrugated and barbed or niched portion, substantially as described.

2. A wire nail having a plain smooth cylindrical portion at each end and a corrugated and barbed or niched intermediate portion, substantially as described.

3. A wire nail having a plain smooth body portion and a corrugated portion, the projections of which are provided with barbs or niches, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

JAMES E. EMERSON.
THOMAS MIDGLEY.

Witnesses:
J. F. MERRIMAN,
T. R. HERMON,