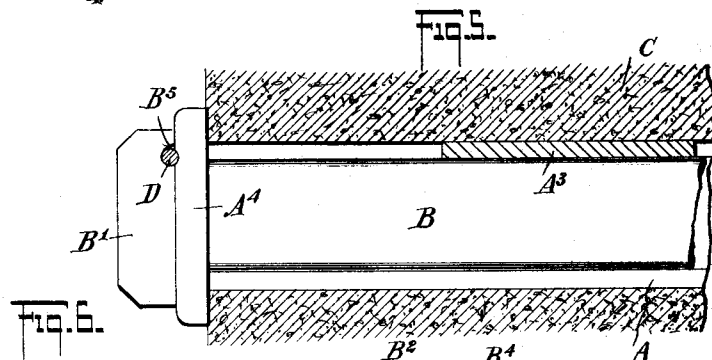
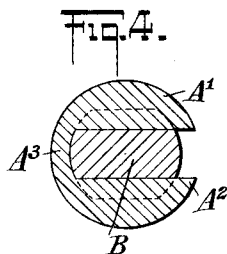
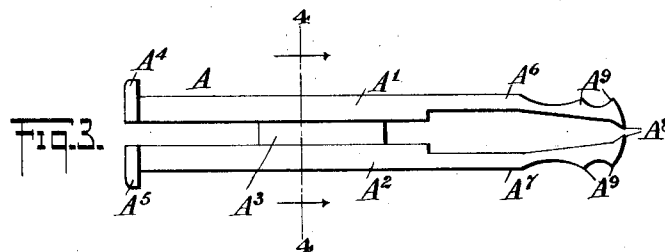
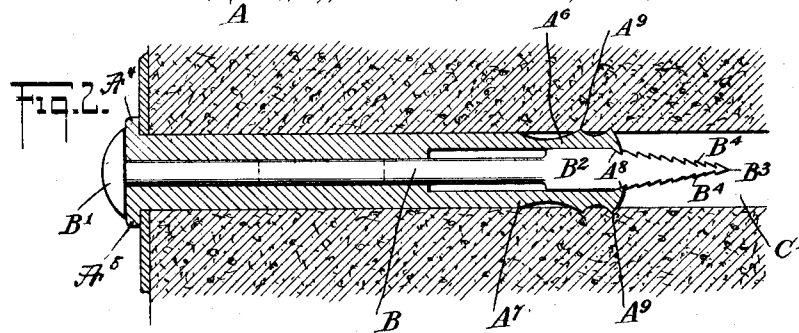
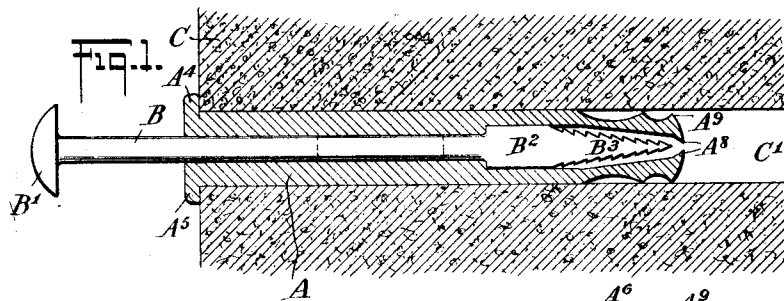


G. C. RAEGER.
EXPANSION NAIL.

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1,104,544.

Patented July 21, 1914.



WITNESSES

W. C. Baker Jr.
Geo. H. Foster

INVENTOR

George C. Raeger
BY *Mannico*
ATTORNEYS

UNITED STATES PATENT OFFICE.

GEORGE C. RAEGER, OF WATERLOO, NEW YORK.

EXPANSION-NAIL.

1,104,544.

Specification of Letters Patent.

Patented July 21, 1914.

Application filed January 17, 1914. Serial No. 812,743.

To all whom it may concern:

Be it known that I, GEORGE C. RAEGER, a citizen of the United States, and a resident of Waterloo, in the county of Seneca and State of New York, have invented a new and Improved Expansion-Nail, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved expansion nail for use in concrete fence posts and other structures and arranged to permit of conveniently applying the expansion nail and to securely fasten a fence wire or other article in place. In order to accomplish the desired result use is made of a sheathing or shell adapted to be placed into a hole in the structure and having spaced members connected with each other at a point between the ends of the shell to form a longitudinal recess between the shell members, the inner ends of which are normally bent inward to form gripping jaws, and a nail adapted to be placed into the said recess and having a head and conical end adapted to spread the said jaws apart to firmly engage the jaws with the wall of the hole.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a sectional side elevation of the expansion nail in position on a concrete structure and with the nail in outermost position; Fig. 2 is a similar view of the same with the nail driven in, fastening an article in place; Fig. 3 is a side elevation of the sheathing or shell; Fig. 4 is an enlarged cross section of the expansion nail, the section being on the line 4-4 of Fig. 3; Fig. 5 is a sectional side elevation of part of the expansion nail showing a fence wire fastened in position to a fence post; and Fig. 6 is a plan view of the nail.

The expansion nail consists essentially of two parts, namely a sheathing or shell A and a nail B. The shell A is formed of two members A' and A² spaced apart and integrally connected with each other at one side by a connecting member A³ extending intermediate the ends of the members A' and A². The outer ends of the members A' and A² are provided with head flanges A⁴ and A⁵ adapted to abut against the outer face of the concrete post or other structure C provided

with a hole C' in which fits a shell A, as plainly indicated in Figs. 1 and 2. The inner ends of the members A' and A² terminate in jaws A⁶, A⁷ having their inner opposite faces spaced farther apart than the main portions of the members A' and A², as plainly indicated in the drawings. The jaws A⁶, A⁷ are normally bent inward toward each other, as plainly shown in Fig. 1, and the terminals of the jaws are provided with sharp edges A⁸. The outer faces of the jaws are also provided with sharp edges A⁹.

The nail B is flat and fits into a recess formed in the members A' and A², and the nail is provided at its outer end with a head B' and at its inner end with an enlarged portion B² adapted to fit into the enlarged inner end of the recess extending lengthwise between the spaced members A' and A² (see Fig. 1). The enlarged end B² terminates in a point B³ provided at the sides with teeth B⁴, and the said point B³ normally extends within the jaws A⁶, A⁷, as indicated in Fig. 1, with the head B' of the nail a distance from the flanges A⁴, A⁵. It will be noticed that by the arrangement described the shell A with the nail B placed therein as indicated in Fig. 1 can be readily pushed into the hole C' of the fence post or other structure C, and then the nail B can be readily driven inward by a blow with a hammer on the head B' so that the point B³ passes between the terminals of the jaws A⁶, A⁷ and spreads the same apart, and in doing so causes the edges A⁹ to embed themselves in the wall of the hole C', as plainly indicated in Fig. 2. It will also be noticed that when the nail B is driven home the edges A⁸ engage the teeth B⁴ so that the nail B cannot be withdrawn from the shell A.

When it is desired to fasten a fence wire D, for instance, in position on a fence post, as indicated in Fig. 5, then the head B' of the nail B is provided at its inner face with a recess B⁵ for the reception of the fence wire D, and when the nail is driven home then the fence wire D is clamped between the head flanges A⁴, A⁵ of the shell A and the head B' of the nail B.

It is understood that I do not limit myself to the particular use of the expansion nail as shown and described, as it is evident that the nail may be readily used for fastening various articles in position on a concrete post or similar structure.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. An expansion nail, comprising a shell having spaced members rigidly connected with each other intermediate the ends to form a longitudinal recess, the outer end of the shell having a head and the inner ends of the said members terminating in jaws, and a nail adapted to be placed into the said recess and having a head at its outer end and a conical inner end adapted to spread the jaws apart on driving the nail inward, the conical end of the nail being of such a length that a portion thereof remains between the jaws and holds them apart.

2. An expansion nail, comprising a shell having spaced members rigidly connected with each other intermediate the ends to form a longitudinal recess, the said recess being widened at the inner end of the shell, the outer ends of the shell members having head flanges and the inner ends of the shell members forming gripping jaws, the terminals of which are normally close together, and a nail adapted to be placed into the said recess and having a head at its outer end, the inner end of the nail being enlarged to fit into the said widened inner portion of the recess, the enlarged inner end of the nail terminating in a toothed point adapted to pass between the terminals of the jaws to spread the same apart, the jaw terminals engaging the teeth of the point to prevent return movement of the nail.

3. An expansion nail, comprising a shell having spaced members rigidly connected with each other intermediate the ends to form a longitudinal recess, the said recess being widened at the inner end of the shell, the outer ends of the shell members having head flanges and the inner ends of the shell members forming gripping jaws, the terminals of which are normally close together, and a nail adapted to be placed into the said recess and having a head at its outer end,

the inner end of the nail being enlarged to fit into the said widened inner portion of the recess, the enlarged inner end of the nail terminating in a toothed point adapted to pass between the terminals of the jaws to spread the same apart, the jaw terminals engaging the teeth of the point to prevent return movement of the nail and the outer faces of the jaws being provided with sharp edges adapted to embed in the wall of the hole in which the expansion nail is used.

4. An expansion nail, comprising a shell having spaced members rigidly connected with each other intermediate the ends to form a longitudinal recess, the said recess being widened at the inner end of the shell, the outer ends of the shell members having head flanges and the inner ends of the shell members forming gripping jaws, the terminals of which are normally closed together, and a nail adapted to be placed into the said recess and having a head at its outer end, the nail head having a slot for the reception of a fence wire, the inner end of the nail being enlarged to fit into the said widened inner portion of the recess, the enlarged inner end of the nail terminating in a toothed point adapted to pass between the terminals of the jaws to spread the same apart, the jaw terminals engaging the teeth of the point to prevent return movement of the nail.

5. An expansion nail, comprising a shell having jaws at its inner end, and a nail having at its inner end an elongated enlargement terminating in a toothed point, said enlargement, when the nail is driven into the shell lying between the jaws with its point projecting beyond the said jaws.

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

GEORGE C. RAEGER.

Witnesses:

CHARLES A. BUCKNER,
DAVID L. BROOKS.