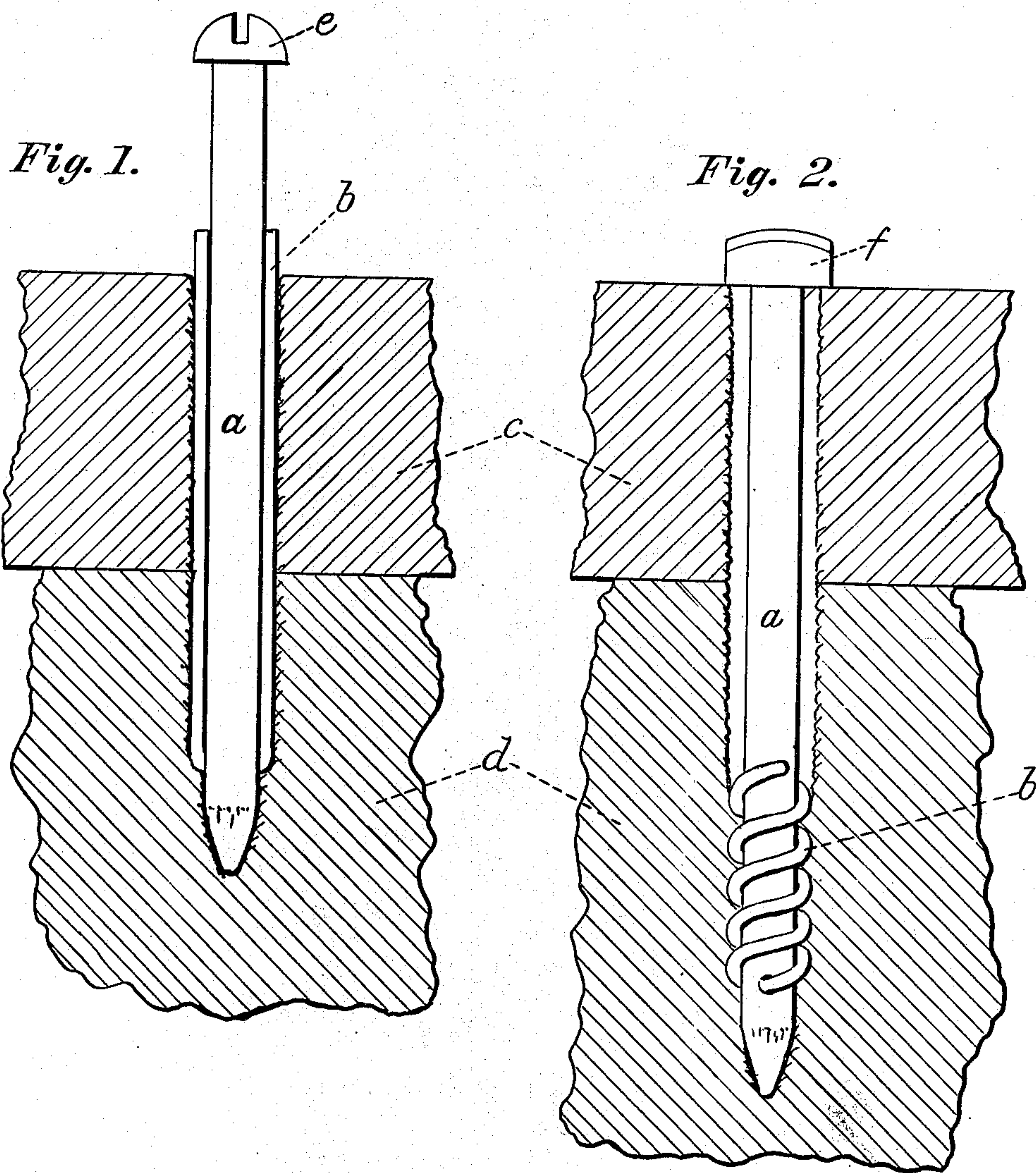


A. SMITH.
SPIKE LOCK.
APPLICATION FILED JAN. 3, 1908.

900,318.

Patented Oct. 6, 1908.



WITNESSES:
Geo. Brinkerhoff
J. M. Porter

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UNITED STATES PATENT OFFICE

ALLEN SMITH, OF THE UNITED STATES ARMY.

SPIKE-LOCK.

No. 900,318.

Specification of Letters Patent.

Patented Oct. 6, 1908.

Application filed January 3, 1908. Serial No. 409,226.

To all whom it may concern:

Be it known that I, ALLEN SMITH, United States Army, a citizen of the United States, residing at Fort Wright, in the county of Spokane and State of Washington, have invented a new and useful Spike-Lock, of which the following is a specification.

My invention relates to improvements in locks or securing devices for spikes capable of being revolved after being partly or wholly driven, and the objects of my improvement are to provide a device which will hold the spike firmly after being driven, which is capable of being tightened on becoming loose, and which will permit the spike to be easily removed. I attain these objects by the device illustrated in the accompanying drawing, in which the different parts are designated by suitable reference characters, and in which—

Figure 1 shows a spike with locking device in process of being driven, and Fig. 2 shows spike and locking device after being driven.

a is the shaft of a spike made approximately circular in cross-section so as to permit of being revolved after being driven, *b* is a strip of flexible metal passed through a transverse opening in the spike preferably near the point thereof, and *c* and *d* are two pieces of wood or other material that it is designed to secure together.

e and *f* are forms of heads used to revolve the spike while being or after being driven. Other forms can be used if found to be more convenient, for instance, an aperture through the head of the spike into which a bar can be inserted to turn the spike.

The operation of the spike lock is as follows: The spike with lock attached is driven either part way or wholly into the material desired to be secured, and then the spike revolved by means provided on the head thereof. If driven only part way before being revolved, the flexible strip *b* will wind around the shaft of the spike in the form of the threads on a screw, as shown in Fig. 2, and will act as a screw and draw the spike into the material until the head is flush with its surface. If the spike is wholly driven before being revolved, the flexible strip will wind around the shaft of the spike at its attachment to the spike. In either case, the spike should not be revolved at first until the flexible strip has been drawn down entirely to and wound

around the end of the spike, but should be turned only until a firm lock is secured, then if the spike and lock become loose, it can be tightened again by revolving the spike in the same direction as before, which will cause a portion of the flexible strip to collect around the end of the spike and fill any space that may have been formed there. By simply revolving the spike each time only sufficiently to tighten the spike, this operation can be repeated a number of times. If the spike finally becomes loose and cannot be retightened, or for any reason it is desired that it be removed, this can be accomplished by revolving the spike in the reverse direction from that required to tighten it, when the flexible strip will be broken loose from the spike, which can then be easily removed, and can be replaced by inserting another flexible strip in the opening and driving as before. Different forms of the flexible strip *b* may be used, but I prefer a strip with a circular or angular cross-section.

The above locking device may be used to advantage with any form of a spike, nail or bolt to which it is adapted, and especially where the holding strength of a bolt is desired but cannot be used, in which event an equivalent holding strength can be obtained by providing a bolt of the desired size with the above locking device.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

1. A spike or nail provided between the point and head thereof with a transverse opening, and a lock of flexible metal passed through said opening and the length of which is greater than the transverse thickness of the spike or nail, and means for revolving the spike or nail.

2. A spike or nail having an approximately circular cross-section, provided near the point thereof with a transverse opening, a lock of flexible metal passed through said opening and the length of which is greater than the transverse thickness of the spike or nail, and means for revolving the spike or nail.

ALLEN SMITH.

Witnesses:

ULYSSES B. HOUGH,
JOHN B. JOHNSTON.