

(No Model.)

S. S. DEEMER.

NAIL OR SPIKE.

Patented Apr. 21, 1891.

No. 450,861

Fig. 3.



Fig. 1.

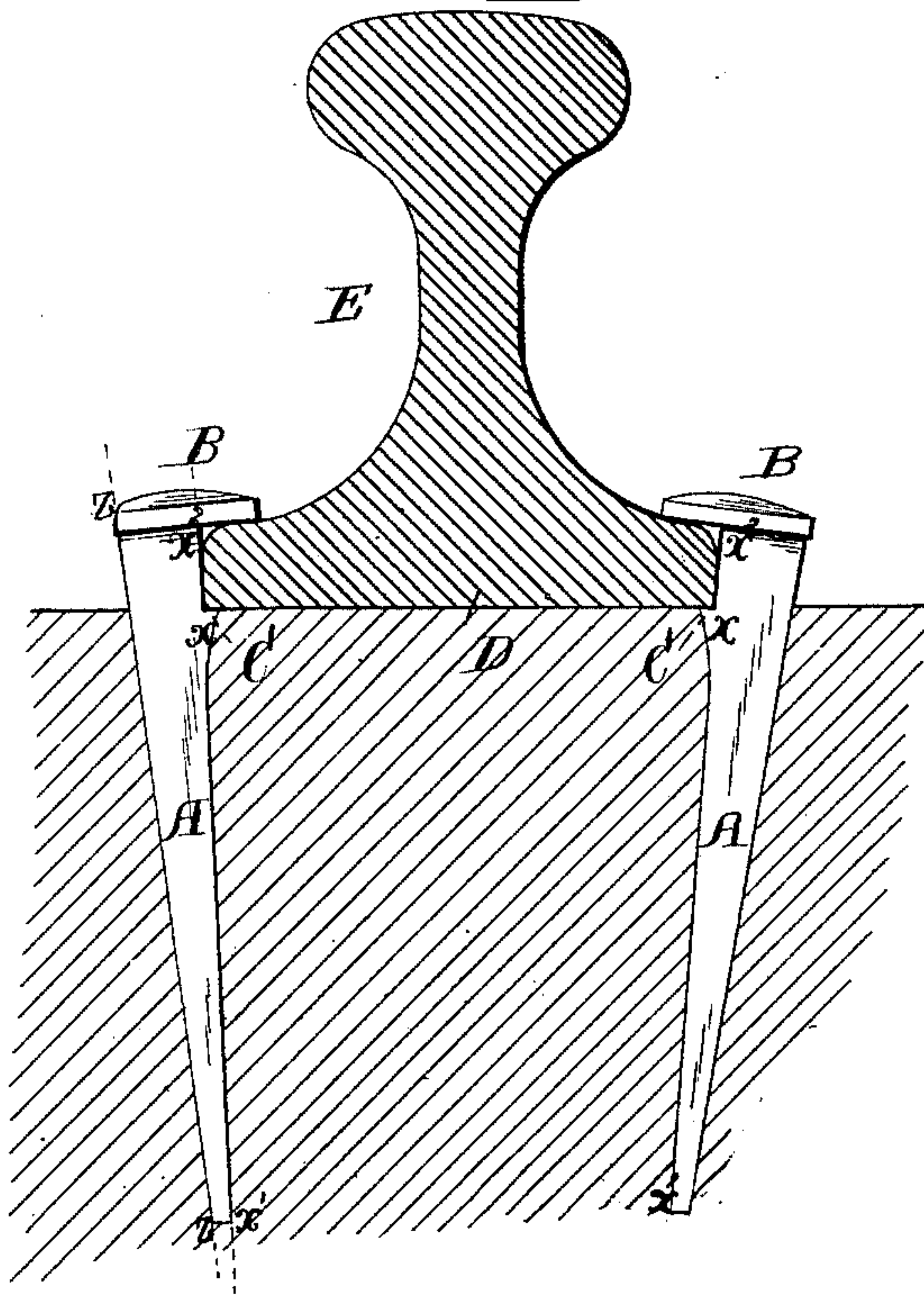
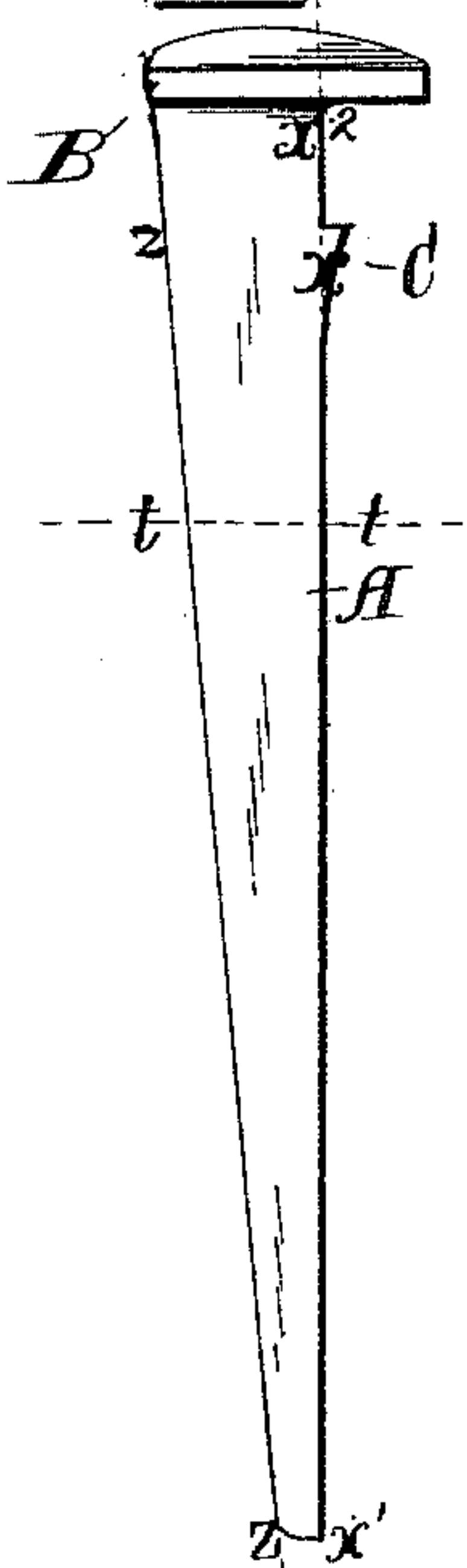


Fig. 2.



Witnesses:

J. C. Turner

M. B. May.

Inventor.

Selden S. Deemer

by
Doubleday & Bliss
his Attys

UNITED STATES PATENT OFFICE.

SELDEN S. DEEMER, OF CHESTER, PENNSYLVANIA.

NAIL OR SPIKE.

SPECIFICATION forming part of Letters Patent No. 450,861, dated April 21, 1891.

Application filed March 8, 1890. Serial No. 343,159. (No model.)

To all whom it may concern:

Be it known that I, SELDEN S. DEEMER, a citizen of the United States, residing at Chester, in the county of Delaware and State of Pennsylvania, have invented certain new and useful Improvements in Fasteners for Railroad-Rails, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to improvements in spikes or devices for fastening railroad-rails.

Figure 1 shows a rail and my improved spike. Fig. 2 shows the spike detached. Fig. 3 is a section on line *t t*, Fig. 2.

15 The spike is shown as having the shank A angular in cross-section, (see Fig. 3,) and the hook-head B, which engages with the upper side of the flange of the rail. It is substantially wedge-shaped and has unbroken sides, except at C, where there is a projection extending across the shank. When the spike is driven into place, the projection passes down by the side of the flange D, and then springs or slips into place a short distance under the edge and abuts against the flange, and is held in position by the elasticity of the fibers of the wood. The jolting and jars experienced by the rails cannot cause the head B to move upward away from the flange, and therefore the shank A will be retained in proper position in the wood.

By using a spike-retainer of substantially this character I obviate the spreading of the rails of a track. Such spreading, as is well known, results from the fact that the spikes loosen in the wood to such an extent that when severe lateral pressure is brought to bear upon the rails they are forced outward, such outward movement under pressure being possible even before the spikes come entirely out of the wood, a partial loosening of them being sufficient.

It will be seen that it is impossible to start any one spike when they are fastened as herein provided for without the rail-flange yielding from end to end of the rail, which is a contingency not liable to be met.

In order that my invention may be clearly understood, I will refer to those in the same general class which it has been attempted to use for the same purpose.

One of the earlier spikes has been made

with a groove directly under the hook-head, extending outward from the line of the inner face, and upon the opposite or outer side made with a wedge-shaped offset, with the expectation that the fibers of the wood resting against the inner face of the spike would be crowded away sufficiently by the wedge to cause the lower edge of said groove to permanently engage with the under side of the flange of a rail; but with that construction it is necessary to crowd out of place all of the fibers of the wood bearing against the whole of the body or shank of the spike on the inner side, in order to force the said lower edge of the groove in far enough, and this crowding is very difficult and in many cases impossible to accomplish.

Earlier spikes of another form were made in such way as to be used in pairs in connection with a metal plate sunk into the wooden sleeper, those of each pair being arranged opposite to each other and both having barbs near the point end and being constructed so that one could be forced toward the other by a separate wedge. Each spike of such a pair had a projection extending inward from the inner face to engage with the under side of the rail-flange; but this projection was not driven into the wood, and, owing to the presence of the aforesaid barb below it, it could not be driven into it to advantage. In another case the shank was made cylindrical, so that it could be turned after being driven into the wood; but I desire to prevent all turning of the shank and make it angular in section. (See Fig. 3.) In my case the part which enters the wood is, as has been said, of the ordinary form without any projections extending inward from the inner face or outward from the outer, and therefore it can be applied and driven in the ordinary way. This construction differs also in the respects above described from the earlier ones referred to, the outer face being on a continuously straight unbroken line *z z*, and the inner face being also unbroken or on a continuous straight line *x x'*, continued above the part C, as at *x x''*.

What I claim is—

The herein-described fastener for a railroad-rail, it having the shank A angular in cross-section and formed with the straight

unbroken outer face, as at $z z$, and with the
straight unbroken inner face, as at $x x'$, and
having the projection C integral with said
shank and projecting inward from the line
5 $x x'$ and adapted and located substantially as
set forth, whereby when driven it passes be-
low and catches under the flange.

In testimony whereof I affix my signature in
presence of two witnesses:

SELDEN S. DEEMER.

Witnesses:

THOS. MARPLE,

A. H. DILL.