

(No Model.)

J. N. HIERONYMUS.
FASTENER FOR WOOD JOINTS.

No. 546,152.

Patented Sept. 10, 1895.

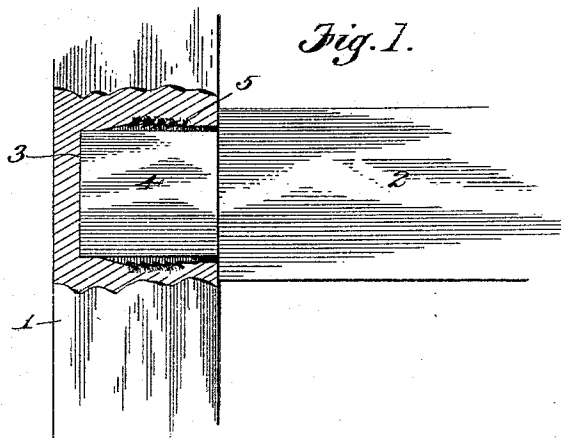


Fig. 1.

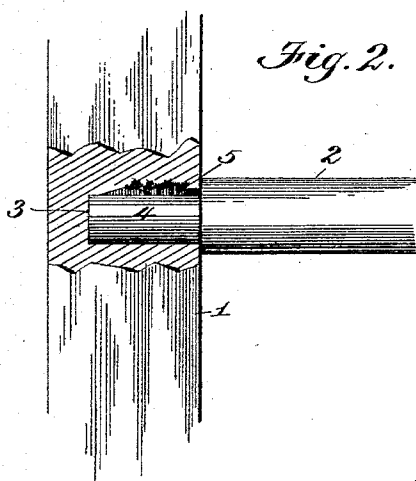


Fig. 2.

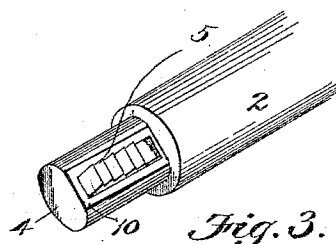


Fig. 3.

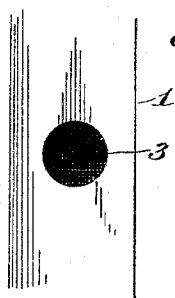


Fig. 5.

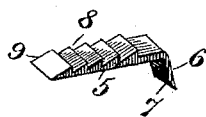


Fig. 4.

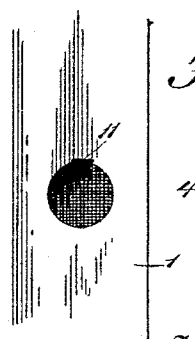


Fig. 6.

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UNITED STATES PATENT OFFICE.

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FASTENER FOR WOOD-JOINTS.

SPECIFICATION forming part of Letters Patent No. 546,152, dated September 10, 1895.

Application filed February 13, 1895. Serial No. 538,211. (No model.)

To all whom it may concern:

Be it known that I, JASPER N. HIERONYMUS, a citizen of the United States, residing at Fairbury, in the county of Livingston and State of Illinois, have invented certain new and useful Improvements in Fasteners for Wood-Joints; and I 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.

My invention relates to improvements in wood-joints and has particular reference to a new and improved metallic fastener employed in connection with the same.

The objects of my invention are to produce a secure practically inseparable joint for two adjacent members of wood, and to effect the same through the medium of a cheaply constructed readily applied metallic fastener.

With these general objects in view the invention consists in the construction of joint hereinafter described and the fastener employed in connection therewith, all as particularly pointed out in the claims.

Referring to the drawings, Figure 1 is an elevation and partial sectional view of two wood members joined in accordance with my invention, two of the metallic fasteners being employed. Fig. 2 is a similar view illustrating the mode of forming a joint with a round member or rung and but one of the metallic fasteners. Fig. 3 is a detail in perspective of the end of the round rung or member with the fastener applied. Fig. 4 is a detail in perspective of the metallic fastener. Fig. 5 is an elevation of that member in which the mortise is formed but before the insertion of the tenon member. Fig. 6 is a similar view illustrating the mortise as it appears after the insertion of the tenon member and fastener.

Like numerals of reference indicate like parts in all the figures of the drawings.

For the purpose of convenience I will designate the two members composing the joint as the "mortise" member 1 and the "tenon" member 2, it being understood that the former is provided with the mortise 3, and in the present instance the latter member is provided with the tenon 4. It is to be understood, however, that the mortise may extend entirely

through the member 1, in which case the tenon on the member 2 would be omitted and the latter member passed entirely through the member 1, such arrangement being necessary in some structures.

The fastener is made of metal and consists of the two branches 5 and 6, the same being right-angularly disposed with relation to each other, and the latter branch being considerably shorter than the former. The lower extremity of the branch 6 is beveled at its inner side, thereby producing a chisel-shaped driving-point 7. The upper side of the remaining branch 5 of the fastener is provided with a series of rearwardly-inclined teeth 8, the teeth extending to a point near the rear extremity of the fastener. The front end of the branch 5 is beveled in conformity with the teeth, as indicated at 9. One or a plurality of these metallic fasteners may be employed in a joint, the former arrangement being illustrated in Fig. 2 and the latter arrangement being illustrated in Fig. 1. These fasteners may be readily applied by forcing the driving ends 7 into the tenons near the inner ends of the latter, the toothed portions 5 lying along the tenon and terminating near their outer ends. Where the fasteners are employed in connection with round rungs, and therefore round tenons, the latter are preferably flattened on their upper sides, as indicated at 10, to form a flat surface upon which the fastener may rest. Having placed the fastener in position upon a tenon, the latter is forced into the mortise 3, the latter being, for instance, as shown in Fig. 5. It will be seen that as the tenon is inserted into the mortise the teeth of the fastener will form a channel, as indicated at 11, Fig. 6, the fiber of the wood being forced away by the inclined teeth, which latter, by reason of their inclination, offering but slight obstruction to the insertion of the tenon. When, however, the tenon has become seated in the mortise, the fiber of the wood that has been thus forced aside has a tendency to return, and therefore engages with the rear edges of the teeth of the fastener and securely locks the tenon against withdrawal, all as clearly illustrated in Figs. 1 and 2. In appearance the joint is ordinary, but it will be seen that a most effective means has been provided

for preventing the withdrawal of the tenon, and I thus obviate the use of pins or nails for securing the tenons in position.

It will be understood that the fasteners may be formed of any suitable length, and they may be provided with any number of teeth, which latter may be made coarse or fine, as desired, all such changes being mere mechanical skill, or as may be suggested by the character of work to be performed.

Having described my invention, what I claim is—

1. The herein described metallic fastener for wood-joints, the same consisting of the right angularly disposed branches 5 and 6, the former having the series of inclined transverse teeth 8, terminating short of its rear end, and its front end beveled as at 9, and the branch 6 reduced to form the chisel-edge driving-point 7, substantially as specified.

2. The combination with the member 1, having the mortise 3, and the member 2, having the tenon 4, of the right angularly shaped metal fastener having the branches 5 and 7,

the former provided upon its upper side with a series of transverse teeth inclined toward the outer angle of the device, and the member 7 engaging permanently with the tenon, substantially as specified.

3. The combination with the member 1 having the mortise 3 and the member 2 having the tenon 4, of the upper and lower metallic fasteners applied to the upper and lower sides of the tenon in a permanent manner and consisting each of the right angularly disposed branches 5 and 6, the former having the series of inclined transverse teeth 8, and at its front end beveled as at 9 and the branch 6 reduced to form the driving point 7, said teeth 8 engaging with the opposing walls of the mortise 3, substantially as specified.

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

JASPER N. HIERONYMUS.

Witnesses:

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