(Model.)

R. W. FERGUSON.

JOINT FASTENER.

No. 262,032. Patented Aug. 1, 1882.

FIG. 1.

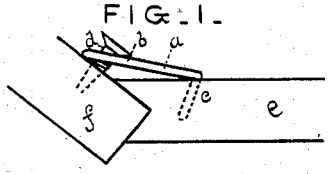


FIG. 2.

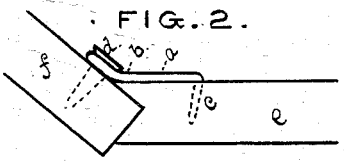


FIG. 3.

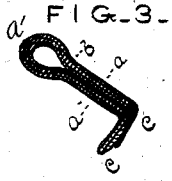


FIG. 4.

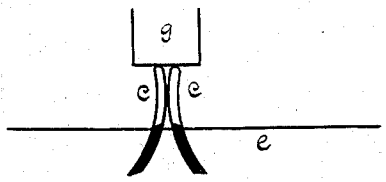
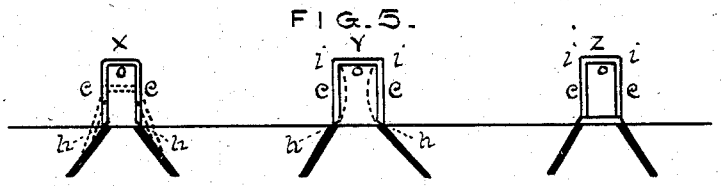


FIG. 5.



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ROBERT W. FERGUSON, OF DECATUR, ILLINOIS.

JOINT-FASTENER.

SPECIFICATION forming part of Letters Patent No. 262,032, dated August 1, 1882.

Application filed March 30, 1882. (Model.)

To all whom it may concern:

Be it known that I, ROBERT W. FERGUSON, a citizen of the United States, residing at Decatur, in the county of Macon and State of Illinois, have invented certain new and useful Improvements in Joint-Fasteners, of which the following is a specification, and which has never been patented to me nor to others with my knowledge and consent in any foreign country.

My invention relates to joint-fasteners in which one end is attached by driven points and the other by a screw. It is intended especially to connect pieces at an angle of about forty-five degrees, and the points of novelty consist in the mode of constructing and attaching both the driven points and the end that is secured by the screw.

To describe the points of novelty in my device with any degree of accuracy it will be necessary to refer to the drawings and to the state of the art.

Figure 1 is a side view of my device, showing the driven points connected and the opposite end ready to be "drawn up" or tightened by the screw. Fig. 2 shows the joint complete. Fig. 3 is my fastener in perspective. Fig. 4 is an end view of device, showing the driven points as connected; and Fig. 5 shows common staples with their points beveled to make them operate, as nearly as possible, like the driven points in my device.

The fastener is formed of a single piece of metal, round wire being preferred, bent upon itself, forming the loop *a'* at one end. The sides *a a* are pinched tightly together and bent at right angles to form the points *c c*, which are beveled in opposite directions and opened or diverged from each other, as clearly shown in Fig. 4.

As regards the state of the art, I am aware that joint-fasteners have been made with driven points that entered the wood parallel one with the other, and I am aware that joint-fasteners made to conform to the angle of the joint have been secured at one end by screws that entered the wood in a direction nearly parallel to the direction of the body of the fastener. I am also aware that staples have been beveled on their points to make them enter the wood at an angle with the surface, and I hereby disclaim all these.

Taking my device in the first process of attachment the driven points *c c* are forced into the wood by *g*, as shown in Fig. 4, describing an arc similar to that shown, and bracing each other throughout almost the entire distance. This operation is somewhat similar to driving a bevel-pointed staple, inasmuch as both clinch in the wood; but by referring to Fig. 5 we will see that the operation of my device is necessarily different from and superior to the operation of the bevel-pointed staple.

I have marked the acute angle at *x* and *y* by the letter *h*. This angle is of first importance as a support for the driven staple. The dotted lines at *x* in Fig. 5 show that these angles are torn out, and the dotted lines at *y* in the same figure show the direction the upper ends of the staple must take in order to enter the wood without weakening their support by enlarging the holes. This latter direction is of course rendered impossible by the rigid connecting-bar *o*; and there is one distinguishing point between my device and a bevel-pointed staple. My driven points are not rigidly connected at their upper ends, but are left free to follow the direction indicated by their form, said direction being such as to bring them into mutual lateral support while being driven. Again, at *z* in Fig. 5 the driven staple shows that the bend must occur at the angles formed by the points and connecting-bar, which of course makes the operation both hard and dangerous, as a rebend at that angle is very liable to break the staple.

In my device the side motion of the points is distributed in the form of a twist through out the entire length of bars *a a*.

In completing a joint after the points *c c* have been driven the fastener is placed in the position shown in Fig. 1 and secured as in Fig. 2, the screw-head bending the wire and tightening the joint.

I claim—

The joint-fastener described, formed of a single piece of wire or other metal bent upon itself forming the loop *a'*, closely-pinched sides *a a*, and points *c c*, beveled in opposite directions and slightly diverged, substantially as set forth.

ROBERT W. FERGUSON.

Attest:

GEORGE A. FERGUSON,
L. P. GRAHAM,
ALBERT SINE.