

No. 846,775.

PATENTED MAR. 12, 1907.

F. L. BOYNTON.
FASTENING DEVICE FOR PICTURE WIRE.

APPLICATION FILED JAN. 24, 1906.

Fig. 1.

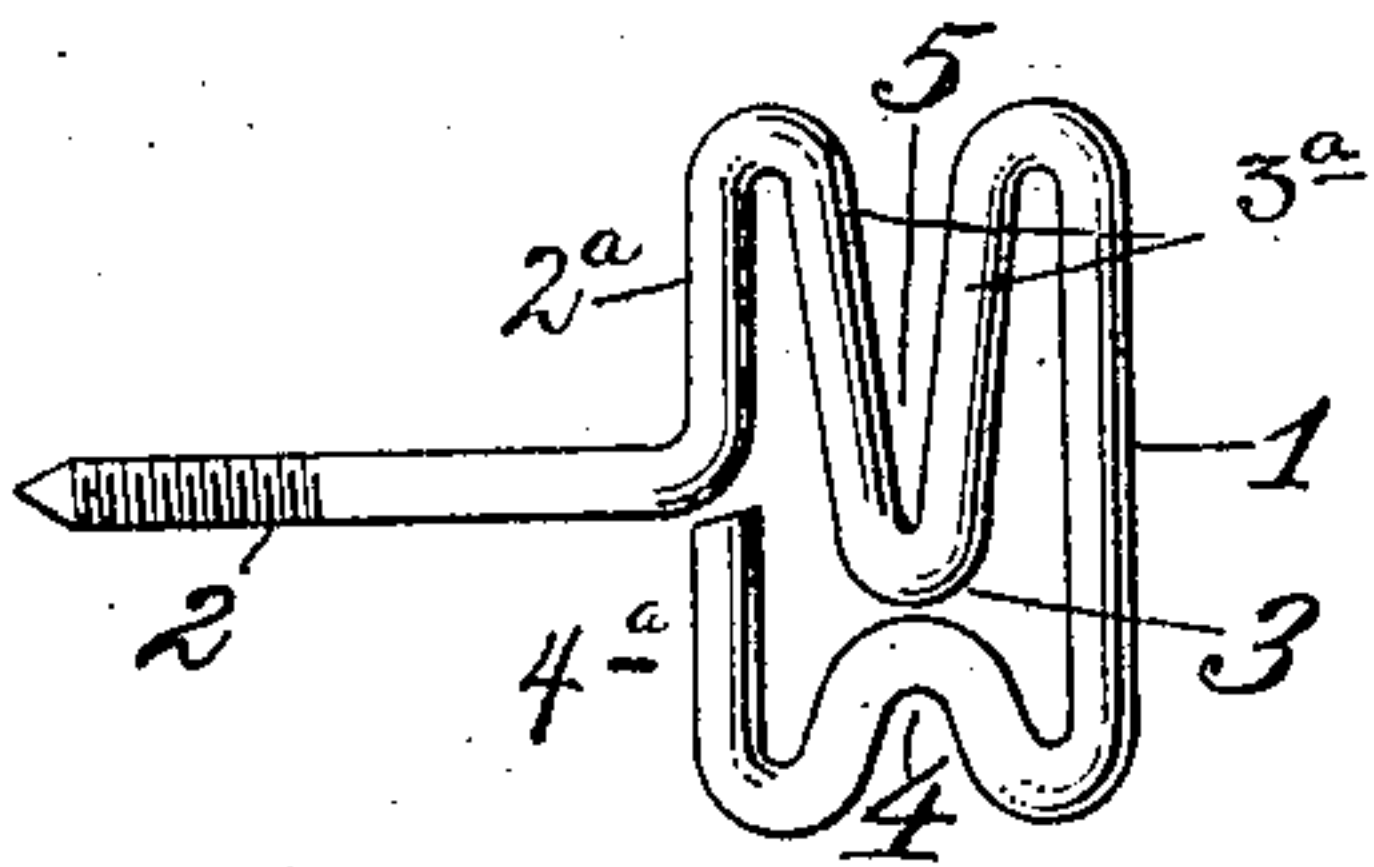


Fig. 2.

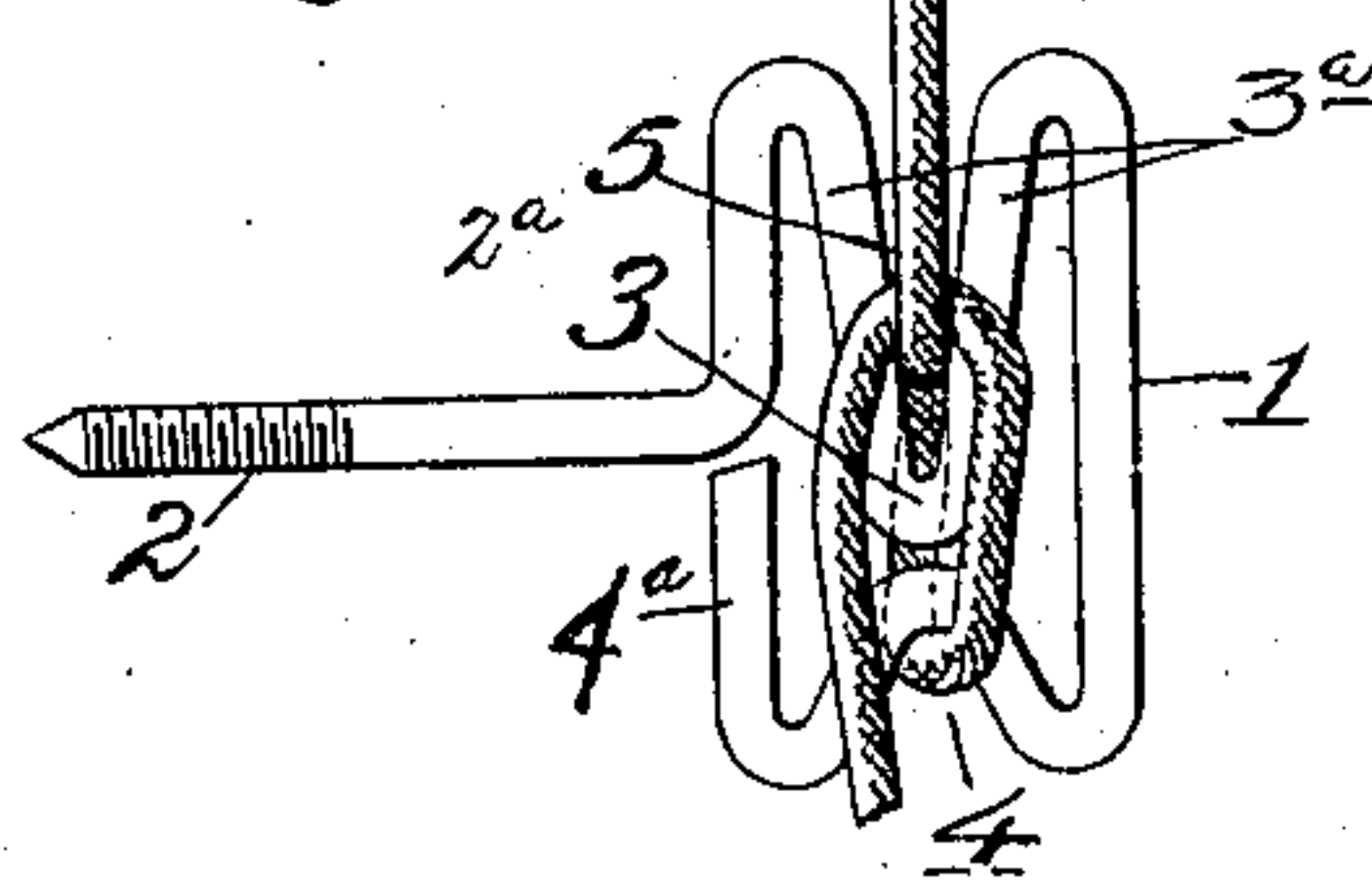


Fig. 3.

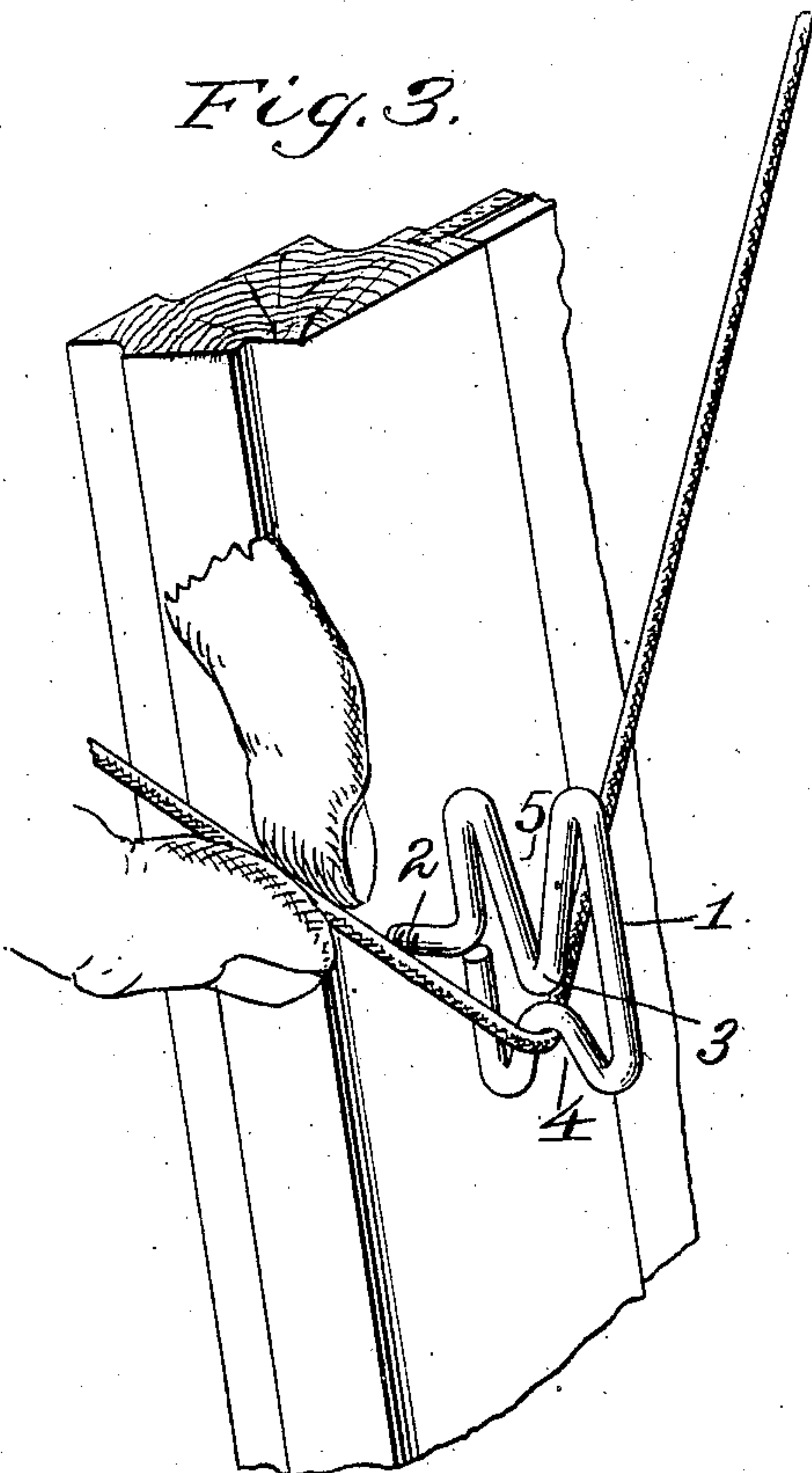
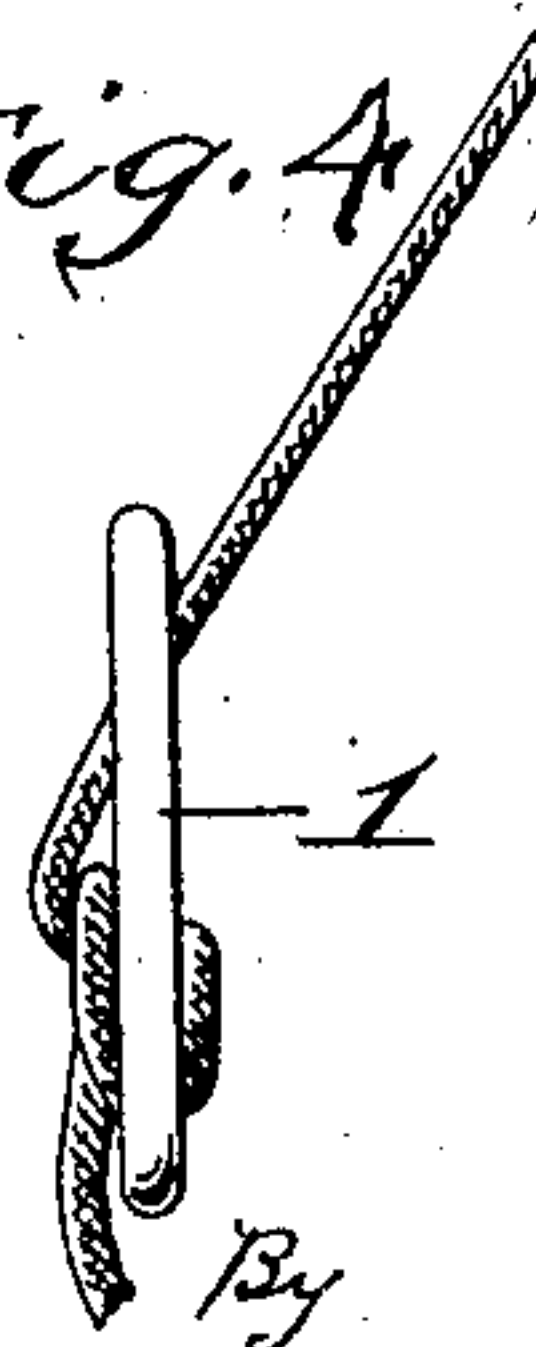


Fig. 4.



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UNITED STATES PATENT OFFICE.

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FASTENING DEVICE FOR PICTURE-WIRE.

No. 846,775.

Specification of Letters Patent.

Patented March 12, 1907.

Application filed January 24, 1906. Serial No. 297,584.

To all whom it may concern:

Be it known that I, FRANK L. BOYNTON, a citizen of the United States, residing at Washington, in the District of Columbia, have invented new and useful Improvements in Fastening Devices for Picture-Wire, of which the following is a specification.

My invention relates to an improved attaching device for picture-wire to suspend a picture or like frame from a supporting nail or hook, and has for its object to provide a simple device for this purpose which will avoid the necessity of threading the end of the wire through a screw-eye and twisting or twining such end upon the wire strand as now commonly practiced.

The device of my invention provides an attaching means to which the wire may be readily connected and securely fastened, having a wire guide and runner to facilitate the adjustment of the picture to any desired elevation.

In the practical use of my improved attaching device the free end of a skein of picture-wire may be attached to the device at one side of the picture or like frame, passed over a hook or nail, brought to the attaching device at the other side of the frame, and the desired elevation of the frame ascertained prior to severing the wire.

The means commonly used for attaching wire to picture-frames is the old and well-known screw-eye. In the use of such screw-eyes it is common to pass one end of the wire through the eye and then twist the end of the wire about the body of the strand, and for safety of the connection it has been the practice to use a liberal wire end to afford a number of twists or turns thereof about the strand, resulting in a material waste of the wire. Again, it has been the practice after one end of the wire has been secured to one of the screw-eyes to approximate as nearly as possible the length of the wire needed to suspend the picture at the desired elevation and then sever the wire from the skein. Since the box in which the picture-wire skein is usually sold on the market cannot be passed through the eye of the screw, the ascertainment of the length to be severed can be but roughly approximated, resulting in a needless waste of the wire.

By my invention I provide an attaching device by which the wire may be easily,

quickly, and securely attached, and in the use of which the tedious operation of twisting the end of the wire after passing through a screw-eye about the strand, and the consequent waste of material is avoided.

In the accompanying drawing, illustrating the invention, Figure 1 is a plan view of the device; Fig. 2, a similar view showing the picture-wire secured thereto; Fig. 3, a view showing the device in elevation and illustrating the operation of securing adjustment of the picture-frame. Fig. 4 is an edge view of Fig. 2.

As shown in said drawing, my improved device comprises a head 1 and a pointed or screw shank 2, the latter serving to connect the device to the picture-frame. The head 1 is constructed with a neck 3, having at one side a picture-wire guide and runner 4 and at the opposite side and in alinement with the runner 4 a wire bite 5. The wire guide and runner consists of a reëntrant groove in the head, the bottom of which groove is rounded to provide a free running surface for the wire to facilitate the adjustment or positioning of the picture-frame at the desired elevation. In this elevation, as shown in Fig. 3 of the drawing, the wire is laid into the groove 4, and by drawing upon or taking up the wire the picture-frame may be elevated, and by paying out the wire it may be lowered. During this operation the wire is guided and retained in the groove by the opposite walls of and runs freely across the rounded bottom of the groove. In this way the desired position of the picture may be accurately ascertained and the required amount of wire severed from the skein, leaving just sufficient surplus of wire to accomplish a secure connection thereof to the attaching device, as will be described, and without waste of the wire. The wire bite 5 also consists of a reëntrant groove which is relatively deep as compared to the runner 4 and the walls of which converge toward the neck 3, as shown, the converging walls serving to receive and exert a binding action on the wire when the free end of the latter is looped about the neck 3 and over the body of the wire strand, as shown in Fig. 2. When the free end of the wire is thus looped about the neck and over the body of the wire strand and a pull exerted on the free end, the wire is pulled tightly in between the con-

verging walls of the wire bite, which engage the same firmly, and this arrangement, added to the frictional hold of the free end of the wire looped about the neck and over the body of the wire strand, affords a firm and secure attachment of the wire to the device, and the walls of the wire bite, as well as the walls of the wire runners, as best shown in Fig. 5, prevent sidewise movement of the wire and all possibility of slipping of the connection. The character of the wire bite—that is, the converging form or shape of the walls of the groove and the space between the walls—is such that wires of different gage or cross-sectional area may be accommodated and used with a given attaching device, and the broad rounded running-surface of the wire-guide and runner is such that wires of different gage may be used.

In practice the free end of the skein of wire is attached to one of the fastening devices in the manner before described. The wire is then passed over the supporting hook or nail and brought into the wire-runner of the attaching device at the other side of the picture-frame, when the position of the frame may be accurately ascertained and obtained in the manner set forth. The wire is then severed from the skein and the end thereof is looped about the neck 3 and over the body of the strand of wire, when by a slight pull on such free end the wire is carried into the wire bite and forced into firm engagement with the converging walls thereof.

In the embodiment of the invention herein shown the device is constructed from a single strand of wire, the head 1 being formed as a continuation of the shank 2 by bending the strand at right angles to the shank to provide the short leg 2^a and then bending the strand in V form, the legs 3^a of the V constituting the wire bite 5. The strand is then bent down parallel with the short leg 2^a and in the same plane with said leg and with the shank 2 and also the V-bend and is then arched toward and directly opposite the neck 3, as shown, to provide the wire guide or runner 4, the free end of the arched portion being then bent upward to provide another short leg 4^a, which terminates adjacent the shank 2 and in line with the short leg 2^a. By referring to the drawing it will be seen that all bent portions of the strand are in the same plane with each other and with the shank 2. Thus a flat head is provided that may be readily

grasped between the fingers to facilitate screwing the device to a picture-frame or other object to be suspended.

In practice I design that the device shall be constructed of a single strand of wire bent to form the several operative parts thereof, as described and shown, as such construction can be manufactured very economically and has all the strength and rigidity required for the purposes intended. I wish it understood, however, that I do not limit my invention to a device constructed of a single piece of wire, except in respect of such clauses of claim as may expressly refer to that idea.

It will be understood that in the foregoing description I have used the term "wire" and "picture-wire" and analogous terms, which are generic, as including a cord or other flexible medium for supporting pictures or picture-frames and the like.

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

1. A device of the character described, comprising a flat head and a pointed shank formed from a single strand of wire, that portion of the strand constituting the head being bent to provide oppositely-disposed grooves one of which is deeper than the other, and all bent portions of the strand lying in the same plane with each other and with the shank.

2. A device of the character described, comprising a head and a shank formed from a single strand of wire, the head portion of the strand having oppositely-disposed reëntrant bends to form aligned grooves which differ from one another in width at their bases.

3. A device of the character described comprising a flat head and a pointed shank formed from a single strand of wire, that portion of the strand constituting the head of the device being provided with a V-bend to provide a wire bite and an arched bend to provide a runner-groove, the base of said V-bend and the apex of the arched bend being directly opposite each other and in alignment.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FRANK L. BOYNTON.

Witnesses:

GERTRUDE M. STUCKER,
GEO. W. REA.