

No. 774,441.

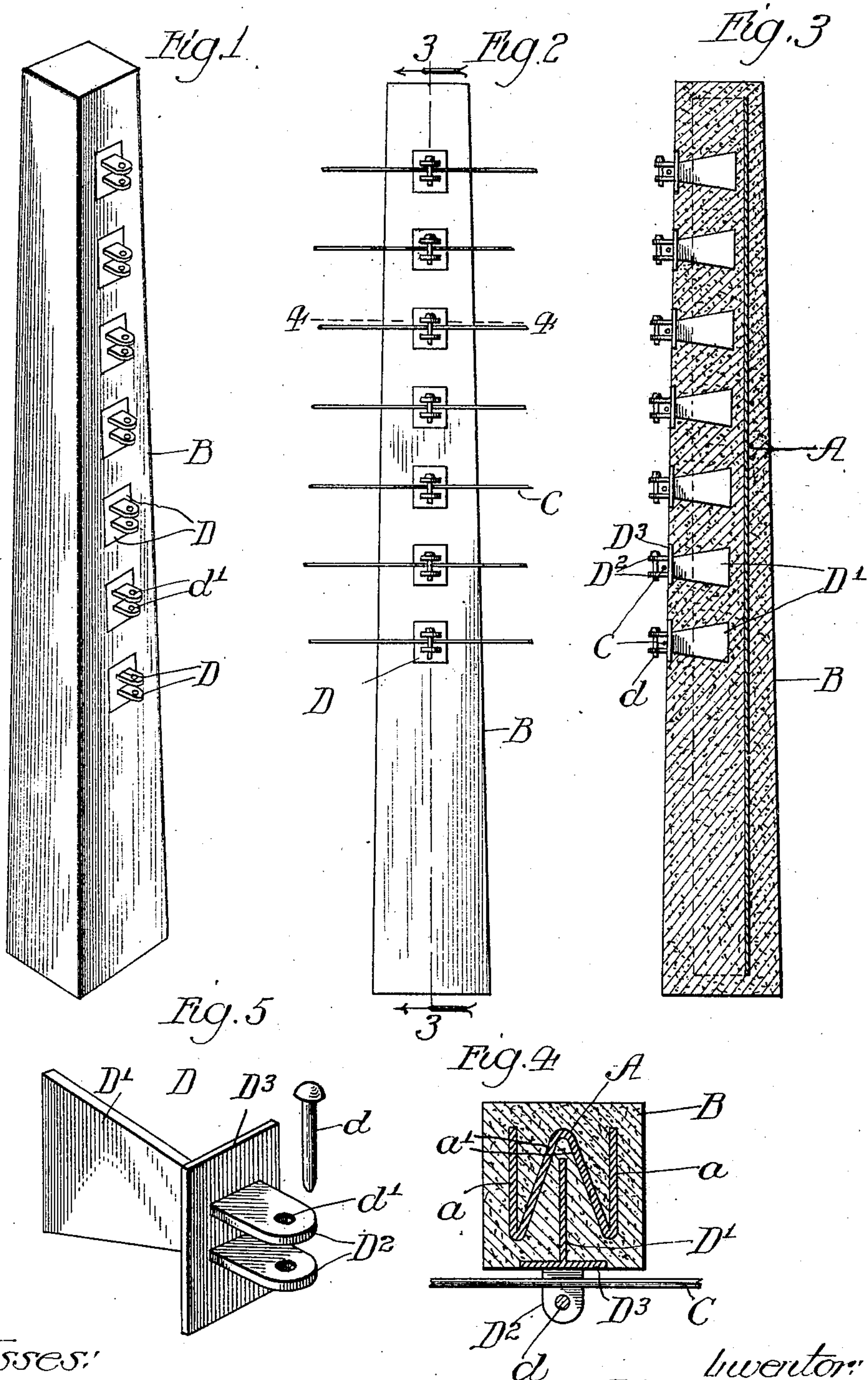
PATENTED NOV. 8, 1904.

J. J. LUCK.  
COMPOSITE POST.

APPLICATION FILED NOV. 9, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 6

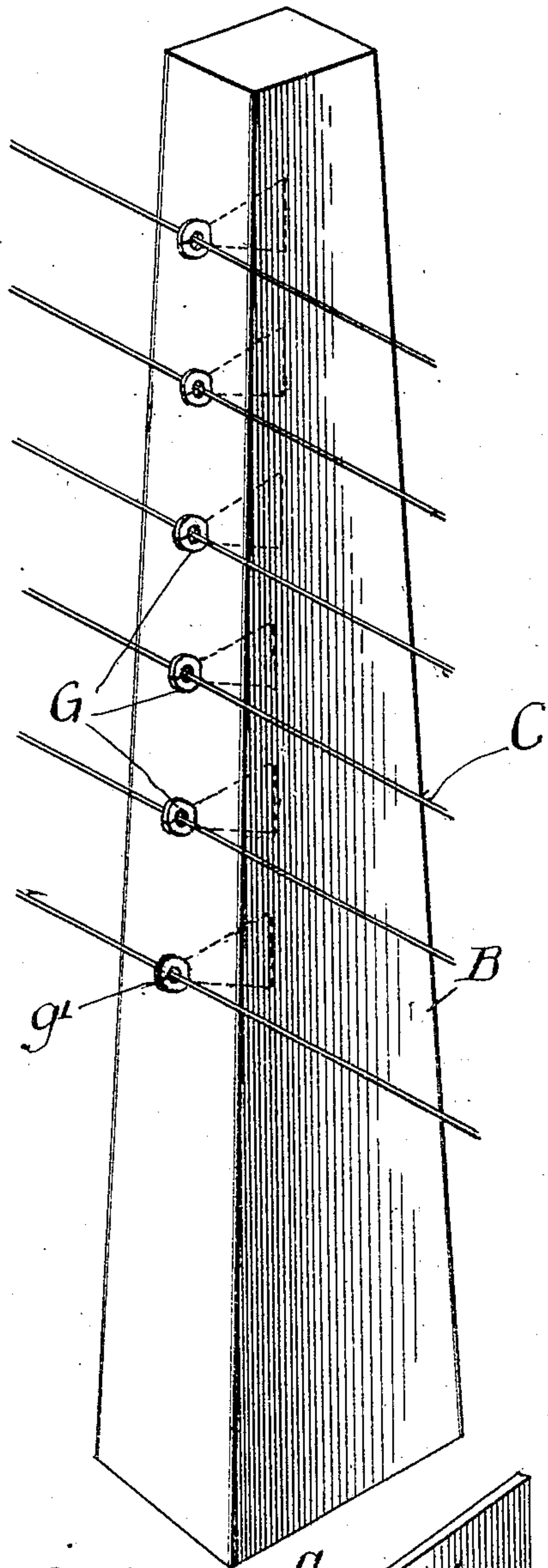


Fig. 8

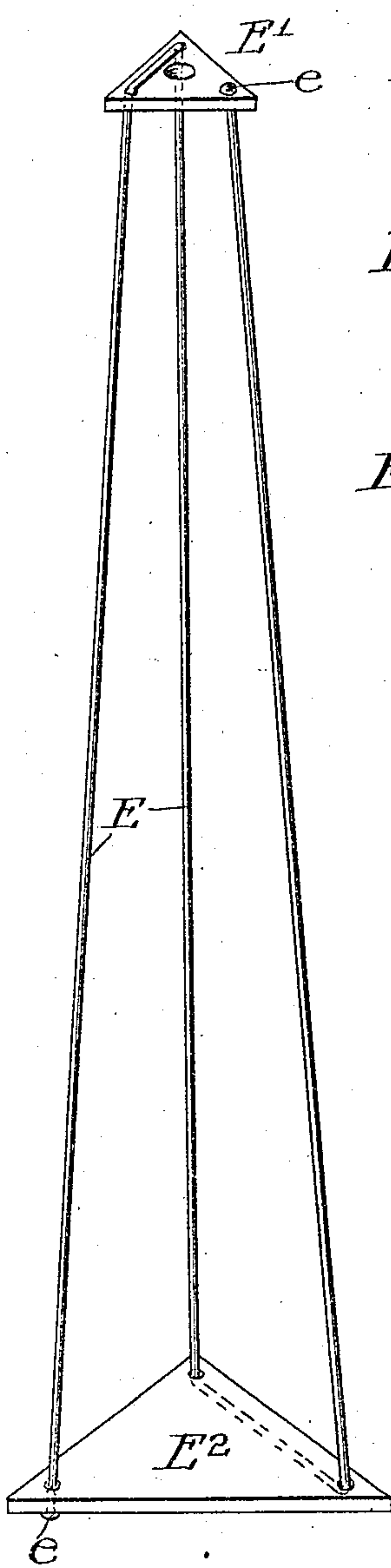


Fig. 7

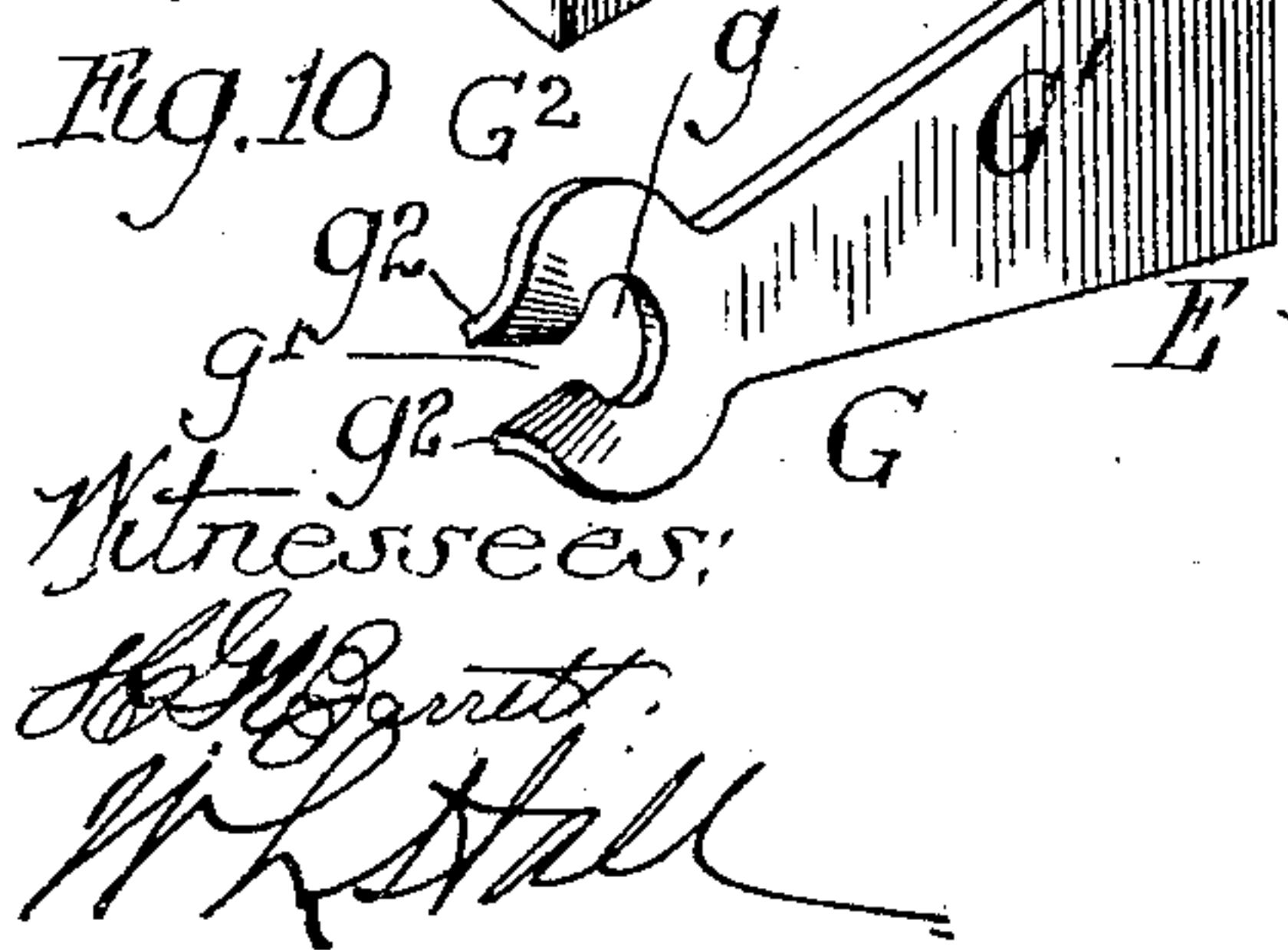
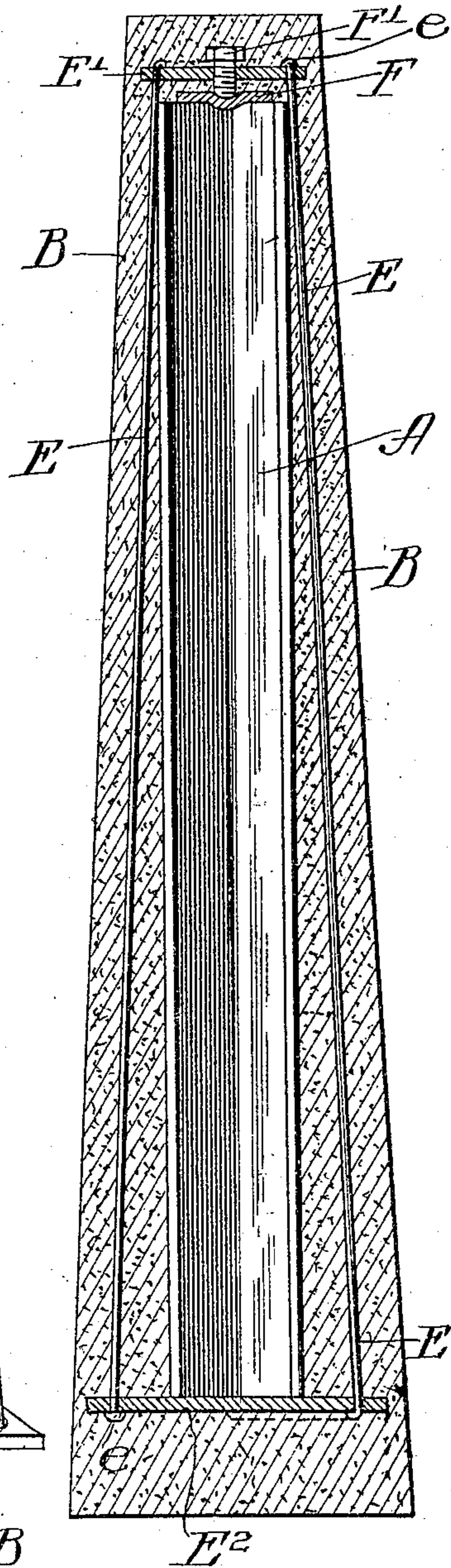
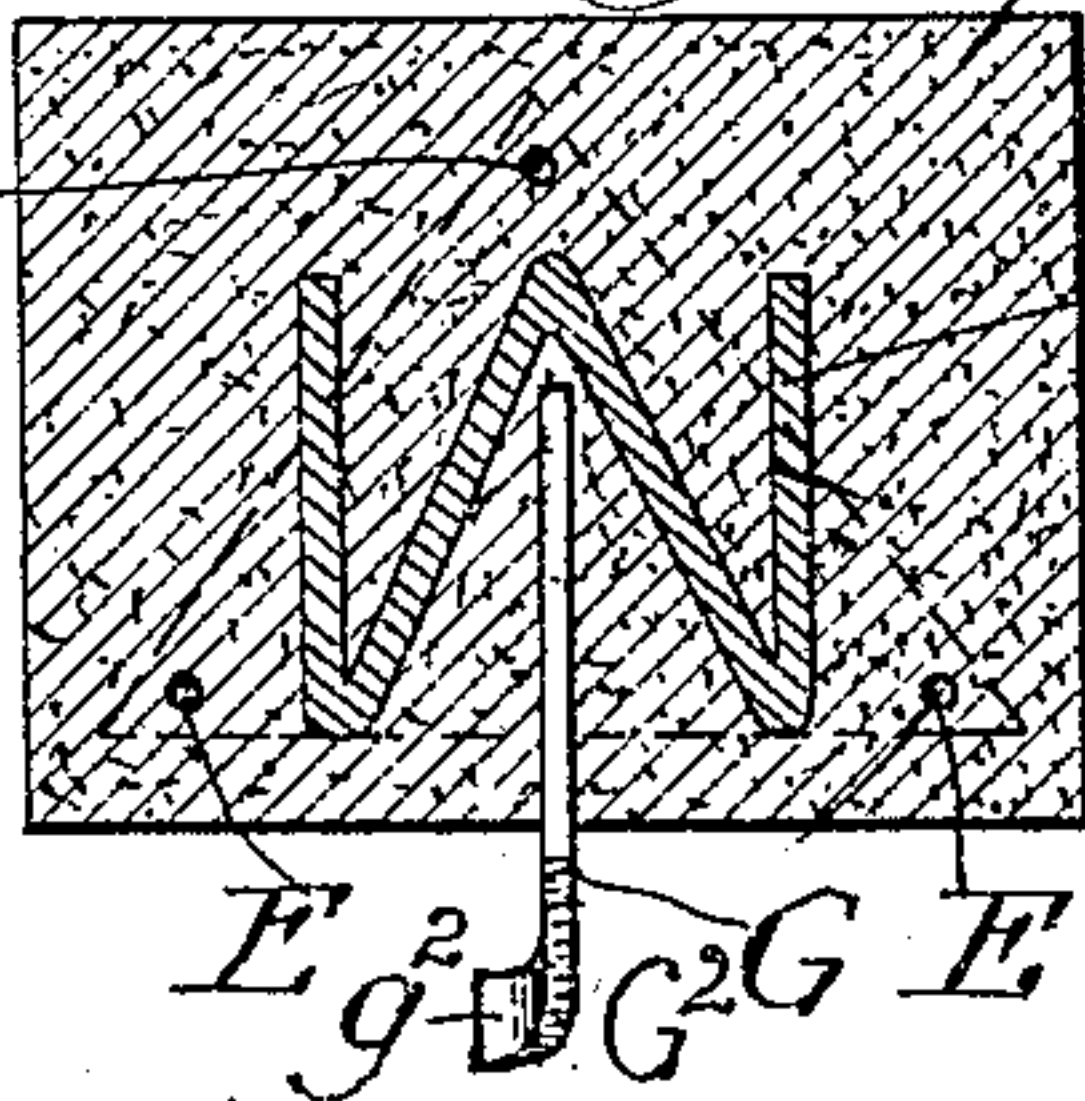


Fig. 9



Inventor:  
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## UNITED STATES PATENT OFFICE.

JOHN J. LUCK, OF AURORA, ILLINOIS.

## COMPOSITE POST.

SPECIFICATION forming part of Letters Patent No. 774,441, dated November 8, 1904.

Application filed November 9, 1903. Serial No. 180,390. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN J. LUCK, a citizen of the United States, residing at Aurora, in the county of Kane and State of Illinois, have  
 5 invented certain new and useful Improvements in Composite Posts; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters  
 10 of reference marked thereon, which form a part of this specification.

This invention relates to improvements in composite posts of that class made of a body of material which is formed or molded while  
 15 in a plastic state, such as cement or a mixture thereof with a suitable binding material, as asphaltum, and a rigid metallic core or frame which is embedded in said body and upon which the material constituting the body is  
 20 formed while in a plastic state and which subsequently sets or becomes hardened.

The invention includes also an improved form of wire fastener employed with posts of this character.

25 A post made in accordance with my invention may be adapted for use as a fence-post, gate-post, &c., and the body may be formed to give thereto an ornamental appearance, if desired.

30 The invention consists in the matters hereinafter set forth, and more particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a post made in accordance with my  
 35 invention, shown as adapted for use as a fence-post. Fig. 2 is a front elevation thereof. Fig. 3 is a vertical section taken on line 3 3 of Fig. 2. Fig. 4 is a transverse section taken on line 4 4 of Fig. 2. Fig. 5 is a per-  
 40 spective view of a wire-fastener which constitutes part of said post when used as a fence-post. Fig. 6 is a perspective view of a modified form of post. Fig. 7 is a vertical longitudinal section thereof, showing the core or  
 45 frame principally in elevation. Fig. 8 is a perspective view of a portion of the core or frame of the post shown in Fig. 6 removed from the other parts. Fig. 9 is a horizontal section of said post. Fig. 10 is a perspective

view of the wire-fastening device illustrated 50 in Fig. 6 removed from the post.

As shown in the drawings, Figs. 1 to 4, inclusive, the post consists of an inner metallic core or frame A, which is preferably made of sheet metal of a suitable thickness and rigid-  
 55 ity to give the required strength to the post, and a body of cement or like material B, in which the core or frame is embedded, and which material is applied to the core when in a plastic state and formed to give proper  
 60 shape to the post and thereafter allowed to set or harden. Any material may be used to form the body having the properties mentioned and which possesses the required durability and hardness when set or hardened. 65  
 The frame or core A may be made of relatively light sheet metal, so that it may be readily formed into the proper cross-sectional shape to give strength thereto by simple sheet-metal-working machinery. Said frame 70  
 or core A is formed to provide at its side two relatively wide parallel parts or members *a a*, which are generally parallel with the adjacent side faces of the post when the post is of rectangular cross-section, and said parts are  
 75 joined by a suitably-shaped connecting part to give strength to the post to withstand stress from all directions. As herein shown, the parts *a'* of said core, connecting the side members *a*, meet each other and the part *a* 80  
 at acute angles, thus giving the core an M-shaped cross-section. The outer parts *a* of the core are preferably disposed in planes transverse to the plane of the row of posts when the posts are set, so as to bring the  
 85 greatest strength of the posts to bear against lateral wind-pressures.

D designates a wire-fastening device for fastening the wires C to the post when the latter are used for fence-posts and constitut-  
 90 ing a part of a wire fence, said device comprising what may be termed a "fastening-clip" and consists of a tailpiece D', made, preferably, of flaring or fish-tail shape and which is embedded in the body B of the post, 95  
 upper and lower lugs D<sup>2</sup> D<sup>2</sup>, between which the wires C are confined, and retaining-pins *d*, which are adapted to extend through verti-



cally-alined openings  $d'$  in said lugs to retain the wires in place. Preferably a flange or face-plate  $D^3$  is provided at the bases of said lugs to give additional bearing of said device  
 5 against the post and to thereby strengthen the same and also to give finish thereto. Said face-plate  $D^3$  is preferably embedded in the outer face of the post, so as to be flush therewith, as clearly seen in Figs. 3 and 4. As  
 10 herein shown, each wire-fastening device is provided with a separate retaining-pin  $d$ ; but, if desired, a single retaining-wire may be employed for each post and made of a length to extend through all of the lugs of the fasten-  
 15 ing devices. The tailpiece  $D'$  of said retaining devices extends into the post between the central folded parts  $a'$  of the core or frame A.

In the construction shown in Figs. 6 to 10 I employ, in addition to a rigid core or frame  
 20 A, a plurality of stiffening or stay wires  $E$ , extending from top to bottom of the post and attached at their ends to upper and lower plates  $E'$   $E^2$ , which are fixed to or connected with the upper and lower ends of the core.  
 25 As herein shown, three stay-wires are employed, and the plates  $E'$   $E^2$  are made of triangular shape. The plate  $E^2$  is fitted in a horizontal position to the lower end of the core in any suitable manner, and the upper  
 30 plate  $E'$  is connected with the upper end of the core in a manner permitting it to be moved away from the core, and thereby place a tension or strain on said wires. The stay-wires  $E$  are preferably made from a single  
 35 length of wire, being laced through suitable openings in the upper and lower plates  $E'$   $E^2$  in the manner shown in Fig. 8, and the ends of said wire are provided with knots or enlargements  $e$   $e$  to fix the same to the plates.  
 40 The devices for connecting the upper plate to the core, so as to exert therethrough tension on the stay-wires  $E$  to strain them, are made as follows:  $F$  designates a block which is affixed to the upper end of the core in any  
 45 suitable manner, and  $F'$  designates a screw which extends downwardly through a central opening in the upper plate  $E'$  and has screw-threaded engagement therewith and bears at its lower end on the block  $F$ . Said block is  
 50 preferably provided with a central recess or depression to receive the lower end of the screw. Such strain may be exerted on the wires by movably connecting the lower plate with the core or in any other suitable manner.

55 The wire-fastening device  $G$  (shown in Figs. 6 and 10) of the last-described construction consists of a vertically-disposed flat metal plate  $G$ , which is provided with a flared tail-piece  $G'$ , embedded in the body of the post,  
 60 as shown more clearly in dotted lines in Fig. 6, and a head  $G^2$ , which protrudes from the post and is provided with a horizontal aperture  $g$  to receive the wire  $C$ . Said head is provided with a slit  $g'$ , (shown more clearly in

Fig. 6,) which extends from the aperture  $g$  to 65 the margin of the head. When the fastener is formed, the parts  $g^2$  of said head on each side of the slit  $g'$  are turned laterally outwardly, as shown in Fig. 10, in a manner to enlarge the slit sufficiently to permit the wire 70  $C$  to pass laterally therethrough into said wire-receiving aperture. Thereafter said outwardly-turned parts of the fastener are turned inwardly to bring the margins thereof together and restrict the slit sufficiently to 75 prevent the wire from becoming disengaged from the fastener. Said outturned parts of the fastener-head may be turned inwardly for the purpose specified by means of a suitably-constructed plier or otherwise. Said 80 fastener  $G$  is made from sheet metal by a suitable swaging operation, and it may be cut from a metal plate, the aperture formed therein, and the parts  $g^2$  turned outwardly by a single operation of a swaging-machine. 85

In manufacturing the post shown in the last-described figures the lower plate  $E'$  and the block  $F$  are first fixed to the core in any suitable manner. Thereafter the stay-wires  $E$  are laced through or otherwise attached to 90 the upper and lower plates  $E'$   $E^2$ , and the screw  $F'$  is passed through the upper plate and turned down against the block  $F$  until the desired tension is exerted on the stay-wires. Thereafter the cement body  $B$  is ap- 95 plied to the frame or core thus made while in a plastic condition and allowed to harden thereon. An important advantage is obtained by the use of a sheet-metal core folded to constitute an  $M$  shape in cross-section in a com- 100 posite post of rectangular form, for the reason that a core of this form corresponds in its general external outline with the rectangular form of the post, and its parts are so disposed as to permit portions of the plastic material 105 to project into the folds of the core, and thus secure strong adherence of said plastic material to said core. Moreover, in a core of  $M$  shape the two parallel marginal parts are parallel with two side faces of the completed rec- 110 tangular post, while the edges of said parallel marginal parts and the central angle of the folded part are in line with each other, with the result that uniform support is given to the surface portion of the plastic material at 115 three sides of the post, while at the fourth side a deep groove is formed by the central fold, providing a centrally-arranged body of the plastic material, into which the wire-fastening devices may extend through a greater 120 part of the thickness of the post, and thereby afford a strong and rigid connection of said wire-fastening devices with the post.

I claim as my invention—

1. A fence-post, comprising a molded body 125 of rectangular form in cross-section and a sheet-metal core which is longitudinally folded and is of  $M$  shape in cross-section, said core



being embedded in the molded body with the parallel marginal parts thereof parallel with opposite side faces of the rectangular body.

2. A fence-post, comprising a molded body of rectangular form, a sheet-metal core which is longitudinally folded and is of **M** shape in cross-section, said core being embedded in the molded body with its parallel marginal portions parallel with opposite side faces of the rectangular molded body, and a plurality of wire-fasteners provided with tailpieces which are embedded in the body of the post and extend into the groove formed between the central longitudinally-folded parts of the core.

3. A composite post, comprising a molded body of rectangular form in cross-section, a sheet-metal core which is longitudinally folded and is of **M** shape in cross-section, said core being embedded in the molded body with its parallel marginal parts parallel with opposite side faces of the rectangular molded body, horizontal plates embedded in the body at the upper and lower ends of the said metal core,

stay-wires surrounding the core and attached at their upper and lower ends to said plates, and means acting on said core for exerting endwise strain or tension on said wires.

4. A composite post comprising a frame consisting of a metal core, stay-wires surrounding the core and attached at their upper and lower ends to plates at the upper and lower ends of the core, and a screw extending downwardly through the upper plate and bearing on a part affixed to said core, whereby endwise strain or tension may be exerted on said wires, and a molded body in which said frame is embedded.

In testimony that I claim the foregoing as my invention I affix my signature, in presence of two witnesses, this 5th day of November, A. D. 1903.

JOHN J. LUCK.

Witnesses:

WILLIAM L. HALL,  
GEORGE R. WILKINS.