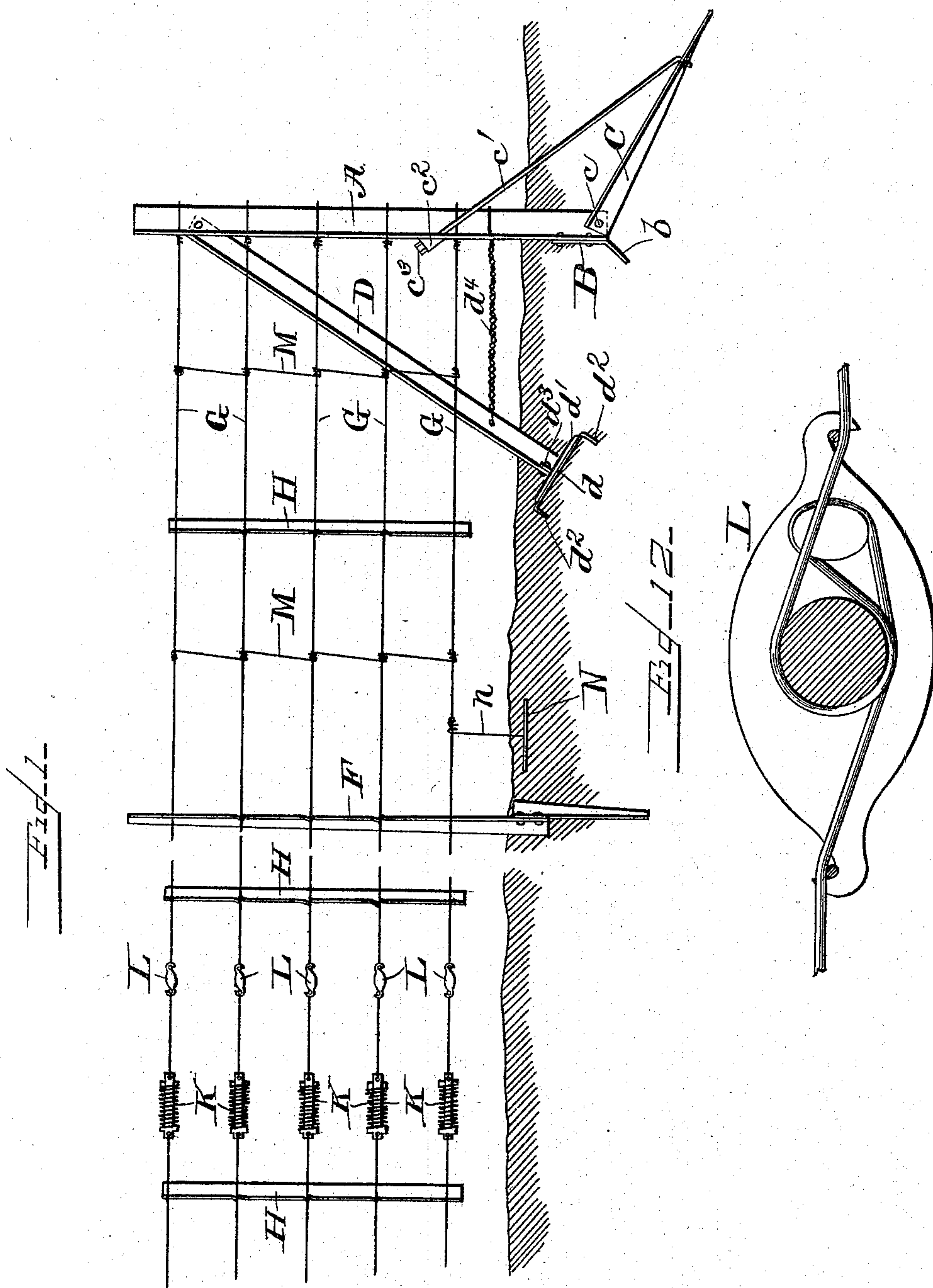


No. 528,109.

Patented Oct. 23, 1894.



Witnesses  
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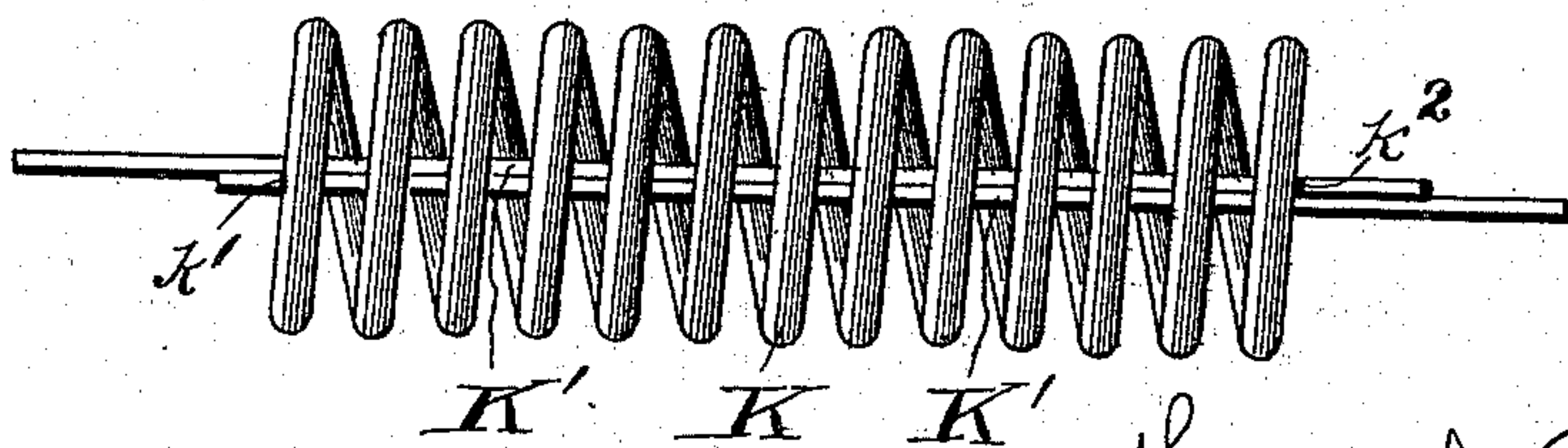
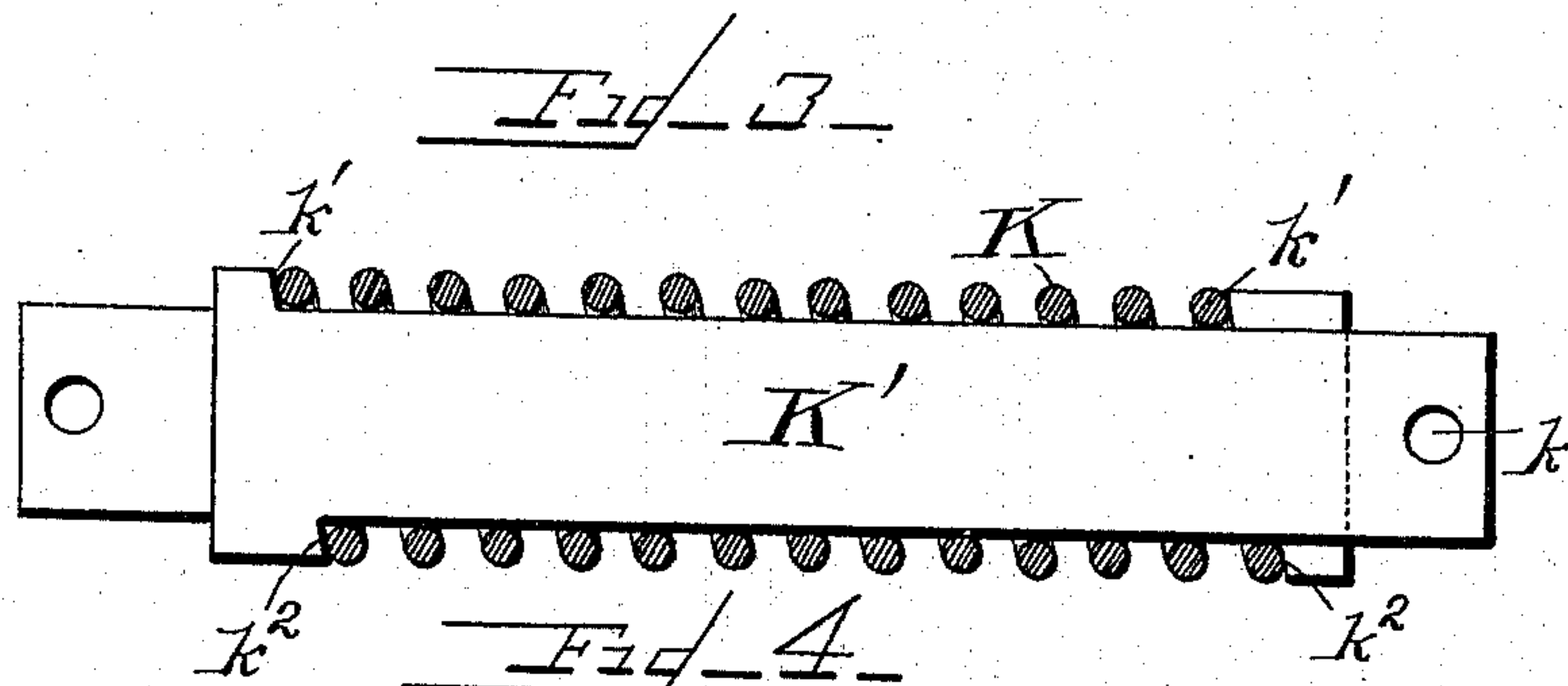
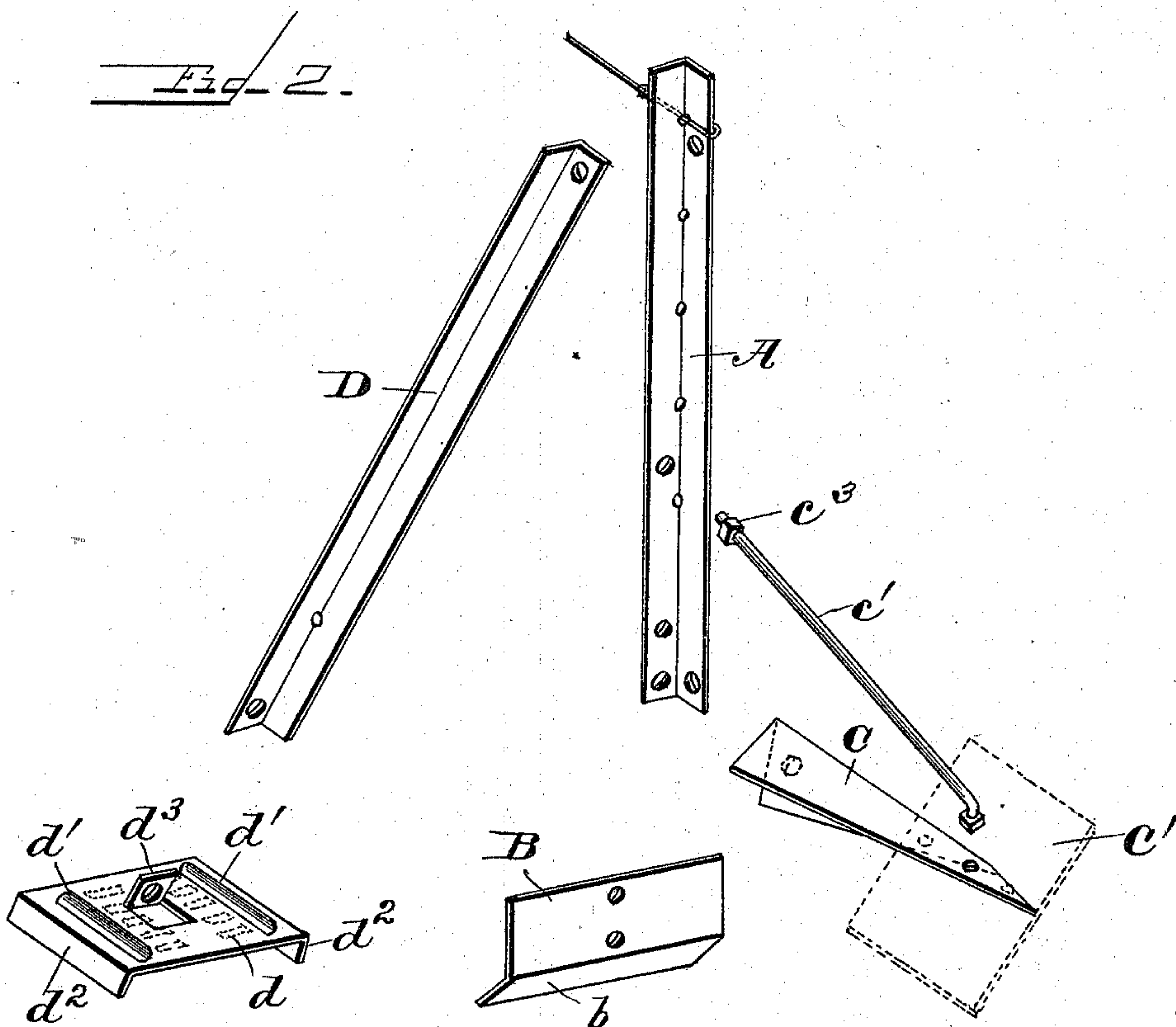
(No Model.)

3 Sheets—Sheet 2.

H. C. PRATT.  
WIRE FENCE.

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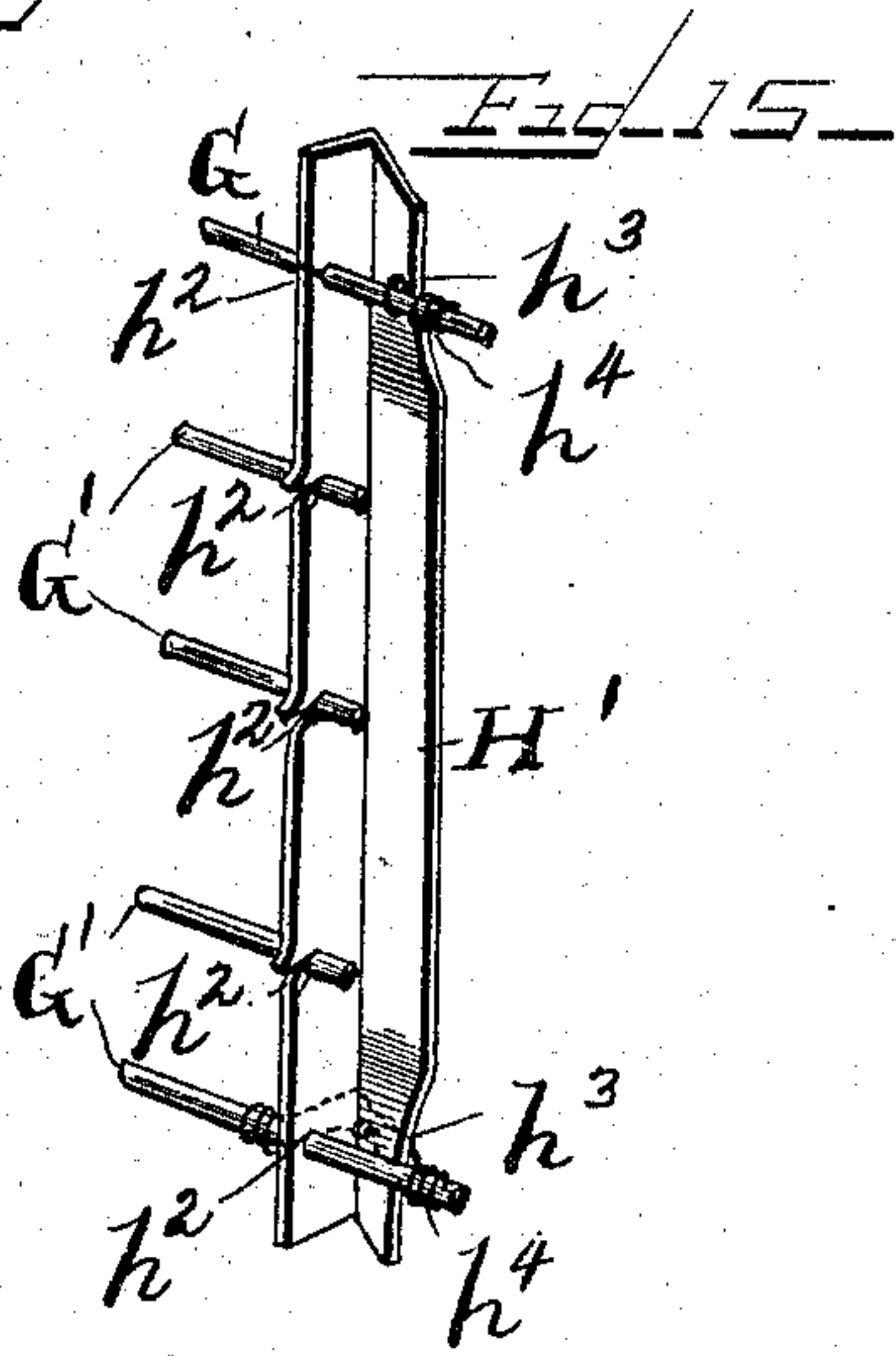
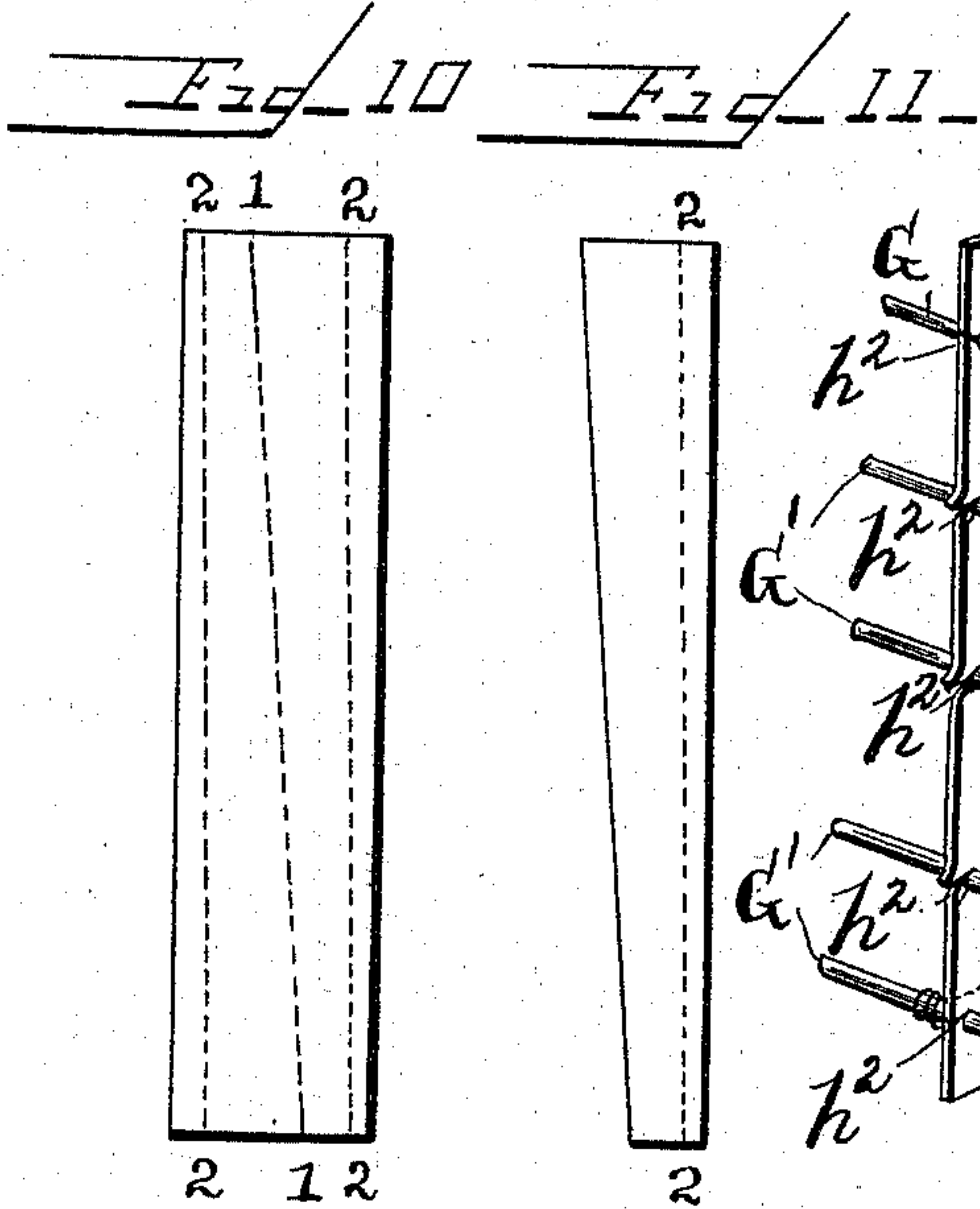
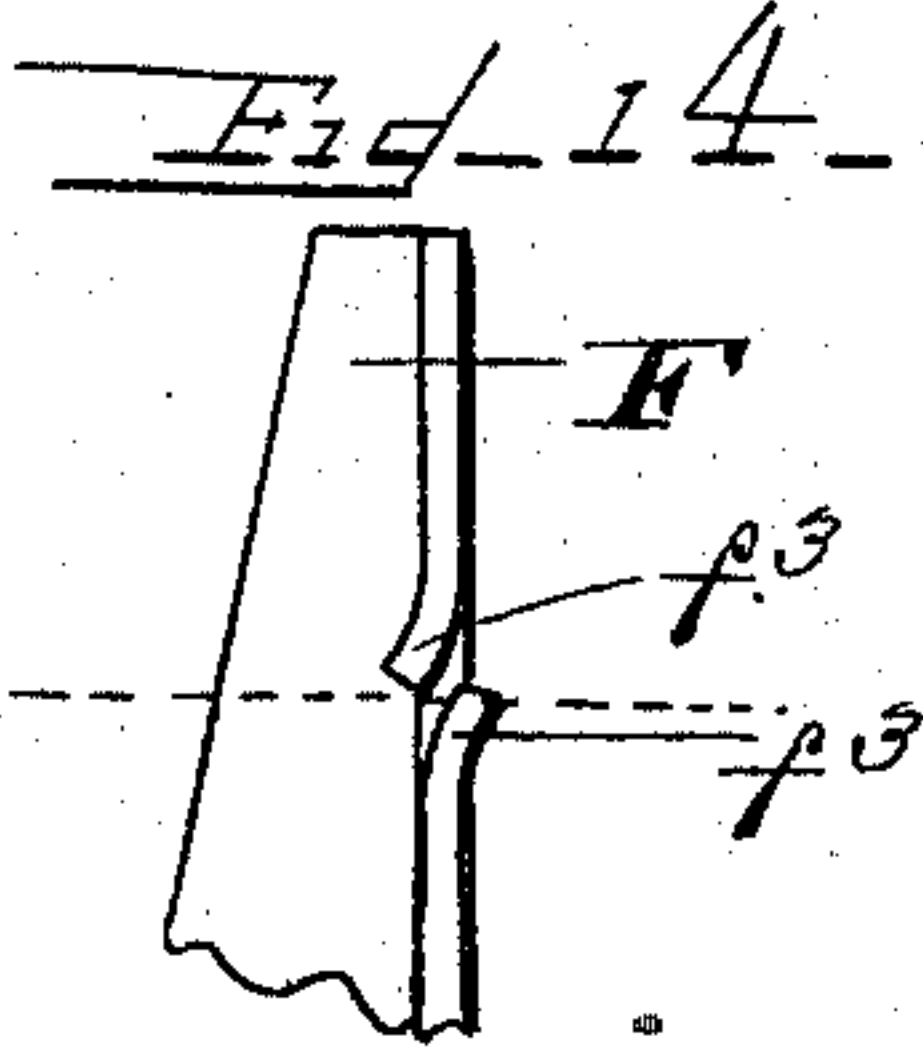
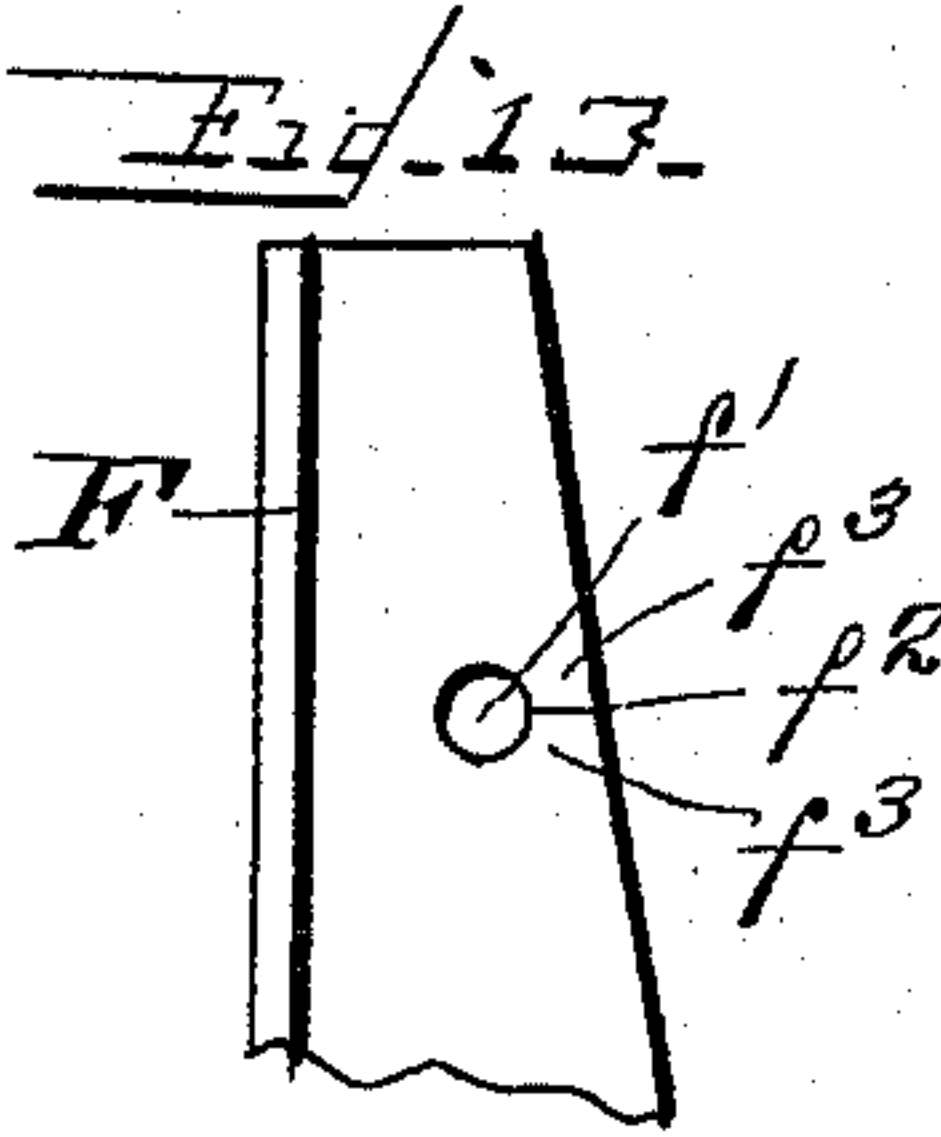
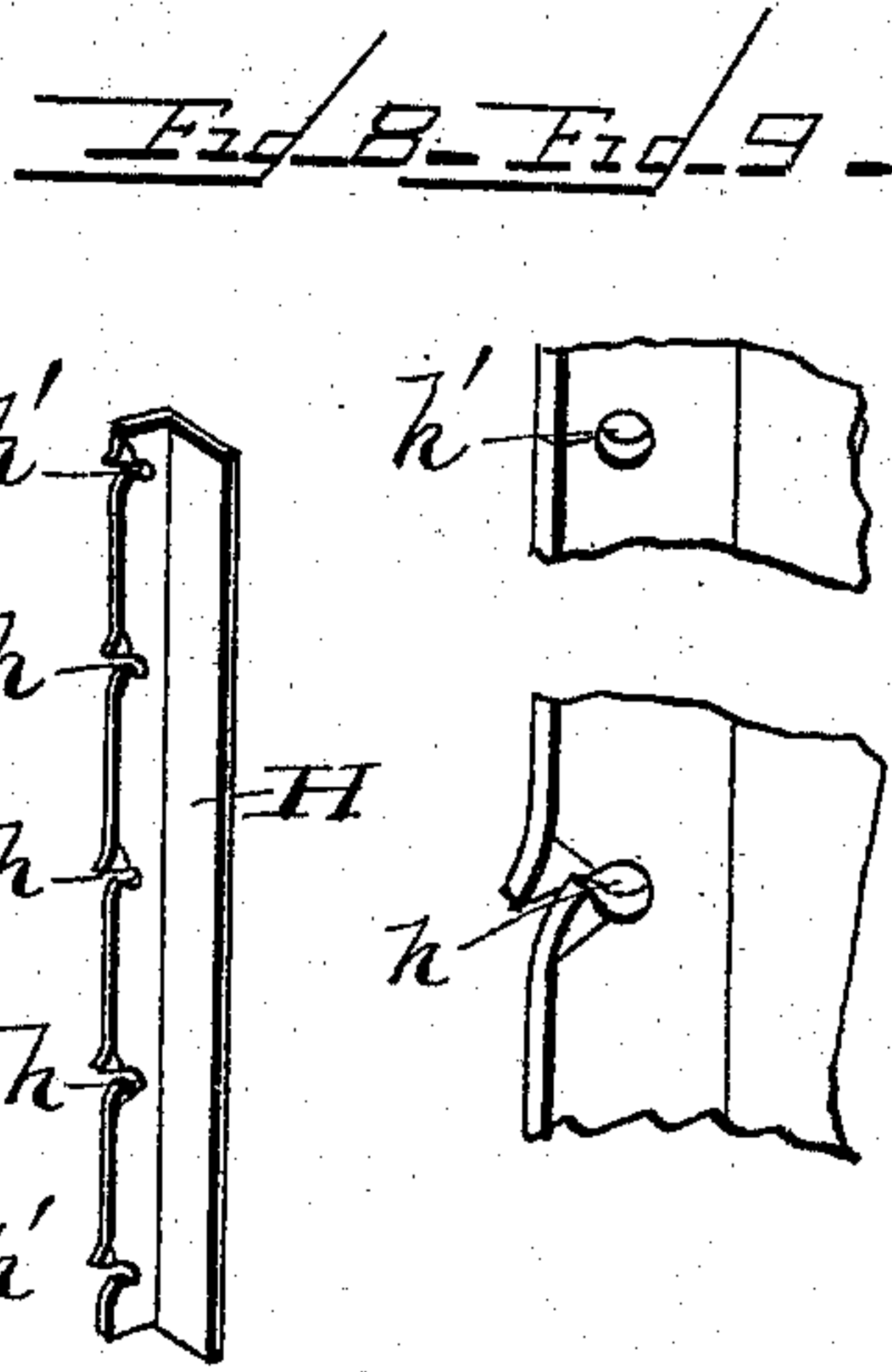
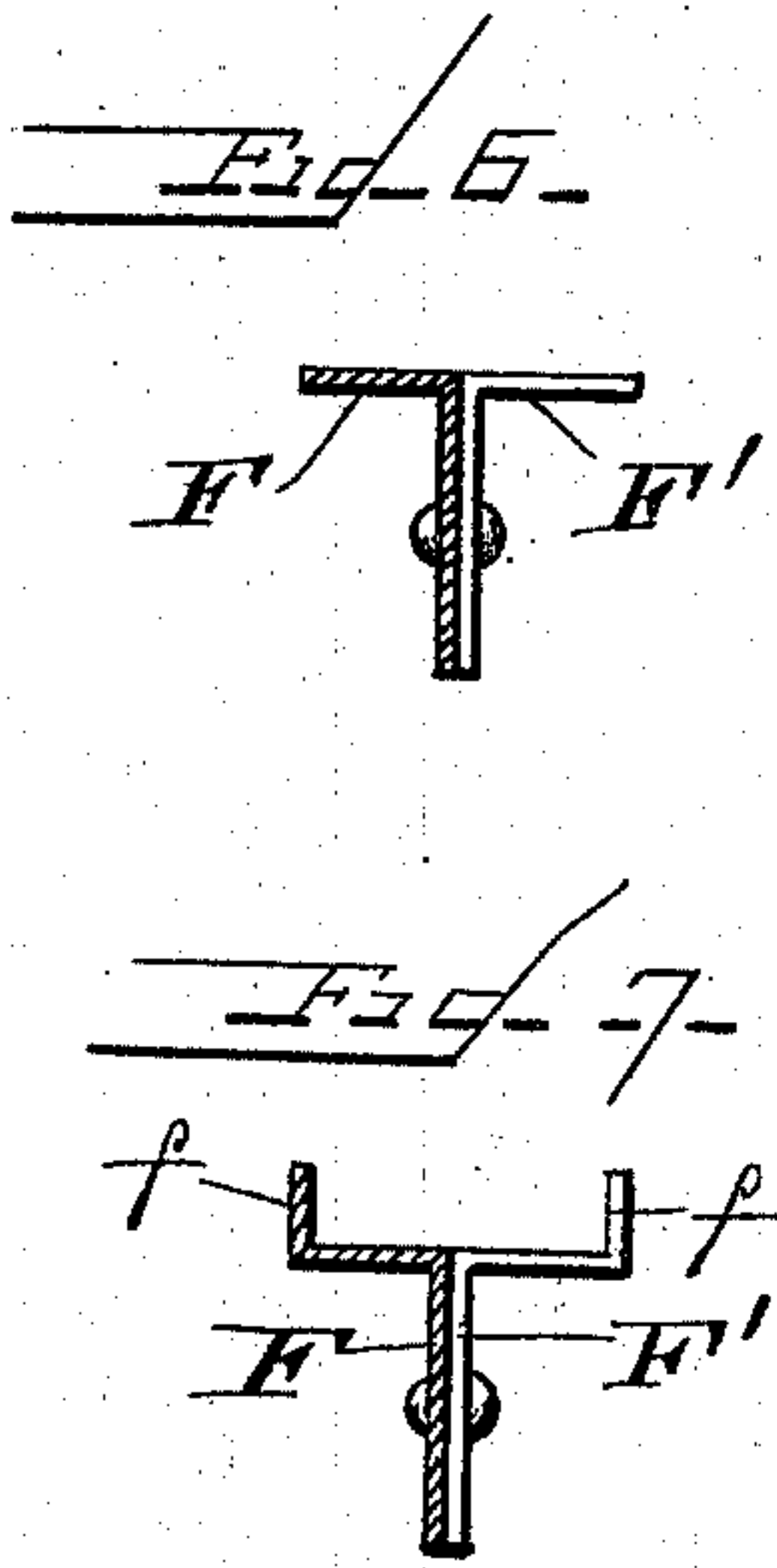
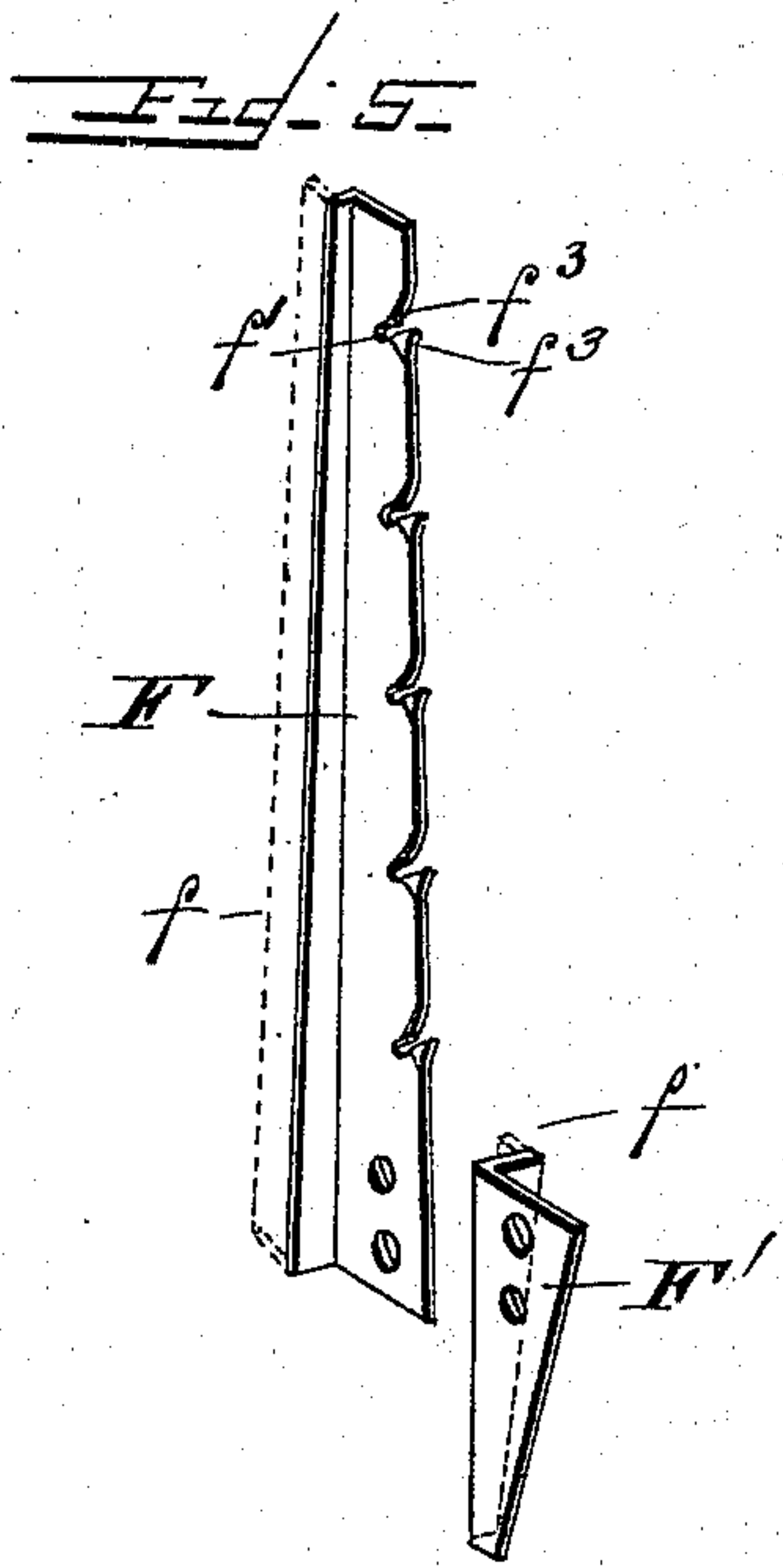
(No Model.)

H. C. PRATT.  
WIRE FENCE.

3 Sheets—Sheet 3.

No. 528,109.

Patented Oct. 23, 1894.



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# UNITED STATES PATENT OFFICE.

HENRY C. PRATT, OF CANANDAIGUA, NEW YORK.

## WIRE FENCE.

SPECIFICATION forming part of Letters Patent No. 528,109, dated October 23, 1894.

Application filed September 8, 1893. Serial No. 485,078. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY C. PRATT, a citizen of the United States, residing at Canandaigua, in the county of Ontario and State of New York, have invented certain new and useful Improvements in Wire Fences; 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 is an improvement in wire fences and consists in the novel features of construction and combination of parts herein-  
after fully described, reference being had to the accompanying drawings which illustrate the best form in which I have contemplated embodying my invention and said invention is fully disclosed in the following description and claims.

Referring to the accompanying drawings, Figure 1 represents a portion of a wire fence constructed according to and embodying my invention. Fig. 2 is a view representing in detail the several parts connected with the supporting end posts of my improved wire fence. Fig. 3 is a longitudinal section of the tension device which I employ. Fig. 4 is a plan view of the same. Fig. 5 is a perspective view of one of the intermediate posts of my improved fence showing the parts separated. Fig. 6 is a transverse section through one of said intermediate posts. Fig. 7 is a similar transverse section illustrating a slightly modified form of post. Fig. 8 is a perspective of one of the vertical stay bars employed by me. Fig. 9 represents portions of the same in detail. Fig. 10 represents a sheet metal blank from which the intermediate posts are made. Fig. 11 is a view of the portion of the blank from which a single post is made. Fig. 12 is a sectional view of a wire tightening device employed by me, and Fig. 13 is a detail of the upper portion of one of the intermediate posts showing the manner of forming the wire receiving apertures therein. Fig. 14 is a similar view showing the post in a different position, and Fig. 15 is a perspective view of a modified form of stay bar.

The object of my invention is to provide a fence which shall be very rigid and strong in its construction and also very durable, having

no wooden parts which may be affected by air or moisture.

In the drawings A represents one of the end posts from which a line of my improved fence will be run and which will be securely anchored and braced to withstand the tension of the wires and to support the fence in a rigid manner. This end post A is composed of angle iron as shown best in Fig. 2 and is provided at its base with a broad flange having its lower edge bent upwardly very slightly in the direction in which the wires are run. For convenience this plate B is preferably formed separately as shown in the drawings, is provided with the inclined lower edge *b* and is secured to the end post A. This plate B gives the lower end of the post a broad bearing surface in contact with the earth and the inclined portion *b* prevents the post A from being drawn upwardly. The lower end of the post A is also provided with an anchor C composed preferably of angle iron and bolted or riveted to the post A at *c* so as to form a pivotal connection. An adjusting rod *c'* has its lower end connected to the anchor C at some distance from the point of pivoting, and extends through a suitable aperture in one of the flanges of the post A, where it engages preferably a suitable inclined washer *c<sup>2</sup>* and is provided with a nut *c<sup>3</sup>* engaging a screw threaded portion of the rod *c'*. By means of this adjusting rod the post may be readily straightened in case it should be inclined to tilt forwardly at any time under the tension of the fence wires. I also prefer to provide the end post A with a brace D composed also of angle iron and preferably pivoted at its upper end to the post A adjacent to the upper end of the post. The lower end of the brace D engages a broad flat plate *d* which is preferably provided with struck-up strengthening ribs *d'* and downwardly turned edges *d<sup>2</sup>* which engage the earth and prevent lateral movement of the plate. The lower end of the brace D may engage the plate *d* without being secured thereto and the plate may be provided with corrugated or struck-up portions as indicated in dotted lines Fig. 2, to prevent the brace from slipping but I prefer to provide the plate *d* with a struck-up lip *d<sup>3</sup>* which is riveted or otherwise secured to the lower end of the brace D. I also prefer to connect the



brace D and post A adjacent to their lower ends by a horizontal stay rod or wire  $d^4$  for greater security.

The construction heretofore described provides an end post which is extremely rigid and which can be readily adjusted in case of any sagging by simply removing the earth about the plate  $d$  and drawing the post A into a vertical position by means of the adjusting rod  $c'$  and nut  $c^3$  after which the earth should be packed in under the plate  $d$ .

F, Fig. 1, represents one of the intermediate posts of the fence which are constructed of angle iron. In order to form a post having the required rigidity and lightness, without waste of metal, I take a rectangular blank of sheet metal as shown in Fig. 10 and sever it into two portions on the inclined dotted line 1—1 producing two parts like the one shown in Fig. 11. Each part is then bent on the line 2—2 see Figs. 10 and 11, thus producing an angle iron post having each flange tapering slightly from one end toward the other, without wasting any of the sheet metal from which such posts are formed.

F' represents the earth engaging portion of the post F which is formed in the same manner as the part F but is somewhat shorter. The two parts F and F' are then secured together with their broad flanges in engagement with each other, by means of rivets or bolts as shown in Figs. 1, 5 and 6. These posts as well as the end post A and the parts connected therewith are preferably coated with tar or some other water proof compound in order to protect them from rust, or they may be protected in any other desired way. In order to further strengthen the post F I may give the short flange of the post a further bend as shown at  $f$ , Fig. 7 and in dotted lines in Fig. 5, and the lower portion F' of the post may be similarly formed. The upper portion F of the post is provided with suitable apertures to receive the fence wires G which I prefer to form as indicated in Fig. 13 by punching a circular aperture  $f'$  through one of the flanges of the post F, preferably the wider flange, and connecting this aperture  $f'$  by a straight slit  $f^2$  extending to the outside of the post. The edges  $f^3 f^3$  adjacent to this slit are then turned, one to the right and the other to the left as shown in Fig. 13 and also in Figs. 1 and 5. It will thus be seen that by holding the wire in a slanting position it can be readily inserted between the bent lips  $f^3 f^3$  into the aperture  $f'$  where it will be securely held against accidental displacement as soon as it resumes its horizontal position, and yet the wire may be readily tightened without interfering with the position of the post. If it is desired to hold the wire more securely the lips  $f^3 f^3$  may be bent back into the plane of the flange of the post thus closing the aperture  $f'$  and holding the wire positively locked in position.

I also provide vertical stay bars H which are placed in engagement with the wires G G

of the fence and are securely attached to certain of said wires, as for instance the top and bottom wire, while the other wires will pass freely through suitable apertures in the stay bars H. One of these stay bars H is shown in detail in Fig. 8 and consists of a narrow piece of angle iron having one of its flanges provided with a series of apertures  $h$  similar to the apertures in the intermediate posts F, for receiving the wires G G. At its upper and lower ends I provide the stay bar H with narrower openings  $h'$  which may be closed in such a manner as to clamp the wire rigidly as indicated in the upper portion of Fig. 9, the ordinary apertures  $h$  being indicated in the lower portion of that figure. By this means the stay bar H can be placed in engagement with the wires of the fence and secured rigidly to the upper and lower wires thus preventing the stay bars from being moved longitudinally of the fence while not interfering with the independent adjustment of each wire.

In Fig. 15 I have shown a slightly modified form of stay bar which is my preferred form. In this figure the stay bar H' is composed of angle iron and has one flange provided with recesses  $h^2$  similar to the recesses  $h$  just described to receive the wires. At the points where the bar is to be attached rigidly to the wires, the other flange of the angle iron is bent inward as shown at  $h^3$  and secured to the adjacent fence wire by a strip of wire  $h^4$  engaging the fence wire G' and an aperture in said flange. By this means the stay bar can be secured rigidly at two or more points to the wires G and the flange of the stay which does not engage the majority of the fence wires will be held out of their way thus leaving them free to move longitudinally through the stay bar.

I also provide each wire with an automatic tension device which will compensate for the expansion and contraction of the wires and hold them taut at all times. This device is shown in detail in Figs. 3 and 4 and consists of a portion K of coiled spring which is preferably formed by simply winding the spring stock upon a mandrel and severing it at certain points to provide suitable lengths of spring. The ends of the spring K do not need to be trued up or treated in any way. K' K' are a pair of metal plates of greater length than the spring K and having the same width for the greater portion of their length as the interior bore of the spring K. Each plate K' is provided at one end with an aperture  $k$  which is engaged by one of the fence wires G and at the other end with a pair of seats or shoulders  $k' k^2$  located in different vertical planes so that when the plates K' are slipped longitudinally through the spring K from opposite ends the shoulders  $k' k^2$  of each plate will engage opposite portions of the ends of the spring K. When the wires are tightened and the plates K' K' are drawn in opposite direction as they will be by the ten-



sion of the wire, the inclined seats  $k'$   $k^2$  will compress the spring K evenly between them and the engagement of the plates K' with the interior of the spring will prevent the spring from buckling, as indicated in the drawings.

I also locate a wire tightening device in each wire as indicated in Fig. 1 at L L. In Fig. 12 I have shown a form of wire tightening device which I find it convenient to employ for this purpose, the operation of which will be apparent from the drawings. This device is covered by my former patent, No. 491,743, granted to me February 14, 1893, and it will not, therefore be specifically described or claimed herein. Any other form of wire tightening device may be used in this connection.

I may also provide the fence wires G G with vertical stay wires M M in addition to the vertical stay bars H if desired, as shown in Fig. 1. I also prefer to provide at suitable points anchor plates N embedded in the ground and connected by wire  $n$  with one or more of the wires G of the fence.

In addition to the anchor C for end post A, I may provide said anchor with a broad plate C' as shown in dotted lines in Fig. 2 to give a greater bearing surface, if found convenient or desirable.

What I claim, and desire to secure by Letters Patent, is—

1. In a wire fence the combination with the end post, of an anchor pivoted thereto, the adjusting rod connected to said anchor at a distance from its point of pivoting and engaging a portion of said post, substantially as described.

2. In a wire fence the combination with an end post composed of an angle iron, of an anchor pivotally connected to one flange of said post disposed in line with the fence wires, an adjusting rod secured at one end to said anchor at a distance from the post and having its other end engaging the other flange of the post, and an earth engaging plate secured

to the flange of said post disposed at right angles to the line of the fence wires, said plate having a flange extending in a horizontal direction to prevent the post from being drawn out of the ground, substantially as described.

3. In a wire fence the combination with the fence post composed of angle iron, of an anchor pivoted to the flange of said post disposed in the line of the fence wires and an adjusting rod connecting the anchor with another portion of the post, a brace pivoted to the fence post, and extending on the side opposite said anchor, said brace having on its lower end an earth engaging plate, the said post being also provided with an earth engaging plate secured to the flange disposed transversely of the line of the fence wires, substantially as described.

4. In a wire fence, a fence post composed of two pieces of angle iron having one flange of each vertically overlapping a flange of the other and rigidly united thereto, the other flanges of said pieces extending at an angle to said united flanges in opposite directions, whereby a broad surface is provided adjacent to the surface of the ground to prevent lateral vibration, substantially as described.

5. In a wire fence the combination with the supporting posts and a series of fence wires, of a stay bar composed of angle iron having one flange provided with apertures for loosely engaging certain of said wires, and the other flange provided with inwardly bent portions rigidly attached to the other wires to secure said bar in position and to hold said latter flange out of engagement with the fence wires loosely engaging said stay bar, substantially as described.

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

HENRY C. PRATT.

Witnesses:

PHEBE G. STETSON,  
JOHN S. COE.