(No Model.)

2 Sheets—Sheet 1.

I. F. EBERT.

WIRE STRETCHER.

No. 504,127. Patented Aug. 29, 1893.

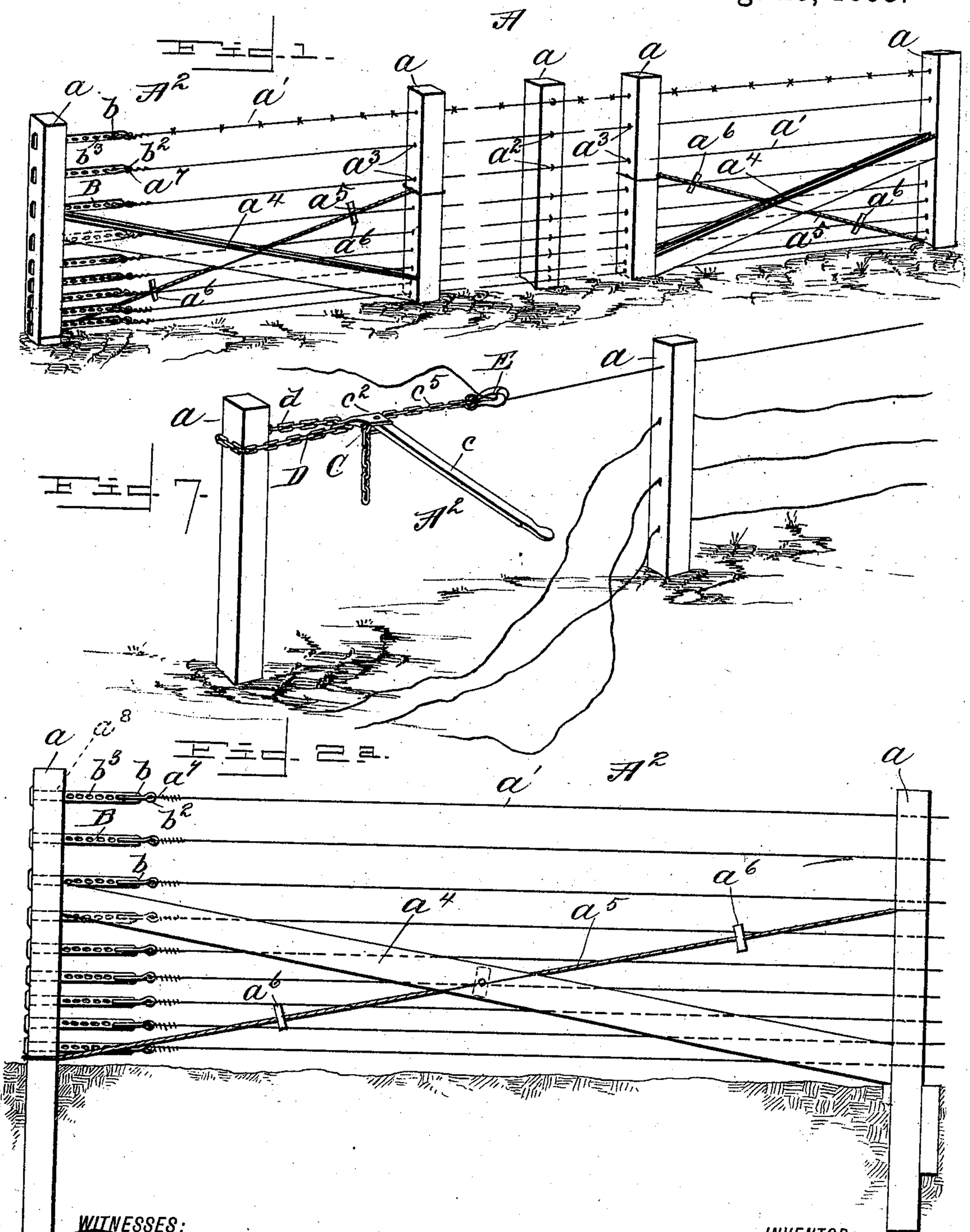

Fig. 2a.

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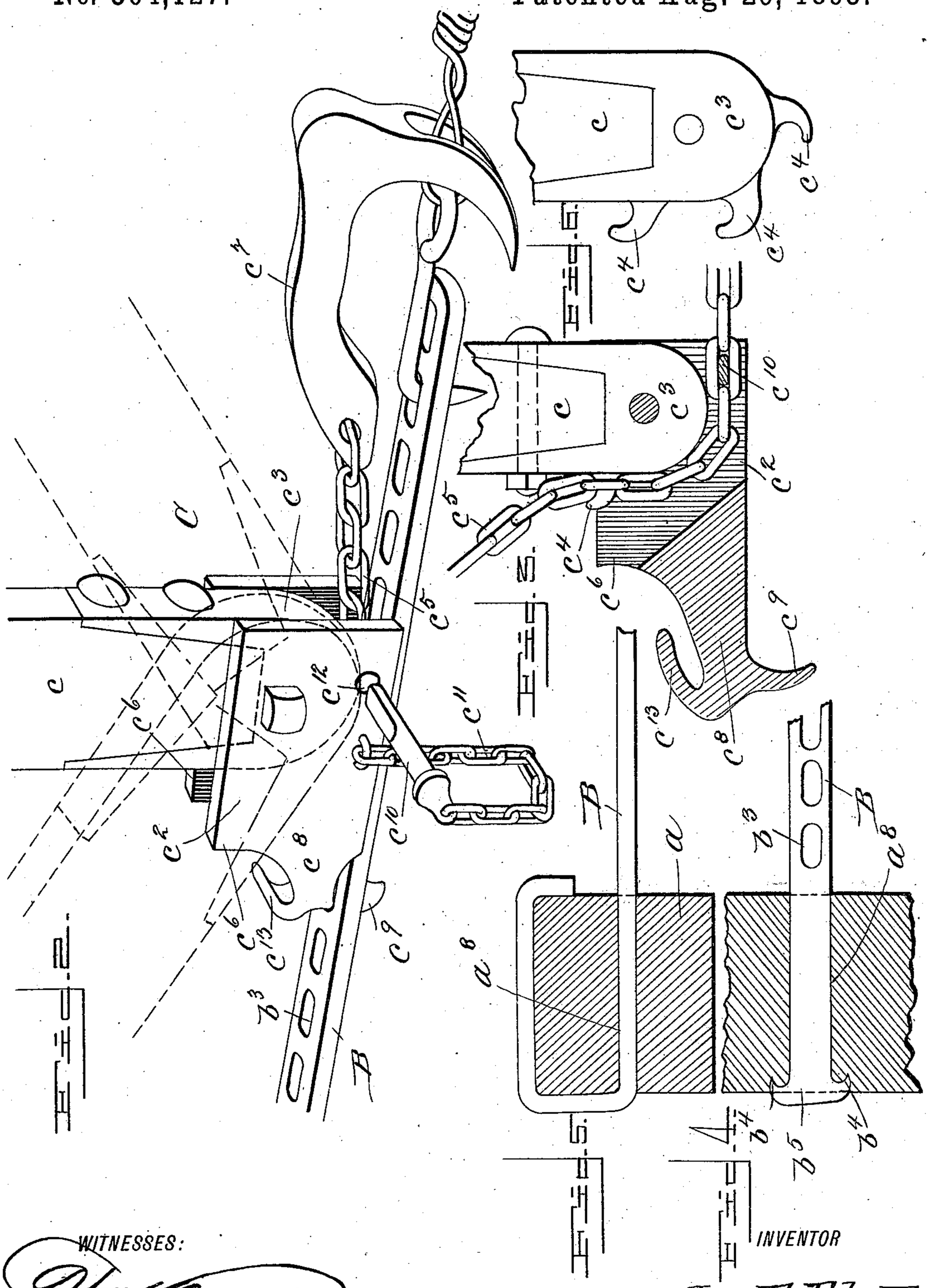

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UNITED STATES PATENT OFFICE.

IRA F. EBERT, OF OSKALOOSA, IOWA.

WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 504,127, dated August 29, 1893.

Application filed April 18, 1893. Serial No. 470,804. (No model.)

To all whom it may concern:

Be it known that I, IRA F. EBERT, a citizen of the United States, residing at Oskaloosa, in the county of Mahaska and State of Iowa, have invented certain new and useful Improvements in Wire-Stretchers; 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.

This invention relates to certain new and useful improvements in "wire-stretchers." With a device of this particular class as heretofore constructed, it has been necessary in properly operating the same, to employ a special form of fence panel in combination therewith, which made an independent use of the same impossible and gave rise to numerous objections, owing to its inapplicability to other fences differing slightly in construction. Again, the construction of such a peculiar form of panel usually required the aid of skilled and experienced workmen, which increased the cost and involved additional labor.

It is the object of this invention to obviate these defects and to that end, I provide an improved and novel straining device, which is adapted to be used independently or in combination with a simple and inexpensive tension bar by which fence or other wires may be strained singly and to any desired extent.

With these objects in view, the invention consists in various novel details of construction, combinations and arrangements of parts to be hereinafter more particularly set forth and claimed.

In describing the invention in detail, reference is had to the accompanying drawings forming part of this specification, wherein like letters indicate corresponding parts in the several views, in which--

Figure 1— is a view in perspective of a wire fence, showing one form of my improved tension bar, applied thereto. Fig. 2— is a view in perspective on an enlarged scale, showing the straining device and bar in operative position on a wire. Fig. 2ª— is a view in elevation illustrating the preferred construction of the terminal panel of the fence. Fig. 3— is a detail view in sectional elevation of the lower portion of the straining device. Fig. 4— is a view in sectional elevation of a fence post showing the tension bar secured therein. Fig. 5— is a view in horizontal section showing a modification of the same. Fig. 6— is a detail view of a modified form of operating lever, and Fig. 7— is a view in perspective, showing the application of the straining device, independent of the bar.

In the drawings: —A— represents a section of a preferred form of wire fence, in which —a—a— are the posts, and —a'—a'— the wires, loosely secured thereon by staples —a^2— or passed through openings —a^3— in the usual manner. Each end panel —A^2— of the section —A— may be provided with a double inclined brace —a^4— which extends from near the center of one post to the ground line of the other, and a rigid or flexible tie-rod or stay —a^5— centrally connected to the brace —a^4— and oppositely inclined and provided with a turn buckle or equivalent device —a^6— by which it may be strained or kept taut.

The fence wires —a'— are each provided with a terminal hook —b— of any suitable construction. The preferred form however, is shown in Fig. 2—, wherein the bent up ends of the wires are passed through eyes —b^2— of the hooks and turned back and wound upon themselves forming loops —a^7— which permit a free movement of the hooks, independent of the wires. These hooks are adapted to engage apertures —b^3— of the inwardly projecting tension bars --B— which latter correspond in number to the fence wires and are adapted to be driven through openings —a^8— in the end post of each section —A— and rigidly secured by the engaging points —b^4— of the head —b^5— formed thereon, taking into the posts as shown. Various modifications of these bars —B— (see Fig. 5—) may be employed, the essential feature being the rigid connection with the post.

To properly take up or strain the wires, after the fence has been set up (as shown in Fig. 1—) I employ a straining device —C— comprising an operating lever —c— which

may be concentrically or eccentrically pivoted in a foot piece —c^2—. The lower end of this lever has secured thereto by bolts, a rounded metallic head —c^3— having at the side thereof one or more upwardly curved teeth or projections —c^4— adapted for engaging the links of a chain —c^5— which latter passes between the walls —c^6— of the foot piece and under the head —c^3— of lever and has attached to its outer extremity a claw-shaped hook —c^7—. This foot piece —c^2— is provided with a rearwardly extending portion —c^8— having on the under side thereof a curved tooth or projection —c^9— which is adapted for taking into the apertures of the tension bars —B—.

The operation of the invention as thus far described, is as follows: Assuming that the straining device is placed as shown in Fig. 2— with the foot piece thereof resting on one of the bars —B— and the downwardly extending tooth —c^9— engaging an aperture —b^3—, the operating lever inclined toward the left as indicated in dotted lines, with the curved projection —c^4— engaging a link of the chain and the claw-shaped hook locked behind the hook of a fence wire, the device will be in operative position. If now, it is desired to adjust the tension of the wire, the operator pulls the lever toward the right, thereby winding on the chain, which tends to draw the wire taut, but should this movement fail to give the required tension, the pin —c^{10}— which is attached to a short length of chain —c^{11}— at the side of the foot piece, may be inserted into the openings —c^{12}— to engage a link of the chain —c^5—, thus retaining the fence wire under tension and allowing the lever to be moved toward the left and a new hold taken on the chain and the hook to be disengaged and inserted into another aperture of the bar —B—.

When using the device —C— as a wire stretcher and independent of the bar —B— it is preferably provided with a short length of chain —D— having the terminal links thereof engaging the curved projecting teeth or lugs —c^9—c^{13}— of the head —c— and the loop —d— passed over one of the posts —a— of the panel —A^2— which serves as an anchor to retain the device in proper position. To the outer end of the chain —c^5— any well known form of "wire clamp" —E— may be detachably secured as shown in Fig. 7—.

It will be understood that I do not confine myself to the exact construction herein shown and described, as various changes may be made in the detail construction within the meaning of the present invention.

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

1. In a wire fence, a panel comprising the end posts, the double inclined braces and stays extending in opposite directions from the center of one post to the ground line of the opposite post, the apertured bars provided with integral engaging heads taking into and forming a rigid connection with one of said posts, and the fence wires having terminal hooks adjustable in the apertures of said bars, as specified.

2. In a wire-fence, the combination with a tension post, of the apertured bars having integral projections engaging said post and forming a rigid connection therewith, and the fence-wires provided with terminal hooks adjustable in the apertures of said bars, as specified.

3. In a wire fence the combination with a fixed bar having a series of apertures formed therein and the fence wires provided with terminal hooks adjustable in said apertures, of a straining device removably mounted on the bar and comprising a foot-piece, a lever pivoted in the foot-piece, and a wire engaging device connected with the lever, as specified.

4. A tension bar, comprising a rectangular and apertured body portion, provided with an integral terminal head having engaging projections formed thereon, as specified.

5. A wire stretcher, comprising an operating lever pivotally secured in a foot-piece and provided adjacent the pivot point with one or more engaging projections, a wire engaging device, and a flexible connection between said device and the lever, said connection being provided with openings into which the engaging projections of said operating lever are adapted to take, as specified.

6. A wire stretcher, comprising an operating lever having the rounded end thereof eccentrically pivoted in a foot-piece and provided adjacent the pivotal point with one or more engaging projections, a wire engaging device, and a flexible connection between said device and the lever, said connection being provided with openings into which the engaging projections of said operating lever are adapted to take, as specified.

7. A wire stretcher, comprising an operating lever provided with a terminal metallic head having one or more engaging projections formed thereon, a foot-piece recessed for the reception of said head wherein the latter is pivoted, said foot-piece being provided with one or more hook-like projections, a wire engaging device, and a flexible connection between said device and the operating lever, said connection being provided with openings into which the engaging projections of said head are adapted to take, as specified.

8. In a wire stretcher, a foot-piece centrally recessed to form side walls and provided with a terminal hook having oppositely curved prongs, an operating lever pivoted between said side walls and provided with one or more engaging projections, a wire engaging device, and a chain connecting therewith and adapted to pass between the side walls of the foot-

piece and into engagement with said projections, as specified.

9. A wire stretcher comprising a foot-piece provided with one or more engaging projections, an operating lever pivotally secured to the foot-piece, a wire-engaging device, a flexible connection between said device and lever, and means for engaging and locking said flexible connection independent of the lever, as specified.

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

IRA F. EBERT.

Witnesses:
G. W. BAUGH,
W. S. KENWORTHY.