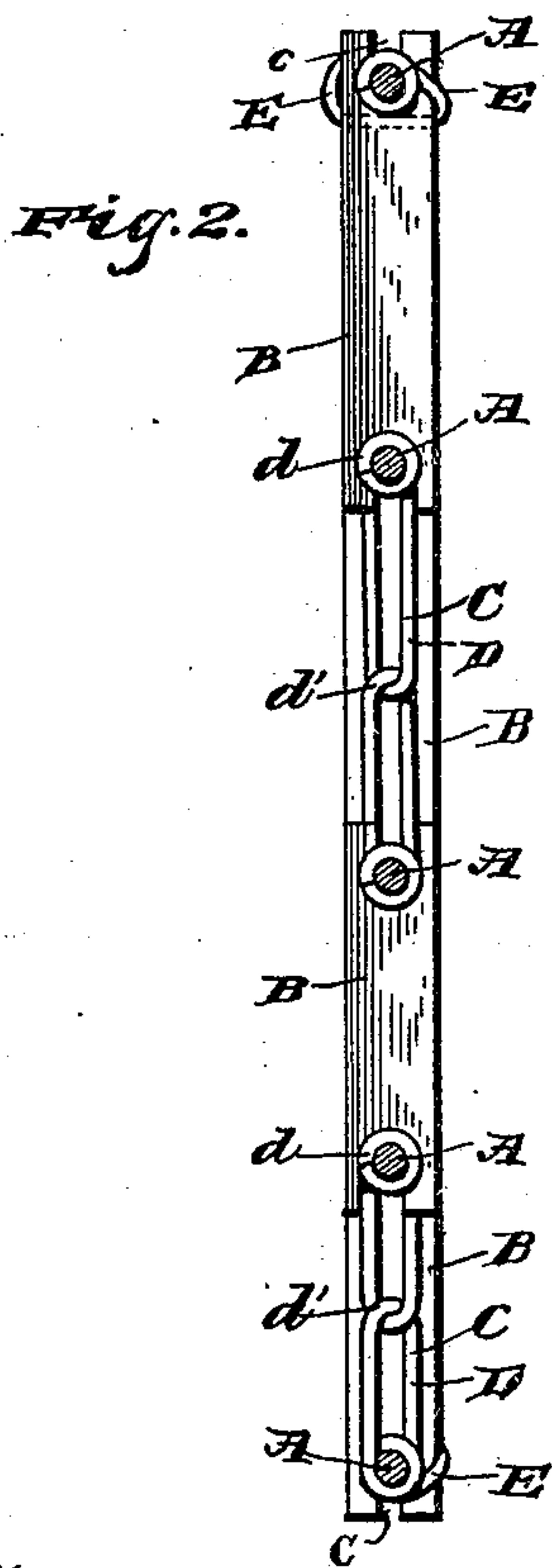
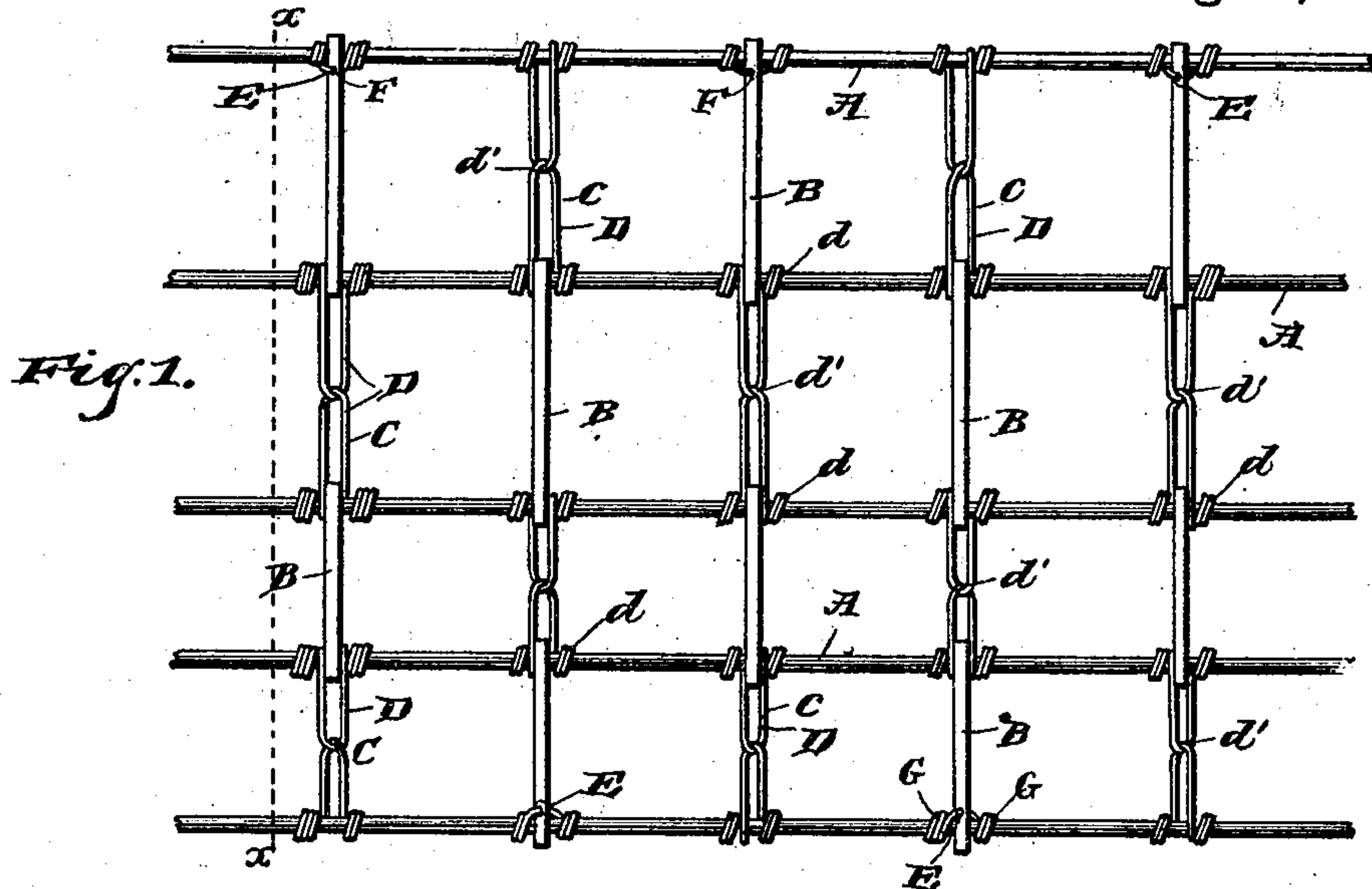


(No Model.)

A. M. KUHN'S.  
WIRE FENCE.

No. 502,977.

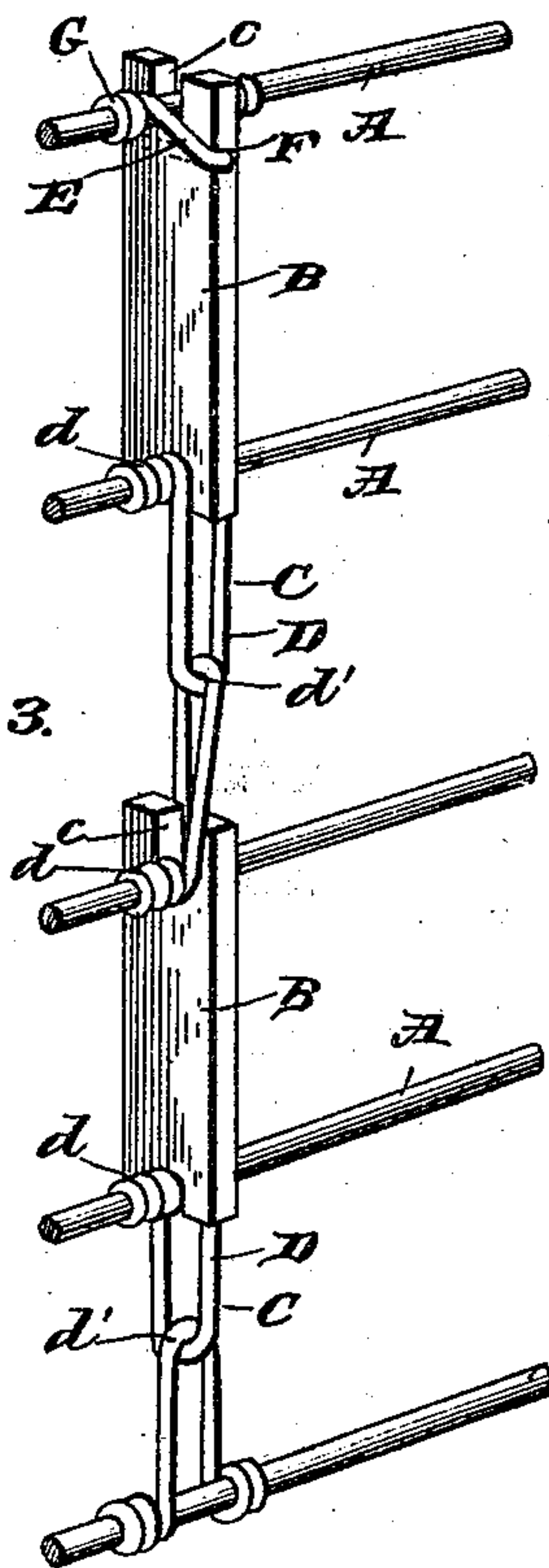
Patented Aug. 8, 1893.



*Fig. 4.*



*Fig. 3.*



Witnesses

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# UNITED STATES PATENT OFFICE.

AMOS M. KUHNS, OF UNION DEPOSIT, PENNSYLVANIA.

## WIRE FENCE.

SPECIFICATION forming part of Letters Patent No. 502,977, dated August 8, 1893.

Application filed December 13, 1892. Serial No. 455,056. (No model.)

*To all whom it may concern:*

Be it known that I, AMOS M. KUHNS, a citizen of the United States, residing at Union Deposit, in the county of Dauphin and State of Pennsylvania, have invented a new and useful Wire Fence, of which the following is a specification.

This invention relates to wire fences; and it has for its object to provide certain improvements in the stays for fences of this character whereby the running wires of the fence are not only prevented from sagging and bending out of shape, but are also allowed a lateral play without impairing or disarranging the stays therefor.

To this end the invention primarily contemplates improvements in the stays for wire fences, or an improved wire fence construction.

With these and many other objects in view which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts hereinafter more fully described, illustrated and claimed.

Figure 1 is a plan view of a portion of a wire fence constructed in accordance with this invention. Fig. 2 is a vertical sectional view thereof on the line  $x-x$  of Fig. 1. Fig. 3 is an enlarged detail in perspective of a line of the fence stay construction. Fig. 4 is a detail plan of one of the rigid stays.

Referring to the accompanying drawings, A represents the parallel running wires of a wire fence stretched from post to post to form the necessary panels in the usual manner. The wires A, are arranged parallel with each other in any number desired according to the height of fence, and are held regularly spaced and firmly stayed by means of an alternate series of rigid and flexible stays B, and C, respectively. The rigid and flexible stays in each vertical series alternate with each other from the lower to the upper wire of the fence, and each vertical series of such stays have their flexible and rigid stays alternate with those of the adjacent series. This is clearly shown in Fig. 1 of the drawings.

The flexible stays C, comprise the separate U-shaped loops D, having their ends coiled on two adjacent running wires as at  $d$ ,

and looped through each other at the central point between the said adjacent wires as at  $d'$ . In each of the vertical series of stays extending from the top to the bottom of the fence these flexible stays alternate with the rigid stay pickets B. The rigid stay pickets B, have notched ends  $c$ , which take over the wires A, between the coiled ends  $d$ , of the U-shaped loops of the flexible stays, which thus prevent the ends of the rigid stays from becoming displaced, and therefore serve to keep the said rigid stays in vertical alignment with the flexible stays. In each vertical series, when an uneven number of line wires A is employed, one end of one of the rigid stays necessarily takes over either the top or bottom wire of the fence, and in order to prevent the outer end of such rigid stay from sliding out of position, I employ a small retaining loop E, coiled at its ends at G upon such top or bottom wire, and passed transversely through a perforation F in the stay, so that the end of the stay is firmly secured to the top or bottom wire as the case may be, to prevent either the top or bottom wire becoming disengaged from the notches of the stays. Now from the foregoing, it will be readily seen that by reason of the disposition of the flexible and rigid stays, the space between all of the running wires A, is spanned by rigid and flexible stays alternately arranged, while this arrangement is true with respect to the vertical alignment of the stays. It will be clear that by this construction, lateral strain on the fence is readily yielded to without sagging, or uneven bending on the part of the several wires, this being due to the yielding of the flexible loop stays, while the height of the fence is kept uniform by reason of the rigid stays holding the wires evenly apart and preventing the sagging thereof. It may be well to further observe at this point that by reason of having the flexible stays alternate with the rigid stays, a construction is provided which differs materially from wire fences employing all flexible stays or all rigid stays, so that the important features of such fences can be combined in a single construction. It is to be noted that the flexible stays allow a ready yielding of the fence, whereby lateral motion may be allowed without bend-



ing or impairing the stays in any manner, while the rigid stays being connected directly to the line wires and held in vertical alignment with the flexible stays by the end connections of the latter, prevent any sagging or bending of such line wires, which is an important feature of advantage in fences of this character, and it is to be borne in mind that the rigid stays have their ends connected directly to the line wires, without any supplemental wire connections, which in themselves would yield and not allow the rigid stays to have their full function.

From the foregoing it is thought that the construction, operation and many advantages of the herein-described fence are apparent without further description.

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

1. In a wire fence, the combination of the parallel running wires and a series of flexible and rigid stays arranged between and connected to such wires, said rigid and flexible stays being arranged alternately in vertical alignment with each other and alternately in longitudinal alignment between the wire, substantially as set forth.

2. In a wire fence the combination of the

parallel running wires, of an alternate vertical and longitudinal series of rigid and flexible stays, said flexible stays comprising separate U-shaped loops looped through each other at their closed ends between the wires and having their other ends coiled on the two adjacent running wires, and said rigid stays having notched ends taking over the running wires between the coiled ends of the loops, and retaining loops secured to the top and bottom wires at points to engage the ends of the rigid stays taking over such wires, substantially as set forth.

3. In a wire fence, the combination with the parallel running wires; of the rigid and flexible stays, said rigid stays having end wire notches and perforations adjacent to the top and bottom wires, and retaining loops passed through the perforations of the rigid stays and looped onto the wires on each side thereof, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

AMOS M. KUHNS.

Witnesses:

E. M. WITHERS,  
AGNES M. WITHERS.