

No. 612,846.

Patented Oct. 25, 1898.

G. HELMERS & W. FESSER.  
WIRE FENCE.

(Application filed Oct. 30, 1897.)

(No Model.)

Fig - 1 -

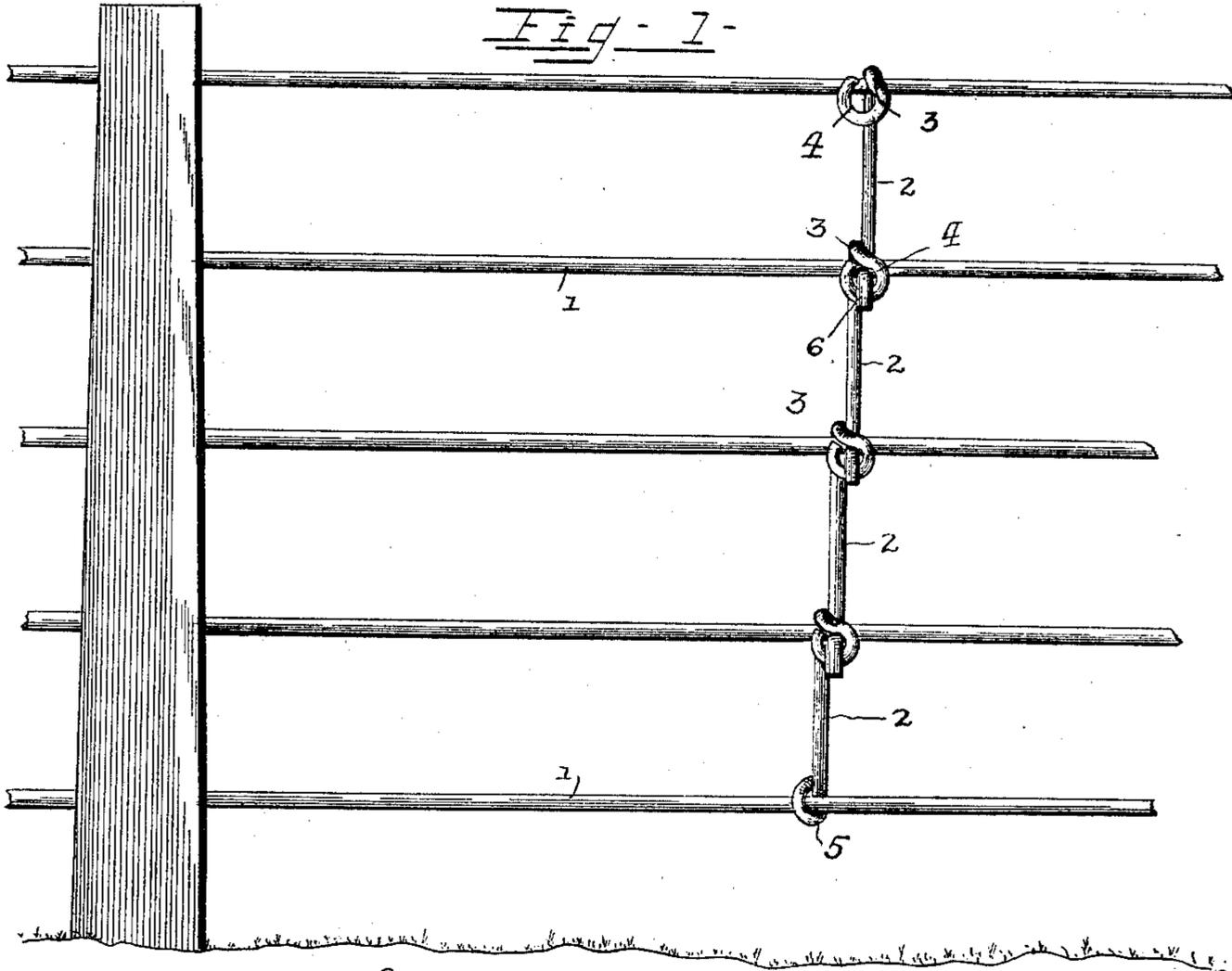


Fig - 2 -

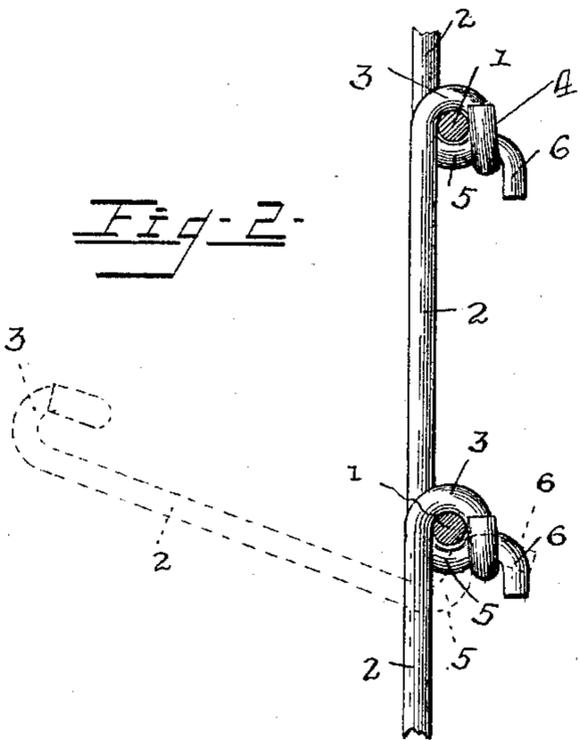
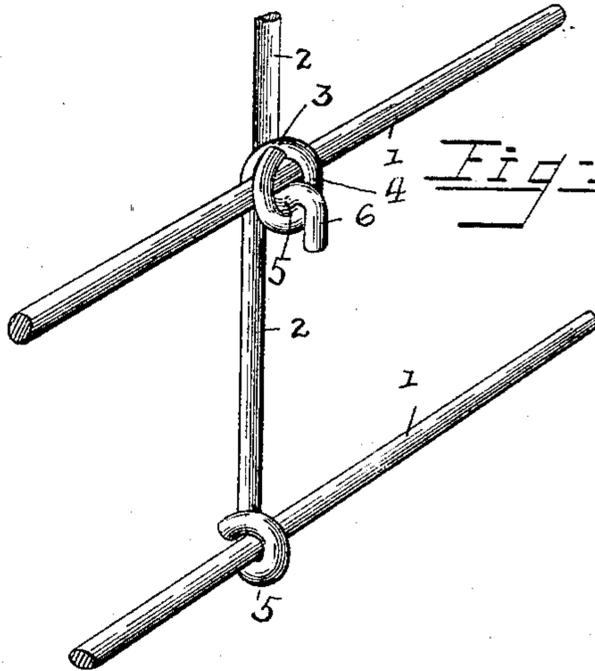


Fig - 3 -



Witnesses

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# UNITED STATES PATENT OFFICE.

GEORGE HELMERS AND WILLIAM FESSER, OF CLARKSDALE, ILLINOIS; SAID HELMERS ASSIGNOR TO SAID FESSER.

## WIRE FENCE.

SPECIFICATION forming part of Letters Patent No. 612,846, dated October 25, 1898.

Application filed October 30, 1897. Serial No. 656,964. (No model.)

*To all whom it may concern:*

Be it known that we, GEORGE HELMERS and WILLIAM FESSER, citizens of the United States, residing at Clarksdale, in the county of Christian and State of Illinois, have invented a new and useful Wire Fence, of which the following is a specification.

Our invention relates to wire fences, and particularly to stays for engaging the runners thereof; and the object in view is to provide a simple and efficient construction of stay which may be applied with facility to the runners, the frictional engagement of the stay with the runners at their points of intersection being caused by the interlocking extremities of the stay-sections.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claim.

In the drawings, Figure 1 is a view of a portion of a fence-panel wherein the runners are connected by a stay constructed in accordance with our invention. Fig. 2 is a detail side view of a stay-section, showing the interlocking connection between said section and the adjoining lower section, the former being shown in dotted lines in the position which it occupies in the act of applying it to the fence-runners. Fig. 3 is a detail view in perspective of the interlocked extremities of adjoining stay-sections.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates fence-runners connected by stays constructed in accordance with our invention, each stay being of sectional construction, with the straight or body portions 2 thereof extended approximately in alinement between the runners. Each stay-section is provided at one end with a loop 3, forming a runner-seat, the extremity of the loop being doubled upon itself to form an eye 4, and at the other end with an oppositely-facing loop forming a runner-seat 5, which is extended to provide an engaging hook 6, the terminal of the hook being arranged approximately parallel with the body portion of the stay-section.

In applying the stay embodying our inven-

tion to the runners of a fence the runner-seat 5 is preferably engaged with the lowermost runner and the hooked extremity is preferably bent upward to embrace said runner. 55  
The upper end of this lowermost stay-section is engaged over the adjacent intermediate runner to arrange the seat 3 in contact therewith, whereby the eye 4 depends at the opposite side of the plane of the runner from the body portion 2. The next stay-section is then placed with its hooked extremity under the runner, and said hook is engaged with the eye 4 of the previously-applied section, as indicated by the dotted lines in Fig. 2, after which 60  
said second stay-section is swung upwardly to the upright position (indicated in full lines in Fig. 2) to engage the seat 5 with said intermediate runner, and thereby clamp said runner between the opposing seats 3 and 5 of 65  
the connected stay-sections. The seat 3 at the upper end of said second stay-section is engaged with the next intermediate runner. This operation is continued until the desired number of sections corresponding with the 70  
intervals between the runners have been applied, when the upper extremity of the uppermost stay-section is arranged to cause the engagement of its runner-seat 3 with the topmost runner. The extremity of the runner-seat 3 is coiled outwardly or from the vertical plane of the body portion of the adjoining upper stay-section, as will be seen by reference to Figs. 1 and 3, whereby the tendency 75  
of the lower end of a stay-section to slide upon the runner in one direction is resisted by contact with the upper end of the body portion of the adjoining lower stay-section, while displacement of said lower end of the upper section in the opposite direction is resisted by the continuous side of the eye 4. 80  
The object of this arrangement is to prevent lateral strain applied to the lower end of an upper stay-section from bending or deflecting the extremity of the lower stay-section at the open or non-continuous side of its eye 4. 85  
Thus by coiling the extremity of the side of the seat 3 in a direction outwardly or from the plane of the body portion of the contiguous or adjoining stay-section the free end of the eye 4 is protected from strain, and 90  
hence the interlocking extremities of the stay-

sections are adapted to retain their normal or operative shape in opposition to any strain which under ordinary conditions of use may be applied thereto. Furthermore, it will be seen that the clamping action applied to the runners by the interlocking extremities of the adjoining stay-sections has the effect of preventing displacement of the stay in a direction parallel with the runners. This frictional engagement of each runner by the interlocked extremities of the adjacent stay-sections is assisted in preventing displacement of the sections parallel with the runners by the fact that of two adjoining sections the upper is arranged at its lower end in contact with one side of the upper end of the lower section, while the eye 4 of said lower section is turned in a direction parallel with the runner and toward the opposite side of said lower section, whereby the continuous side of the eye 4 is toward the transverse plane of the lower end of the upper section. The effect of this is that in case of a strain applied to the upper section in a longitudinal direction from the transverse plane of the lower section the hook 6 will bear against the continuous side of the eye 4, while a strain in the opposite direction applied to the upper section will cause the latter to bear against the side of the body portion of the lower section. The same is true with regard to the lower section. A strain applied in one direction will cause it to bear against the body portion of the upper section, while a strain in the opposite direction will cause the continuous side of the eye 4 to bear against the hook 6. This obviously avoids the straining of the non-continuous side of the eye 4 or that side which is formed by the extremity of the blank, and in order that the engagement of the hook 6 of an upper section with the eye 4 of a lower section may be facilitated and still allow the body portions of the stay-sections to be arranged in the position above indicated the eye 4 has its continuous side deflected parallel with the runner toward the plane of the adjacent end of the upper section, as clearly shown in Fig. 1. In other words, the center of the eye 4 at the upper end of a lower section is disposed at one side of the transverse plane of the body portion of the adjoining upper stay-section.

The peculiar construction of the lock between the detachable sections of the stay embodying our invention provides for a longitudinal stiffness of the stay, whereby an upward strain upon the lowermost runner will

be communicated to the several intermediate and upper runners in the same manner as by an integral or continuous stay. The hook at the upper end of each section engages under the hooked extremity of the adjoining upper stay-section, and thus lifts directly thereon and in alinement with the adjoining upper section. A particular advantage of the construction specified resides in the fact, therefore, that the sections of the stay are independently detachable from the runners to facilitate taking down or removing the fence, whereas when the sections of the stay are in their operative positions the same stiffness is obtained as with a continuous stay.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having described our invention, what we claim is—

In a fence, the combination with runners, of a sectional stay having its adjoining upper and lower sections provided with interlocking contiguous extremities, consisting of oppositely-facing looped seats 5 and 3, in contact with a runner respectively at its lower and upper sides, and combining to encircle the runner in different transverse planes, one side of the seat 3 being extended and deflected in a direction parallel with the longitudinal plane of the fence-runner to form an eye 4, of which the extremity is approximately in contact with the side of the seat opposite to the transverse plane of the body portion of the adjoining upper section, said eye being deflected to arrange its center to one side of the transverse plane of the lower section upon which it is formed, and in the transverse plane of the adjoining upper section, and the seat 5 being terminally bent downwardly, in the transverse plane of the body portion of the upper stay-section, to form a hook 6 engaging said eye, whereby the body portion of the upper stay-section and its hook 6 bear against opposite sides of the adjoining end of the lower stay-section, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

GEORGE HELMERS.  
WILLIAM FESSER.

Witnesses:

A. R. ADAMS,  
JOHN PERRY.