(No Model.)

# C. SHAW.

## WIRE FENCING.

No. 386,270. Patented July 17, 1888.

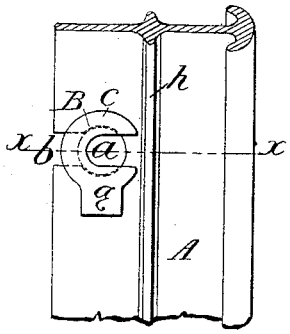


Fig. 1.

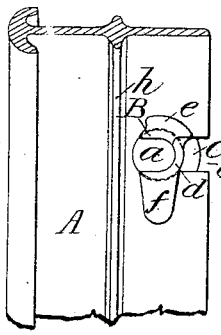


Fig. 2.

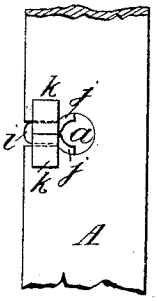


Fig. 6.

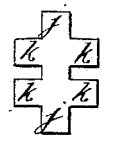


Fig. 8.

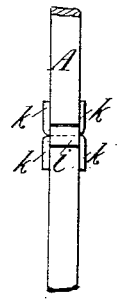


Fig. 7.

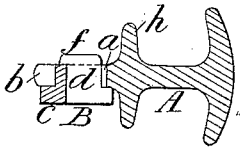


Fig. 3.

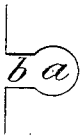


Fig. 4.

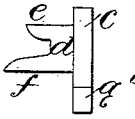


Fig. 5.

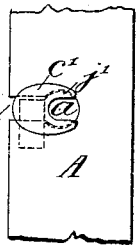


Fig. 9.

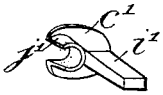


Fig. 11.

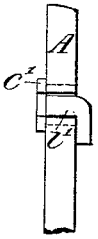


Fig. 10.

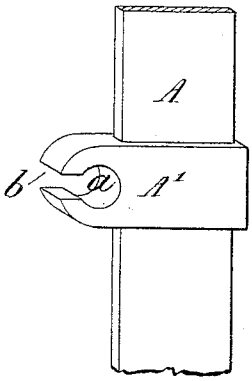


Fig. 12.

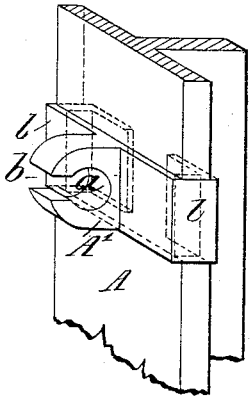


Fig. 13.

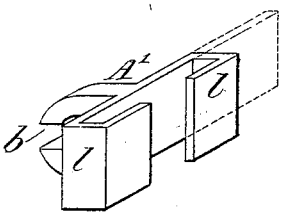


Fig. 14.

WITNESSES:

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Wm. F. Hannam,

INVENTOR:

Charles Shaw,

By his Attorneys,

Arthur C. Fraser & Co

# UNITED STATES PATENT OFFICE.

CHARLES SHAW, OF WOLVERHAMPTON, COUNTY OF STAFFORD, ENGLAND.

## WIRE FENCING.

SPECIFICATION forming part of Letters Patent No. 386,270, dated July 17, 1888.

Application filed November 4, 1887. Serial No. 254,270. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES SHAW, a subject of the Queen of Great Britain, residing at Wolverhampton, in the county of Stafford, England, have invented certain new and useful Improvements in Wire Fencing, of which the following is a specification.

This invention relates to improved means for securing barbed and other wire to the uprights of fencing and to the vertical distance-bars or stretchers, known as "droppers," employed in "Corrimony" or "swing" fencing, without threading such wire through the uprights or distance-bars, and has for its object improved fasteners and their combination with specially-formed openings in the uprights or distance-bars, or in mountings fixed to the uprights or distance-bars, for retaining the wires within such holes or openings.

For the sake of convenience I will describe the invention in relation only to uprights, when its application to distance-bars or droppers for swing fencing will be readily understood without need for special description.

A modification of this invention which I prefer to employ is illustrated by Figures 1 to 5, inclusive.

Fig. 1 is a side elevation of a short length of upright, showing a fastening constructed according to this invention within a specially-formed opening in the web of the upright. Fig. 2 is a view of the opposite side of the part of the upright shown by Fig. 1. Fig. 3 is a section taken on line *x x* of Fig. 1. An opening, *a*, is formed through the web of the upright A for the reception of the wire and of the fastening therefor, and is consequently, therefore, somewhat larger than the diameter of the wire, and such opening has also a part, *b*, of just sufficient width to allow of the passage of a wire, which passes out therefrom to the edge of the upright. The shape of one of these openings is clearly shown by Fig. 4. Fig. 5 is a detached view of the fastening as seen in side elevation previously to its insertion within the upright.

The fastening B has a barrel, *d*, of the width of the web of the upright and of the diameter of the part *a* of the opening, and on one end of this barrel is a flange, *c*, and on the other end, at the top thereof, is a tongue, *e*, and at the bottom thereof a tongue, *f*. Both the barrel and flange are open on one side, as shown at Fig. 1, and a short arm, *g*, is formed down from the lower edge of the flange. The fastener is inserted endwise into the part *a* of the opening, and the tongues *e* and *f* are bent back against the face of the web, and thus the fastener is held within the web of the upright by the flange *c* on one side and the tongues on the other. When it is desired to secure a wire to the upright, the fastener is moved half a turn by means of the arm *g*, so as to bring the open side of the barrel and flange opposite the part *b* of the opening in the upright, and the wire is then moved sidewise through the part *b* and into the barrel, upon which the fastening is turned back into the position shown by Fig. 1, thus closing the communication between the parts *a* and *b* of the opening in the upright and securely retaining the wire within the upright. The tongues may then be tightly clinched up, if desired, to prevent the fastening from being turned through accident or mischief. The fastening may be put in place within the upright, if preferred, after the wire has been passed into the opening *a*, in which case the arm *g* is not required. It is not essential, of course, to have two tongues, as shown, as one only may be employed, if preferred, in which case the tongue may be formed of a width which will pass through the narrower part *b* of the opening, and thus such tongue will not require bending back after the insertion of the fastening within the upright, as upon turning it somewhat within the part *a* of the opening the tongue will be against the side of the upright, and in combination with the flange prevent the fastening from moving endwise. In this case, of course, the tongue is in such position on the end of the barrel of the fastening as that when the fastening has been turned in the manner described the barrel will securely close the communication between the parts *a* and *b* of the opening. The upright is preferably rolled with a rib, *h*, to strengthen it

against liability to fracture through a part where an opening, *a*, is formed. This rib is preferably formed to run down each side of the web of the upright. The employment of the rib for this purpose is not, however, claimed as novel, as such a rib is described in the specification of Letters Patent of the United States granted to William Bayliss, dated the 9th day of June, 1885, and numbered 319,878, for certain improvements in metal fencing.

A modification of the fastening just described is shown by Figs. 6 to 11, inclusive. In this modification the fastening is shown by Figs. 6, 7, and 8 as made of sheet metal, and by Figs. 9, 10, and 11 as made of malleable iron.

Referring first to the case in which the fastening is made of sheet metal, Fig. 6 is a corresponding view to Fig. 1, and Fig. 7 a front edge view of Fig. 6, and Fig. 8 a plan of the fastening previously to its being folded up for application to the upright. By way of example only, the upright is shown in this case as a plain flat bar. The opening in the upright is of the same character as in the modification above described. The fastening, however, in this case cannot be turned in the upright, and must be put in place therein after the wire has been moved sidewise into the part *a* of the opening. This fastening consists of a part, *i*, which passes within the part *b* of the opening, of a part, *j j*, which passes within the opening *a* and closes the communication between the part *a* and the part *b* of the opening, and of tongues *k k*, &c., which bear against each side of the upright. The fastening is pushed into place, as shown, from one side of the upright after the wire has been moved into the part *a* of the opening, and the tongues on the opposite sides of the upright to that from which the fastening has been pushed in must of course be turned back against the side of the upright after the fastening has been placed therein.

Referring to Fig. 8, the fastening is formed by folding the plate over so that the parts *j j* are against one another, and then opening out such parts to the required shape shown by Fig. 6, and also opening out a pair of tongues, *k k*, at one end. One tongue only may be provided at each end of the fastening; but a pair is preferred.

Referring now to the case in which the fastening is made of malleable iron, Figs. 9 and 10 correspond, respectively, to Figs. 6 and 7, and Fig. 11 is a detached view of the fastening, looking from the opposite end thereof to that shown by Fig. 9. In this case a flange, *c'*, is formed on one end of a part, *j'*, which passes into the part *a* of the opening in the upright, and the outer end of the part *i'*, which passes into the part *b* of the opening, is bent back against the face of the upright, as shown at Fig. 10, after the fastening has been placed within the upright. Fasteners constructed in this manner may be employed to hold the uprights securely against any tendency to move in a direction in the plane of the fence by forming the parts of the fasteners (or of one or more of the fasteners for each upright) which pass within the parts *a* of the openings of a tapering thickness lengthwise, so as to wedge themselves tightly against the wires.

In lieu of forming the opening *a b* in the upright, such an opening may be formed in a projecting part of a mounting fixed to the upright, and thus the weakening of the upright occasioned by forming holes therein, as above described, for the wires and fastenings be avoided. Such a mounting applied, by way of example only, to a plain flat upright is illustrated by Fig. 12, in which the mounting A' is fixed to the upright A by means of a rivet or other convenient means, and an opening, *a b*, is formed therein for the reception of the wire and fastening.

Fig. 13 illustrates a corresponding mounting convenient for application to a flanged upright, and Fig. 14 shows a back view of the same. In this latter case a notch is formed on each side of the flange of the upright, and the mounting is formed with wings *l l*, which pass round the edge of the flange within the notches. One of the wings is straight, as shown by broken lines, Fig. 14, previously to the mounting being fixed to the upright, and the mounting is fixed by clinching such wing round the edge of the upright within its corresponding notch.

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

1. A fence-bar having a slotted opening through which a fence-wire is passed, which opening communicates with a larger circular aperture in which the fence-wire is retained, in combination with a fastener having a hollow cylindrical part bent or formed to fit in and conform in shape with the walls of said circular aperture, said cylindrical part being greater in diameter than said slotted opening, and said cylindrical part extending around only a part of the periphery of said circular aperture, and said fastener also having side flanges of greater diameter than said slotted opening, which seat against the bar on opposite sides of said circular aperture when the fastener is applied to the bar, the flange on one side at least being constructed to be bent down against the bar, substantially as set forth.

2. A fence-bar having a slotted opening through which a fence-wire is passed, which opening communicates with a larger circular aperture in which the fence-wire is retained, in combination with a fastener which has a hollow cylindrical part of greater diameter than the width of said slotted opening, said cylindrical part fitting and turning within said circular aperture, and said cylindrical part having an open slot communicating with its central bore, said slot, when the cylindri-

cal part is turned, coinciding with said slotted opening in the bar, and said fastener having on one end of said cylindrical part a fixed flange, which seats against said bar on one side of said aperture, and said fastener having on its opposite side a tongue, which is passed through said aperture, and which is bent down against the bar on the opposite side of said aperture, substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

CHARLES SHAW.

Witnesses:
STEPHEN WATKINS,
ROBERT M. LISTER.