

UNITED STATES PATENT OFFICE.

ELKANAH G. WILLIAMS, OF HARPSTER, OHIO, ASSIGNOR OF ONE-HALF TO
WALTER R. ROWSE.

FENCE.

SPECIFICATION forming part of Letters Patent No. 508,359, dated November 7, 1893.

Application filed May 6, 1893. Serial No. 473,275. (No model.)

To all whom it may concern:

Be it known that I, ELKANAH G. WILLIAMS, a citizen of the United States, residing at Harpster, in the county of Wyandot and State of Ohio, have invented certain new and useful Improvements in Fences; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to fences, of that class known as wire fences, and it consists in certain novel and valuable features which will be hereinafter fully described and claimed.

Referring to the accompanying drawings: Figure 1 is a perspective view illustrating my invention. Fig. 2 is a perspective detail view, partly in section, illustrating on an enlarged scale the several parts of what may be called the automatic tension device. Fig. 3 is a detail view, hereinafter described.

The same letters of reference indicate corresponding parts in the several figures.

Referring to the several parts by their letters of reference:—A indicates a square post which is set in the ground at one end of the fence, and which, like all the other posts, &c., of my fence, may be formed either of wood or iron, whichever is preferred. This end-post is braced against the "pull" of the fence-wires, H, by two inclined braces, I, I, which are arranged on the inner side of said post, one on each side of the series of wires, with their upper ends secured to the post A and their lower ends secured in the ground. Through the post A is formed a series of transverse, parallel, openings, A', the number of which corresponds to the number of fence wires; for although I have shown five wires employed in the fence in the accompanying drawings, it is obvious that a greater or less number of wires can be used, according to the height, &c., of the proposed fence. The openings A' are sufficiently large to admit freely the tension-bars F.

B indicates a short post, or stop-bar, the lower end of which does not come in contact with the ground; and in this post are formed

transverse openings B', corresponding to those in the fixed post A.

F indicates the metal tension-bars, which are formed with the series of openings F'. These metal bars may be formed of steel or strap iron, and are usually made about three-fourths of an inch wide by one-eighth of an inch thick, and of any desired length, one foot, more or less, according to the size of the fence. The outer ends of the fence-wires H are secured to the apertured inner ends of these tension-bars, which enter loosely the openings of the fixed post A; and a coiled spring, C, is mounted loosely upon and encircles, each tension-bar between the fixed post A and the movable bar B; the outer ends of the tension-bars F passing loosely through the openings in post B, where spikes or removable stop-pins, J, are passed through their openings F', on the outer side of the short post B, as shown. The openings F' are formed one inch apart, for the purpose of adjustment as described below.

The fixed posts of my wire fence are placed preferably thirty feet apart, and consist, besides the end-posts A, of posts D and G. The post D, shown in detail in Fig. 3, is a metal or wooden post with a flat face, *d*, and rounded back, *d'*; its shouldered lower end, D', being set in a fixed square or round tile, D², filled with cement or other retaining substance. In the flat side of this post are formed grooves, D³, corresponding in number to the wires of the fence, and of sufficient size to let the wires work freely as they expand and contract under the influence of heat and cold. A flat iron bar, D⁴, riveted or bolted to the flat side of the post, prevents the wires from slipping out of the grooves. The post G is a plain wooden post to the side of which the wires are held in position by staples which are of sufficient size to let the wires slide or work horizontally.

Between the fixed posts, about four feet apart, are arranged stays, E, which serve to hold the wires at the proper distances apart. These metal stays may be formed of strap- or hoop-iron, and tongues E' are cut or struck up out of them at their center, said tongues being bent around the several wires of the fence, as shown, thus securing the stays to

the wires, and holding the fence wires permanently at the proper distances apart.

It will be seen from the foregoing that when the fence wires, which are free to move lengthwise, contract in cold weather, they will compress the spiral springs C, drawing the inner ends of the tension bars F farther through the openings of the end-posts A, while when the fence wires expand in warm weather the spiral springs will slide the post B and tension bars F outward and thus take up the slack. By this novel construction it will be seen that my device operates automatically, preventing all breakage of the wires when they are contracted by severe cold, and taking up all slack or looseness when they expand again. The spikes or removable stop-pins J are adjusted in the proper opening F' to take up all slackness and thus render the device perfectly operative, the openings F' being arranged, for this purpose, one inch apart; thus permitting each fence wire to be adjusted separately.

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 stationary post having the series of transverse openings, separately adjustable tension

bars arranged in said openings, each of said bars directly connected at its inner end to one of the fence wires, the movable post secured on the outer ends of said tension bars, and the springs mounted on said tension bars between the stationary and movable posts; substantially as set forth.

2. In a wire fence, the combination of the stationary post having the series of transverse openings, the separately adjustable tension bars arranged in said openings, each of said bars directly connected at its inner end to one of the fence wires, the opposite ends of said tension bars being provided with longitudinal series of perforations, the movable post having openings to receive said tension bars, the springs mounted on said tension bars between the fixed and movable posts, and movable pins arranged in the openings in the tension bars outside the movable post; substantially as set forth.

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

ELKANAH G. ^{his} × WILLIAMS.
mark

Witnesses:

CYRUS SEARS,
J. L. LEWIS.