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J. M. Rappleye.
Wire-Fence.

PATENTED JUL 4 1871

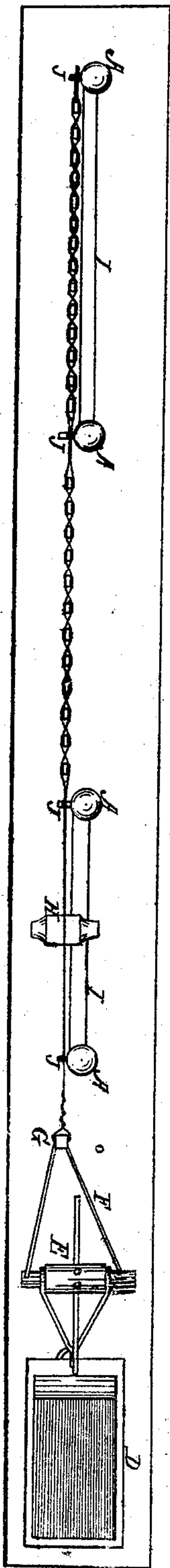


Fig. 2.

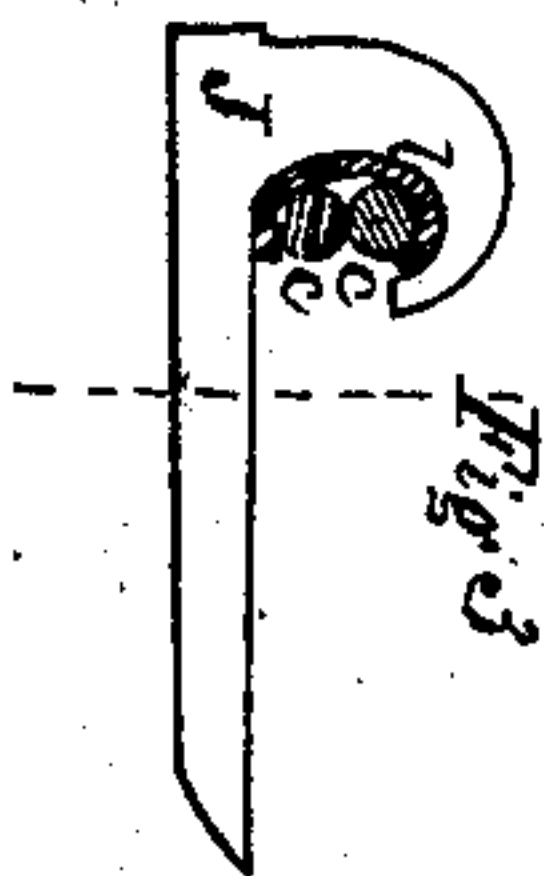


Fig. 3.

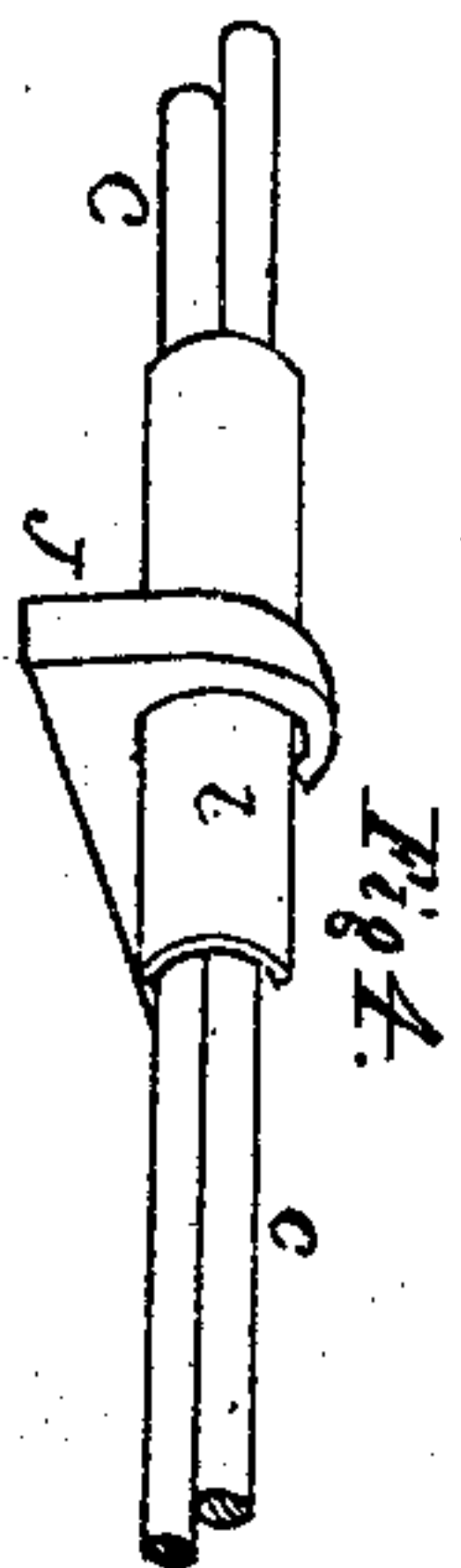


Fig. 4.

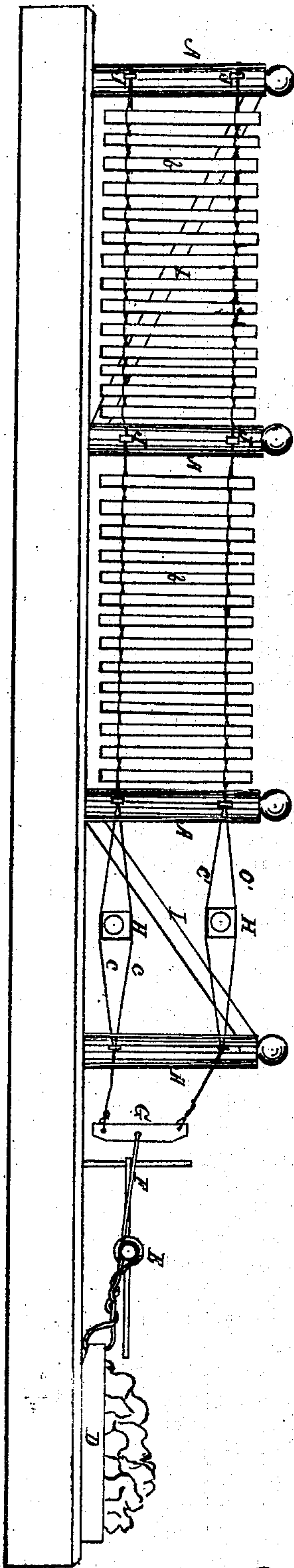


Fig. 1.

*Patented to Sweet, Jr.
Wm. J. Fyfe.*

*J. W. Rappleye
Per Burke, Fraser & Osgood, attys.*

UNITED STATES PATENT OFFICE.

JOSHUA W. RAPPLEYE, OF FARMER VILLAGE, NEW YORK.

IMPROVEMENT IN CONSTRUCTING WIRE FENCES.

Specification forming part of Letters Patent No. 116,755, dated July 4, 1871.

To all whom it may concern:

Be it known that I, JOSHUA W. RAPPLEYE, of Farmer Village, in the county of Seneca and State of New York, have invented certain Improvements in the Mode of Constructing Fences, of which the following is a specification:

My invention relates to that class of fences which is constructed of palings connected together by double strands of wire, said strands being attached to posts set in the ground at stated intervals; and it consists: 1st, in the method of connecting the double strands with the posts by means of a hook and a sheath or holder for retaining the strands; and, 2d, in the apparatus for maintaining the wires at a proper and uniform tension while the palings are being interwoven with the strands during the construction or erection of the fence; and, also, in the method of bracing the posts at the end of a line of fence of this construction.

Figure 1 is a side view of the fence, together with the apparatus used in its construction. Fig. 2 is a plan view of the same. Fig. 3 is a side view of the fastening device for connecting the wires to the posts, the sheaths and wires being shown in section. Fig. 4 is a view of the same, in perspective.

In constructing fences of this kind, posts A A are first set in the ground at intervals; wires of two strands each, *c c' c'*, are fastened to the first or end posts at suitable heights, and the proper distance apart, to secure the pales *b b*, which are woven into the wires by the crossing of the strands in the spaces between the pales, as shown in Figs. 1 and 2. In order that the pales may be firmly held the wires must be strained under a considerable degree of tension, and this tension must be maintained equally during the construction of a line, else there will be looseness of some of the pales.

Heretofore this tension has been maintained by anchoring a windlass to a post or other fixed object, and winding the wires on the windlass till sufficiently strained; but the weaving in of the pales takes up the wire rapidly, making it necessary to pay out frequently by unwinding from the windlass. This was liable to slack the wires too much at times, rendering the tension, and consequently the stability, of the palings very unequal.

This objection is obviated by that part of my

invention which provides a movable or yielding weight in place of the fixed anchor for keeping the tension on the wires equal while the work of weaving in the pales is in progress. This yielding weight may consist of any device which may be arranged to yield at a given pressure, as a sliding weight, spring-balance, or loaded truck. The device which I find it most expedient to employ, as it is almost always kept on a farm, is a stone-boat, D, loaded with stone until the right resistance is attained. To this I attach the windlass E, and connect the barrel or axis thereof (in any suitable manner, but preferably by a cable, F) with the middle of the double-tree G. The strands of wire *c c' c'* are secured to each end of this double-tree at a distance apart equal to that required to hold the pales of a fence of any given height, so that the wires are strained as nearly as may be in the positions in which they are to be secured to the posts. By the working of the windlass the wires are strained uniformly, the double-tree equalizing the tension on all the strands, and the tension being adjusted as desired by increasing or diminishing the weight on the stone-boat. The pales are inserted and secured, and by turning the hand-levers H H to cross or twist the strands between each, and as the wires are taken up by this process the load D moves forward, keeping the tension equal and obviating the necessity of stopping to adjust the windlass, while the fence is made uniform throughout. In order to thoroughly stay the end posts of a line of fence, I place a brace diagonally from the top of the end post, with its foot planted firmly against the bottom of the next post, as shown at I I. This makes an effectual support, as the thrust of the brace I, being against the bottom of the next post, cannot disturb it, and hence does not yield as when planted in the ground.

As ordinarily secured to the posts, the strength of the wire is liable to be impaired by abrasion against the staples which hold them, so that they ultimately break at those points. I obviate this by providing a hook, J, with an open head, as shown in Figs. 3 and 4. The hook portion incloses a sheath or holder, *l*, consisting of a piece of sheet metal or analogous material, which embraces the wires *c c'* and projects an inch or thereabout on either side of the hook. This gives an ample bearing or support to the wires and prevents their vibration in contact with the hook,

which tends to disintegrate them. The hook does not necessarily require to be driven into the post farther than the dotted line, Fig. 3, leaving sufficient room to remove the wires without withdrawing the hook, which is sometimes necessary for repairs, and for laying down the fences to prevent the formation of snow-drifts when used on the lines of railroads.

I claim as my invention—

1. The combination of the movable weight D, windlass E, cross-tree G or its equivalent, with the wires *c c c' c'* for maintaining equable tension and adjustment to the taking up of the wire, substantially as and for the purpose set forth.

2. The double-tree or "evener" G, in combination with the windlass E, for obtaining uniform tension on the two sets of wires *c c c' c'*, as set forth.

3. The sheath or holder *l*, in combination with the open-headed spike or hook J and wires *c c*, substantially as set forth.

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

JOSHUA W. RAPPEYE.

Witnesses:

WM. M. KING,

JAMES L. NORRIS.