

No. 766,954.

PATENTED AUG. 9, 1904.

W. H. KUHLMAN.
WIRE FENCE TIGHTENER.
APPLICATION FILED MAY 17, 1904.

NO MODEL.

FIG. 1.

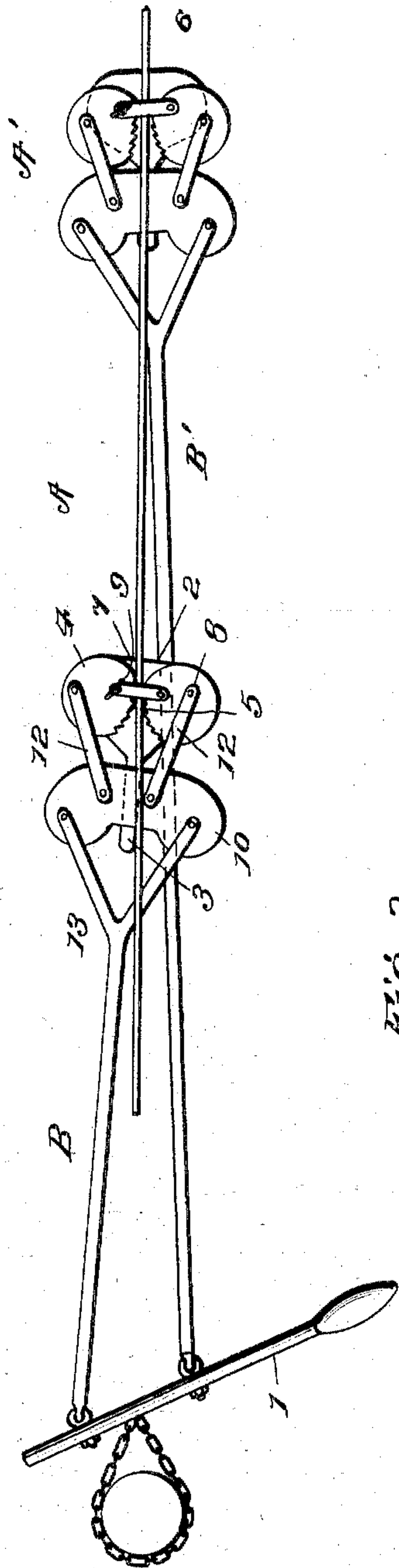
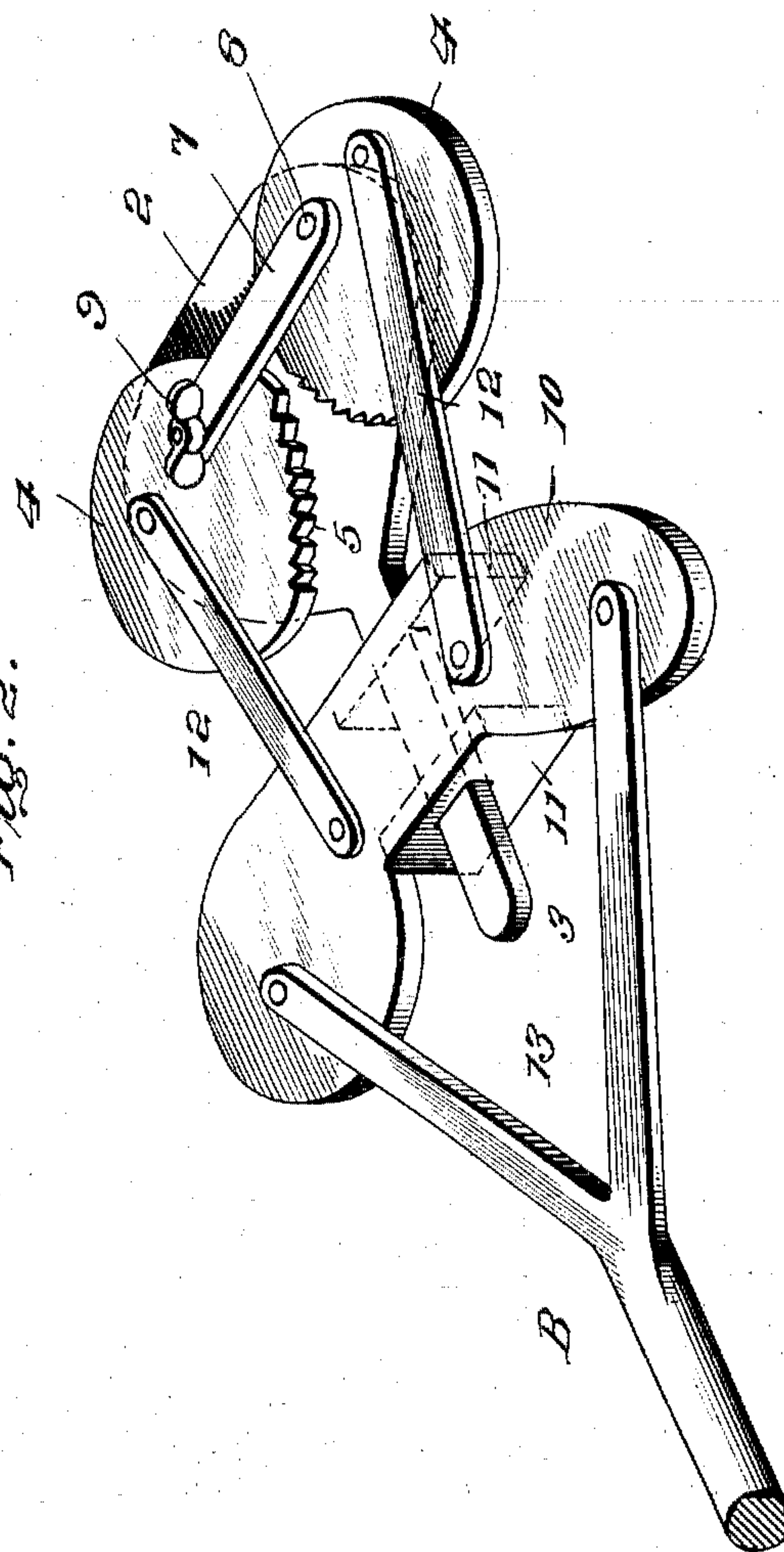


FIG. 2.



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WIRE-FENCE TIGHTENER.

SPECIFICATION forming part of Letters Patent No. 766,954, dated August 9, 1904.

Application filed May 17, 1904. Serial No. 208,449. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. KUHLMAN, a citizen of the United States, residing at Beardstown, in the county of Cass and State of Illinois, have invented certain new and useful Improvements in Wire-Fence Tighteners, of which the following is a specification.

This invention has relation to the class of tighteners for stretching fence wires or lines to be subjected to tension by sets of grips operating in alternation, the one returning to a position to obtain a grip upon the wire or line simultaneously with the advancing of the other grip drawing the line or fence wire forward.

In accordance with this invention the grips are separate and independent and involve a duplicate construction and are so formed that the jaws are positively actuated either to cause them to grip the fence wire or line or to release the same, according as the grip is moving forward or rearward.

The invention comprises a plate, pivoted jaws applied to the plate, a cross-head slidably connected with the plate and adapted to be positively operated to move the grip either forward or backward, and links connecting the cross-head with the pivoted jaws, whereby the latter are turned either to effect a release of the wire or line or to take hold of the same.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and drawings hereto attached.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a detail view showing the application of the invention. Fig. 2 is a perspective view of a grip forming an essential part of the tightener.

Corresponding and like parts are referred to in the following description and indicated in both views of the drawings by the same reference characters.

In accordance with this invention two grips A A' are essential and are connected to an op-

erating-lever 1 by means of rods B B'. These grips are arranged the one in advance of the other. Consequently the rods are of different lengths. Inasmuch as the grips are duplicate in construction, a detailed description of one will suffice for a full understanding of the invention.

The frame of the grip consists, essentially, of a plate 2, having a stem 3. The jaws 4 are pivoted eccentrically of the plate 2, and their inner or gripping edges are toothed or roughened, as shown at 5, to take hold of a wire or line 6 and prevent slipping. A bar or strip 7 extends across the space between the inner edges of the jaws 4 and acts jointly with the plate 2 to hold the wire or line 6 in place. This bar 7 is mounted upon the pivot-fastening 8 of one of the jaws 4 and is secured to the other pivot-fastening by means of a thumb-nut 9. Hence the bar can be turned aside, so as to admit of the wire or line 6 being readily placed between the jaws or removed therefrom, as required. The cross-head 10 is slidably mounted upon the stem 3 and has apertured wings 11, through which the stem 3 freely passes. Links 12 connect the cross-head 10 with the jaws 4 in such a manner as to effect a turning of said jaws upon their pivotal connection with the plate 2 when the cross-head is moved in and out upon the stem 3. The operating-rod for each grip has its outer end forked, as shown at 13, the branches being attached to the cross-head 10 upon opposite sides of the stem 3, thereby equalizing the force exerted upon the cross-head and parts connected therewith. A pull upon the operating-rod moves the cross-head away from the plate 2 and causes the jaws to turn so as to advance the toothed or roughened gripping edges 5, thereby compelling them to forcibly take hold of the wire or line 6, passed between the said jaws. A push upon the operating-rod presses the cross-head toward the plate 2 and turns the jaws 4 in the opposite direction, whereby the wire or line 6 is released. By using two sets of grips, as illustrated in Fig. 1, one moves forward to increase the tension upon the wire or line, while at the same time the other grip moves rearward, so as to obtain a grip upon the said wire or line preliminary to

the return of the first-mentioned grip to obtain a fresh grip upon said wire. In other words, the grips operate in alternation and move simultaneously in opposite directions, the one advancing at the same time the other is receding. The grips are operated by vibrating the lever 1, the rods B B' being connected to said lever upon opposite sides of its fulcrum. Hence one grip is drawn forward at the same time the other grip is pushed rearward upon the wire or line to obtain a new grip thereon.

Having thus described the invention, what is claimed as new is—

1. In a wire or line tightener, a cross-head, a plate slidably connected with the cross-head, cooperating jaws pivoted to the said plate, links connecting the cross-head with the jaws to effect an opening or closing of the jaws, according to the direction of movement of the cross-head, an operating-rod having connection with opposite end portions of the cross-head, and a bar extended across the space formed between the said jaws and mounted upon one of the pivot-fastenings and having detachable connection with the other pivot-fastening, substantially as set forth.

2. In a wire or line tightener, a cross-head

provided intermediate of its ends with apertured wings, a plate having a stem slidably mounted in the openings of said wings, jaws pivoted to opposite portions of said plate, links pivotally connecting the jaws with the said cross-head, and actuating means for the cross-head to effect an alternate opening and closing of the jaws, substantially as specified.

3. The herein-described wire or line tightener comprising a cross-head having apertured wings intermediate of its ends, a plate having a stem slidably mounted in the openings of said wings, jaws pivoted to said plate, links pivotally connecting the jaws with the cross-head, a bar extended across the space between the jaws and mounted upon one of the pivot-fastenings of the jaws and having detachable connection with the other pivot-fastening, and an operating-rod having a fork, the branches of which are attached to opposite end portions of the cross-head, substantially as set forth.

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

WILLIAM H. KUHLMAN. [L. s.]

Witnesses:

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