

No. 768,160.

PATENTED AUG. 23, 1904.

W. M. TAYLOR & W. HOLLE.

WIRE STRETCHER.

APPLICATION FILED MAY 21, 1904.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.

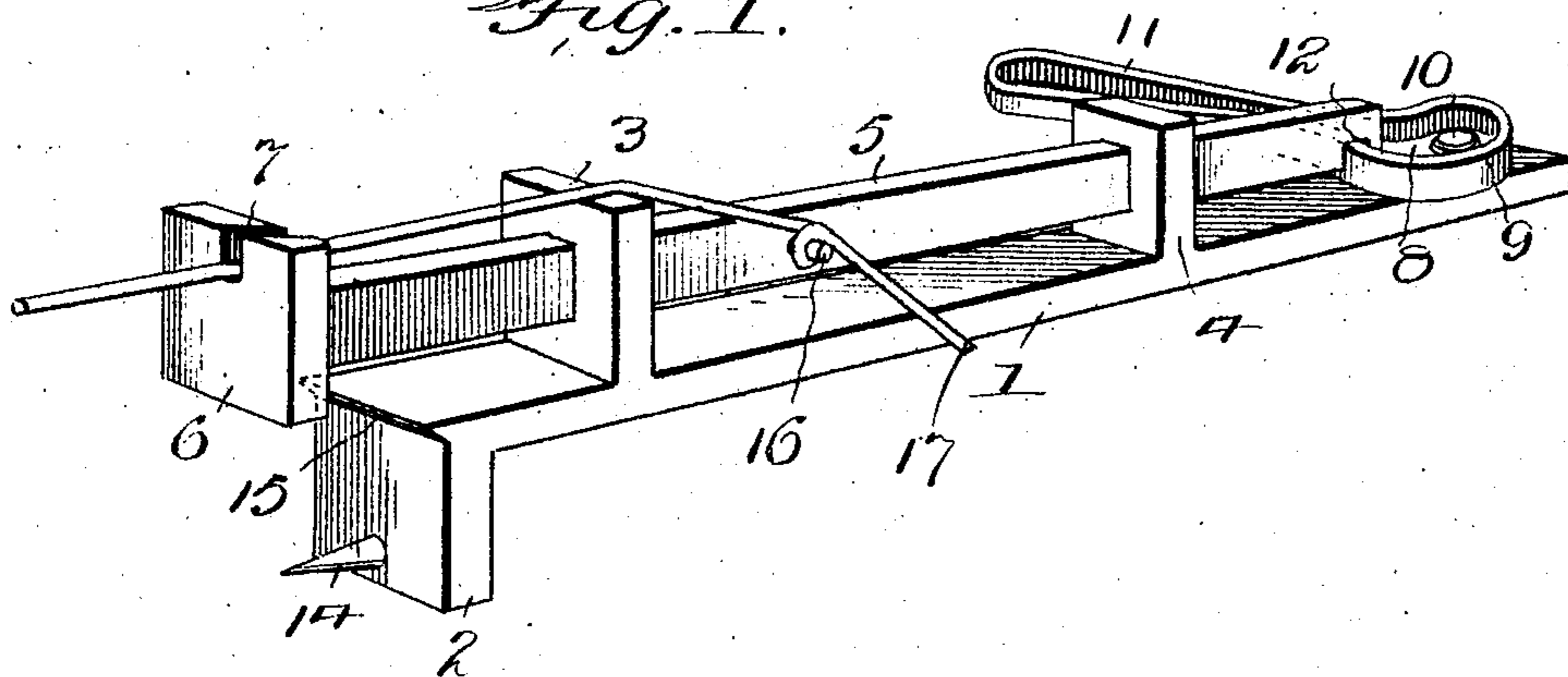


Fig. 2.

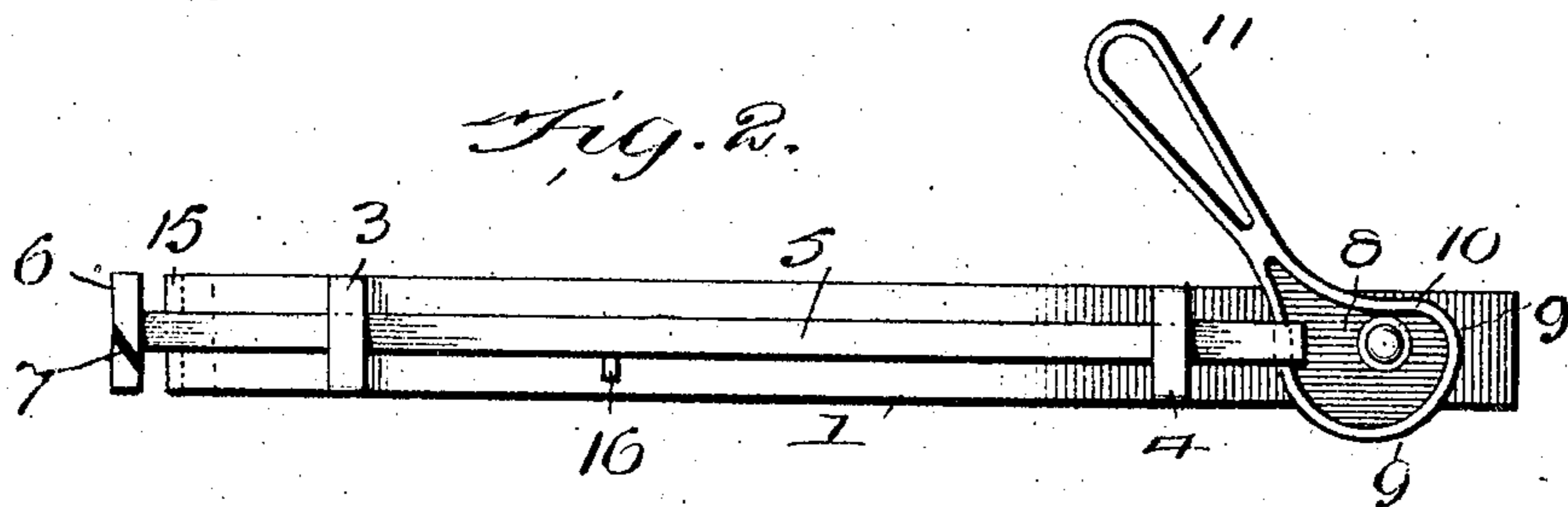


Fig. 3.

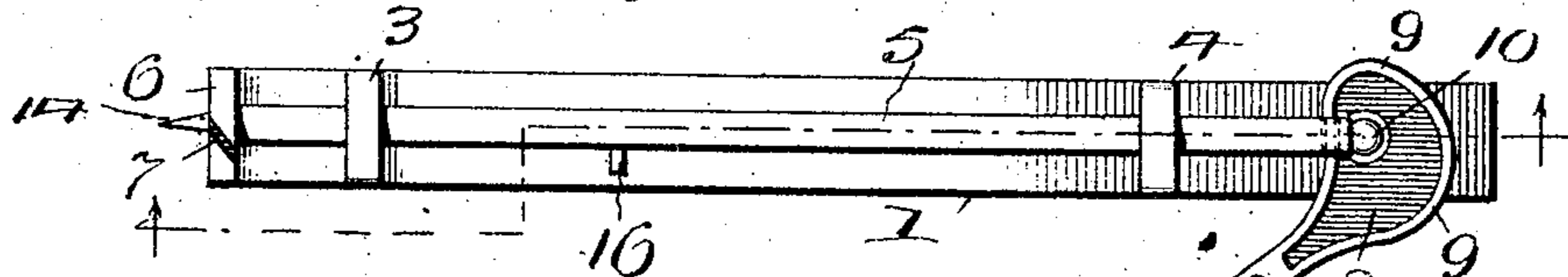
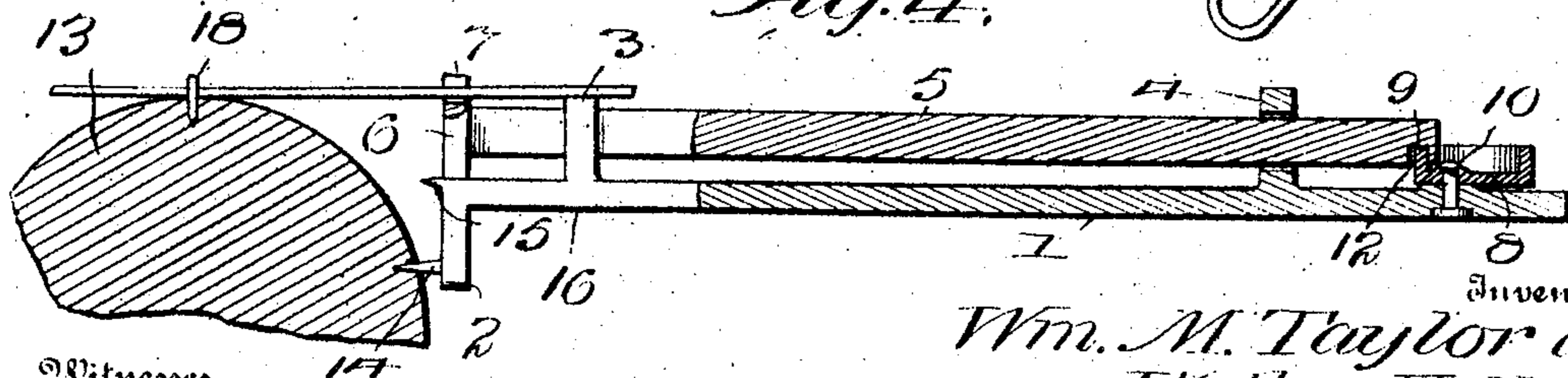


Fig. 4.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 5.

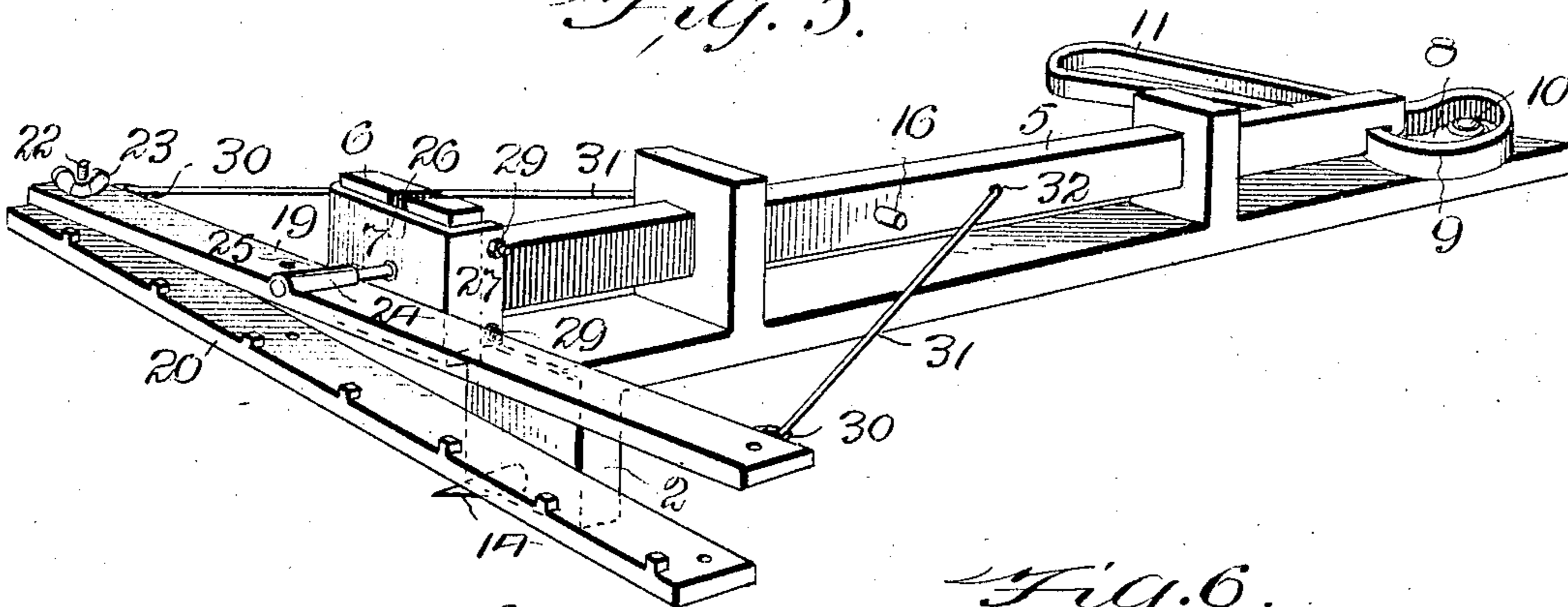


Fig. 6.

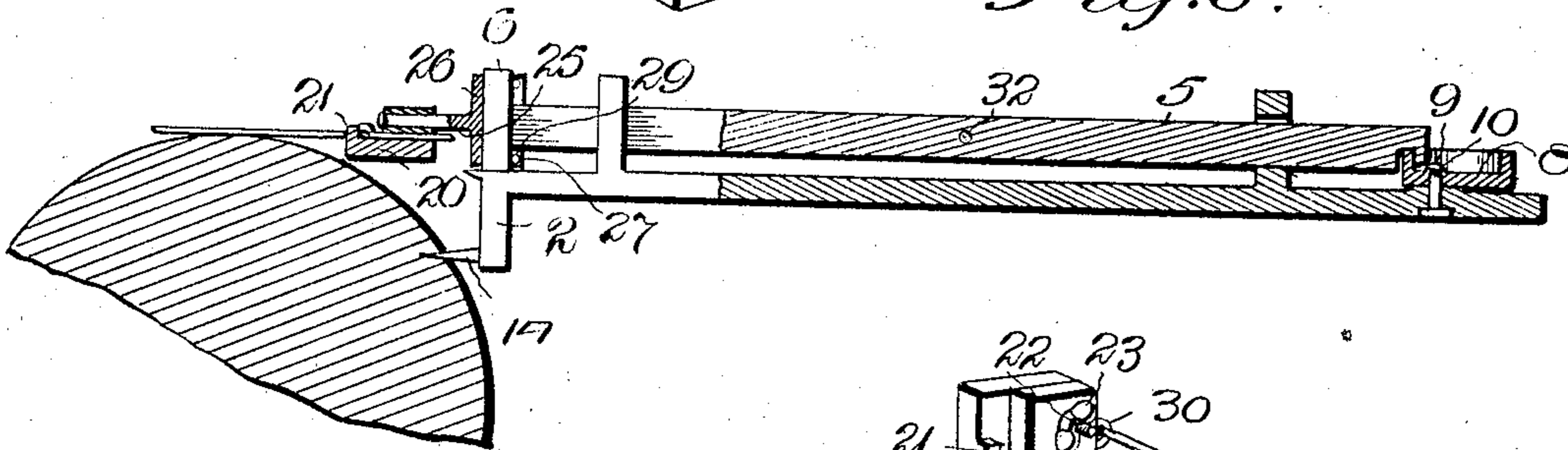
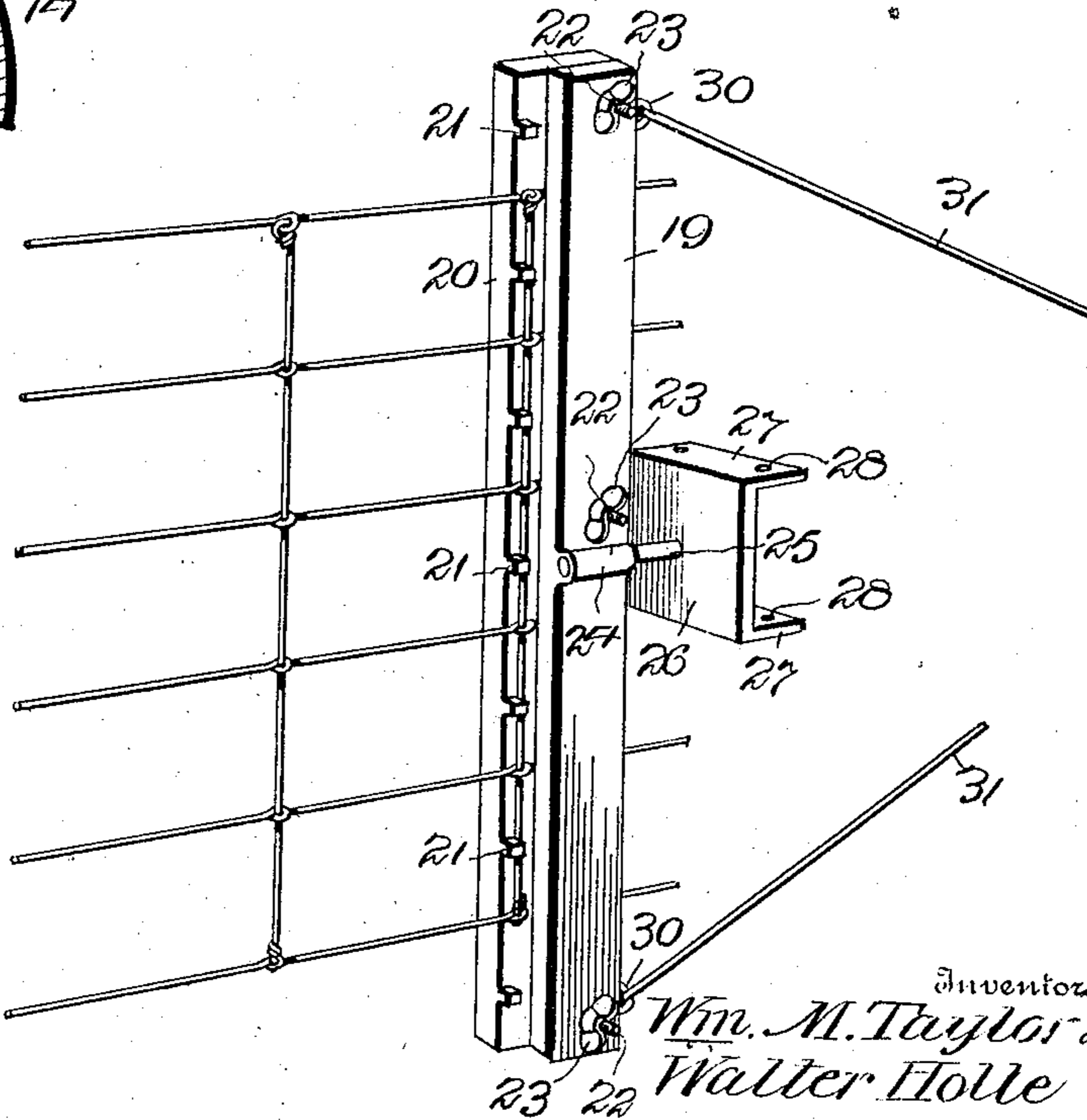


Fig. 7.



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UNITED STATES PATENT OFFICE.

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WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 768,160, dated August 23, 1904.

Application filed May 21, 1904. Serial No. 209,003. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM M. TAYLOR, of Weston, Lewis county, and WALTER HOLLE, of St. Clara, Doddridge county, West Virginia, citizens of the United States, have invented certain new and useful Improvements in Wire-Stretchers; and we do hereby 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.

Our invention relates to a combination tool or instrument the principal purpose of which is to serve as a wire-stretching appliance, as in building wire fences, without regard to whether a single wire is to be stretched or whether an entire section of a woven-wire netting is to be stretched with a proper degree of tension; and our invention consists of certain specified details of construction and combination of elements, all of which will be hereinafter clearly set forth, and pointed out in the claim hereunto appended.

The prime object of our invention, among others, is to provide an instrument or tool of the character specified which will serve the purposes above enumerated and in addition will also serve as a wire-cutting device, as well as a staple-puller and a staple-driver.

A further object of our invention is to provide means which will readily adapt the instrument or change its capacity, whereby it will be useful for any of the purposes above enumerated.

Other objects and advantages arising from the use of our invention will be clearly presented in the following specification and illustrated in the accompanying drawings, in which—

Figure 1 shows a perspective view of our invention complete, illustrating the same employed as a wire-stretcher in stretching a single strand of wire or two wires twisted together, as will be obvious. Fig. 2 is a plan view of our invention complete in an open or extended position. Fig. 3 is a similar view showing the parts disclosed in a closed or retracted position. Fig. 4 is a detail view, partly in section, showing our wire-stretcher

as applied to use in stretching a fence-wire so that the latter will be brought into engagement with the fence-post. Fig. 5 is a perspective view of our invention adapted for stretching a section of woven wire. Fig. 6 is a sectional view of our invention as applied to the work of stretching a section of woven wire or netting, as in Fig. 5. Fig. 7 shows a perspective view of the clamping means employed by us for engaging a portion of a wire-netting of woven-wire fence.

All of the different parts of our invention and accessories coöperating therewith will be referred to by numerals, and, referring specifically to the various details, 1 designates the main or body portion of our wire-stretcher, which is provided upon one end with an angular extension or lip 2 and at intervals upon one side thereof with the ears or brackets 3 and 4, said brackets being provided with apertures to loosely receive the reciprocating shaft 5, the outer free end of which is provided with the cross-head 6, having an obliquely-disposed recess or slot 7 in its outer side, said recess being designed to receive a wire or hold it against casually slipping longitudinally therein. By reference to Fig. 2 and other views it will be observed that the outer end of the recess 7 is started on a line with the central portion or axis of the controlling-shaft 5, whereby a pull upon the wire will be properly distributed relative to said shaft, thereby obviating all lateral or twisting strain which would otherwise be placed thereon if said recess were to one side of the median line thereof.

Upon the end of the body portion 1 opposite the extension 2 we pivotally mount the cam-controller 8, which, as will be observed by reference to Fig. 4, is provided with a raised flange or lip 9, disposed around the entire edge thereof, said body portion being pivotally secured by means of the rivet or bolt 10. We also provide as an integral part of the body portion 8 a controlling-handle 11, whereby said body portion may be readily turned upon its pivot-point, as will be obvious. The outer end of the controlling-shaft 5 is provided with a recess 12 of proper size

to loosely receive the flange 9, and it will be clearly apparent that when the body portion 8 is turned upon its pivot-point said flange will operate to move the controlling-shaft 5 inward or outward, as may be desired.

The extension or lip 2, it will be understood, is intended to serve as a fulcrum-point or bearing, whereby our wire-stretcher may be held in an anchored position, as against a post and incident to the use thereof. The said lip or extension 2 is therefore adapted to bear directly against a part of the fence-post, the latter being designated by the numeral 13, and in order to prevent said lip from casually slipping off of the fence-post we provide one or more friction-points 14, intended to take into a contiguous part of the post, and thereby securely anchor the extension or lip in an adjusted position or prevent it from casually slipping out of its adjusted place. It will be understood that the pointed extension 14 will also be found useful for extracting a fence-staple when it may be desired to remove a wire from its supporting-post, as by entering said pointed extension under the staple and prying the same outward from its driven position.

We also provide in some instances a slight cutting lip or extension 15, located at a proper point upon the body portion or extension 2 in proper place and of suitable form to cooperate with the lower edge of the cross-head 6, whereby a wire interposed between said parts may be easily severed at any desired point.

The disposition of the flange 9 being eccentrically disposed relative to the pivot-point 10, it follows that by turning the body portion 8 upon said pivot-point great force may be easily applied to the controlling-shaft 5 by simply moving the controlling-handle 11 around to the proper point, as will be clearly obvious.

In some instances a slight projection or finger 16 may be formed at a convenient point upon the edge of the shaft 5, whereby the fence-wire, which we have designated by the numeral 17, may be wrapped around said finger to insure that it cannot casually slip when placed in the anchoring-recess 7. It is thought that all ordinary requirements will be fully met and the wire reliably held against slipping when simply placed in the recess 7 and bending it downward, though as an extra precaution the free end of the wire may be grasped, as with the thumb of the operator, or the wire may be wrapped once or partly around the finger extension 16, carried by the shaft 5, as above explained.

We desire now to call attention to the construction illustrated in Figs. 5, 6, and 7, wherein it will be observed that we have provided two parallel cooperating bars 19 and 20, the latter having suitable points 21 upon its outer edge, which are useful for taking into the meshes of the woven-wire fabric and more reli-

ably engaging the same. The parallel members are designed to be clamped tightly together after a section of wire-netting has been interposed between them, said parallel sections being held in close combination by a plurality of locking-bolts 22 and thumb-screws 23, cooperating therewith, as fully illustrated in Figs. 5 and 7. The member 19 is provided near its central part with a swell or extension 24, and seated in an aperture therein is the bolt 25, the inner or free end of which is passed loosely through the plate 26, said plate having upon opposite edges the parallel extensions 27, provided with registering apertures 28, through which we extend the anchoring-bolts 29, said bolts being designed to lie upon the inner side of the head 6, and it is therefore obvious that the plate 26 may thus be operatively connected to said head and thus place the parallel members 19 and 20 under the full control of the reciprocating shaft 5. The plate 26, with its attachments, is therefore designed to be removably secured to the head 6, thus adapting the instrument for use in stretching a section of woven-wire netting, as will be obvious. The plate 26 may be very quickly removed from cooperation with the cross-head 6 by removing one of the bolts 29, thus fitting the instrument after such removal for stretching a single strand or a twisted strand of wire.

In order that the parallel members 19 and 20 may be reinforced at their outer ends, we provide near each end of the member 19 the apertured ears or brackets 30, designed to be connected with the reinforcing-wire 31, which latter is passed through an aperture 32 in a suitable part of the shaft 5, as fully shown in Figs. 5 and 6.

When it is desired to stretch a single wire or twisted strand of wire, the parallel members 19 and 20 are removed by disengaging one of the bolts 29, and thus slipping the plate 26 off of the cross-head 6. The single wire or strand of twisted wire is introduced in the recess 7 and a portion of it wrapped partly or wholly around the finger 16, when a pull upon the lever 11 will operate to withdraw the shaft 5, and thereby tightly draw upon the wire and stretch it to the desired degree of tension, it being understood that the lip or anchoring extension 2 is intended to rest against the fence-post, whereby the friction-point 14 will take into a portion thereof and prevent the lip from casually slipping off.

It will thus be seen that we have provided a simple though reliably efficient form of combination instrument or tool adapted for a variety of purposes, all of which have been clearly set forth, and while we have described the preferred combination and construction of parts we wish to comprehend all substantial equivalents and substitutes falling fairly within the scope and suggestion of our invention.

It is thought from the foregoing description, considered in connection with the accompanying drawings, that the construction and manner of using our wire-stretcher and combination-tool will be made clearly apparent, though it may be stated that the manner of applying the same to use is as follows: When, for instance, it is desired to stretch a single wire or strand, the latter is entered in the recess 7, as before explained, and a portion of the wire bent around and under the contiguous edge of the body portion 1 or partially wrapped around the extension or finger 16. After the wire has thus been connected to our 15 stretcher the extension or lip 2 is placed against the post, whereby the frictional point 14 will enter a contiguous part thereof, thereby holding the extension reliably anchored in place, and the portion of the cam member 20 8 through the mediation of the lever 11 will enable the operator to apply any degree of tension to the wire and the latter secured by the staple 18, as is common. When a section of wire-netting is to be stretched, the parallel members 19 and 20 are separated sufficiently to receive between them a portion of the wire-netting, when said members are tightly clamped together through the mediation of the bolts and nuts 22 and 23, respectively, which prevents the netting from 30 casually slipping between said members, it being understood that said members are connected with the cross-head 6 by the bolts 29, as before explained. After the parts have 35 thus been adjusted and secured together the lever 11 is operated, which will withdraw the shaft 5, and thus cause the wire-netting to be stretched to the proper tension, it being ob-

vious that the lip or extension 2 forms the fulcrum-point when it is placed against the post, as more fully shown in Fig. 6. 40

Believing that the advantages and manner of using our invention have thus been made clearly apparent, further description is deemed unnecessary. 45

What we claim as new, and desire to secure by Letters Patent, is—

The herein-described wire-stretcher and combination tool or instrument, comprising the main or body portion 1 having the extension 2 upon one end thereof and also having 50 the cutting edge 15; brackets or ear-like extensions 2 and 3 carried by said body portion; a controlling-shaft 5 reciprocatingly mounted in apertures provided in said ears, said shaft 55 having a cross-head 6 and an auxiliary cross-head comprising parallel members 19 and 20 and means to secure the same together; said cross-head 6 having a wire-engaging recess 7 located in the edge thereof, in combination 60 with a cam-controller having an extension or handle 11 and an eccentrically-disposed flange 9, said flange being designed to fit in a recess in the outer end of the controlling-shaft, whereby the latter may be reciprocated as desired, 65 said parts being constructed and combined substantially in the manner specified and for the purpose set forth.

In testimony whereof we have signed our names to this specification in the presence of 70 two subscribing witnesses.

WILLIAM M. TAYLOR.
WALTER HOLLE.

Witnesses:

RALPH KITSON,
T. O. WASHBURN.