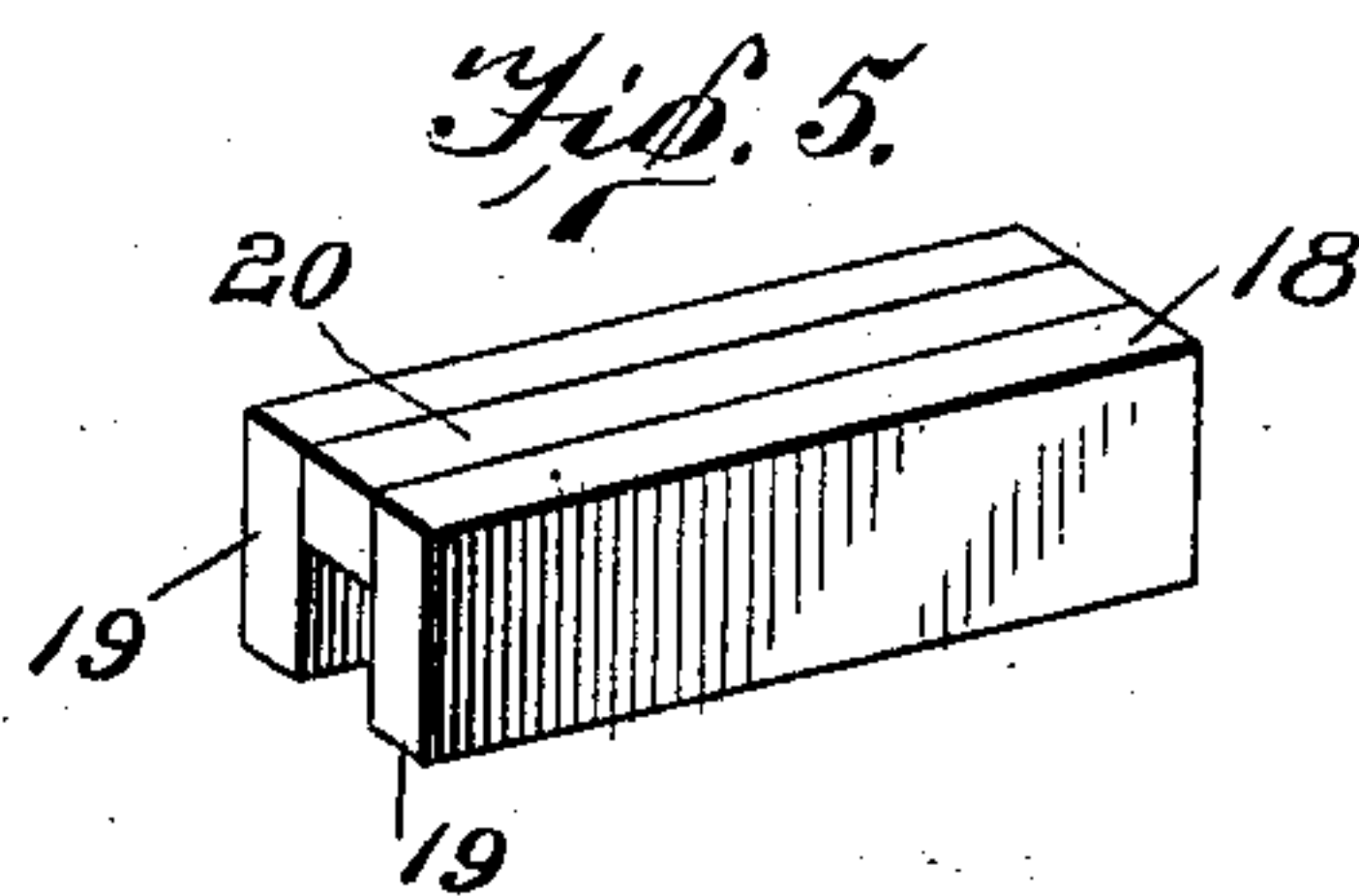
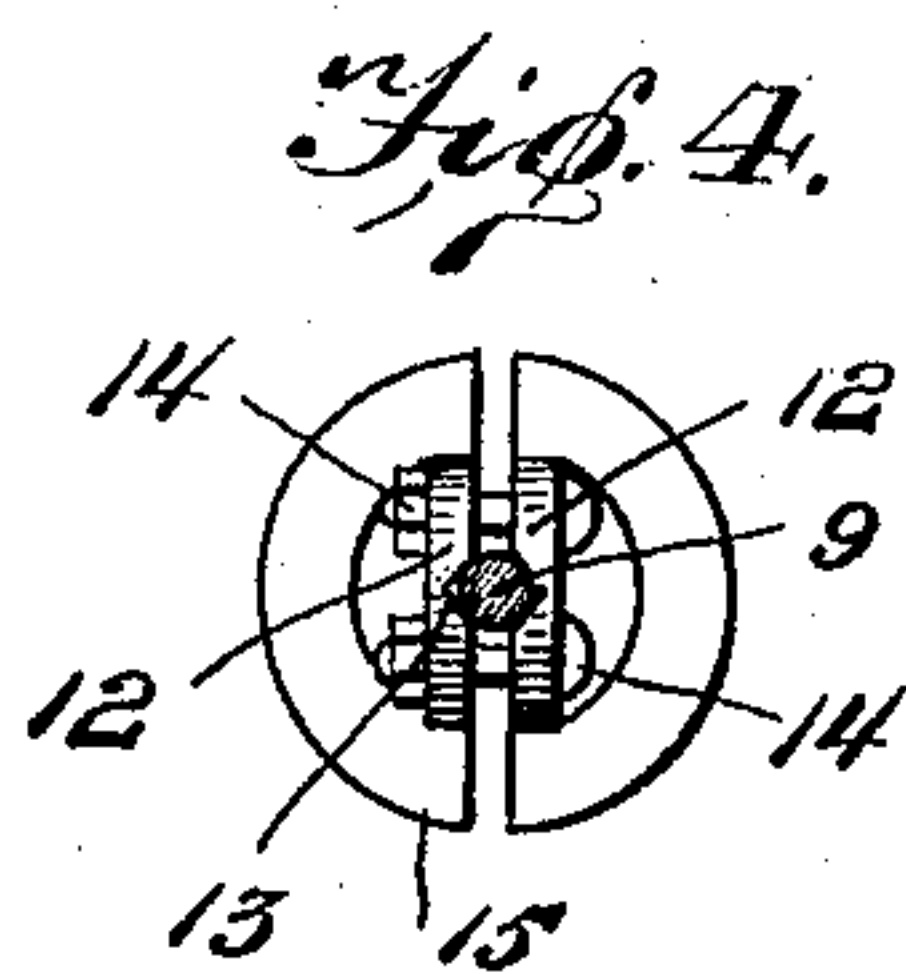
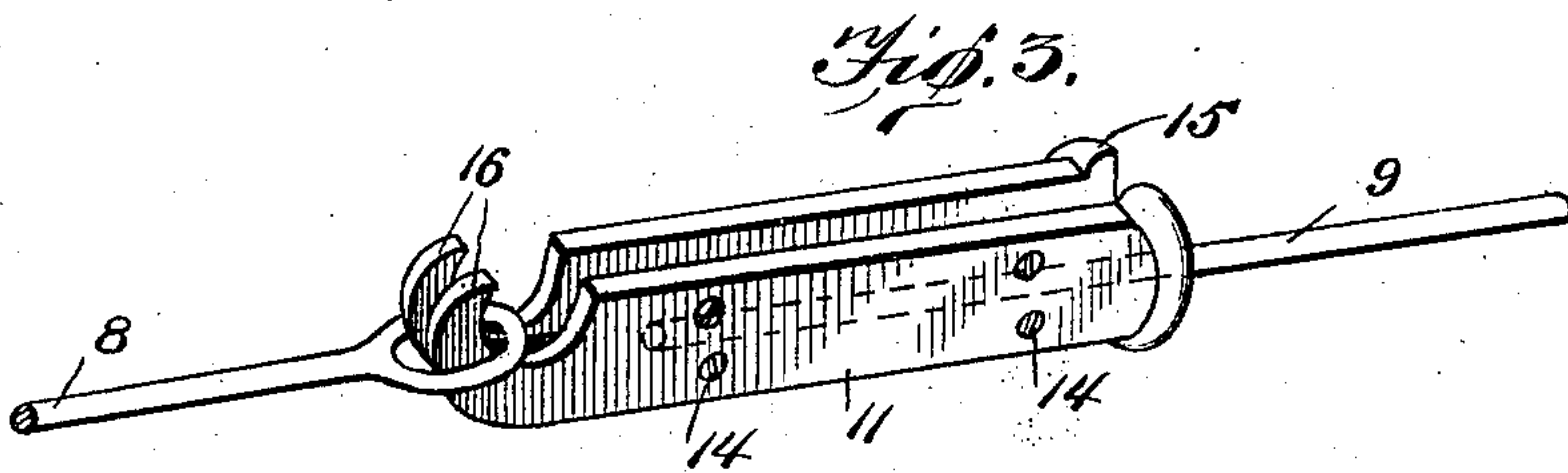
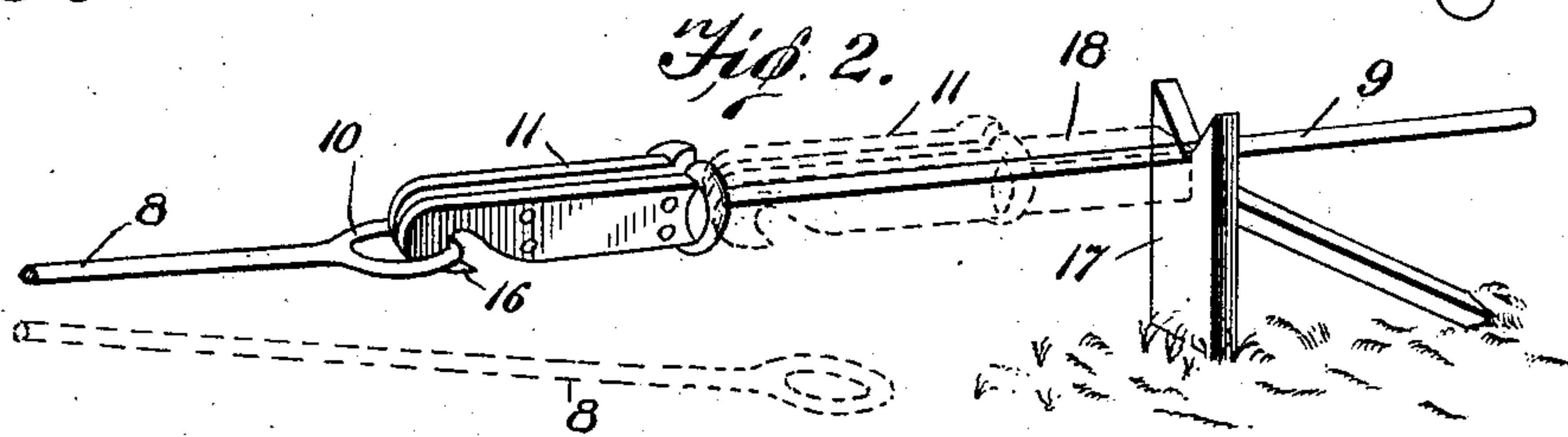
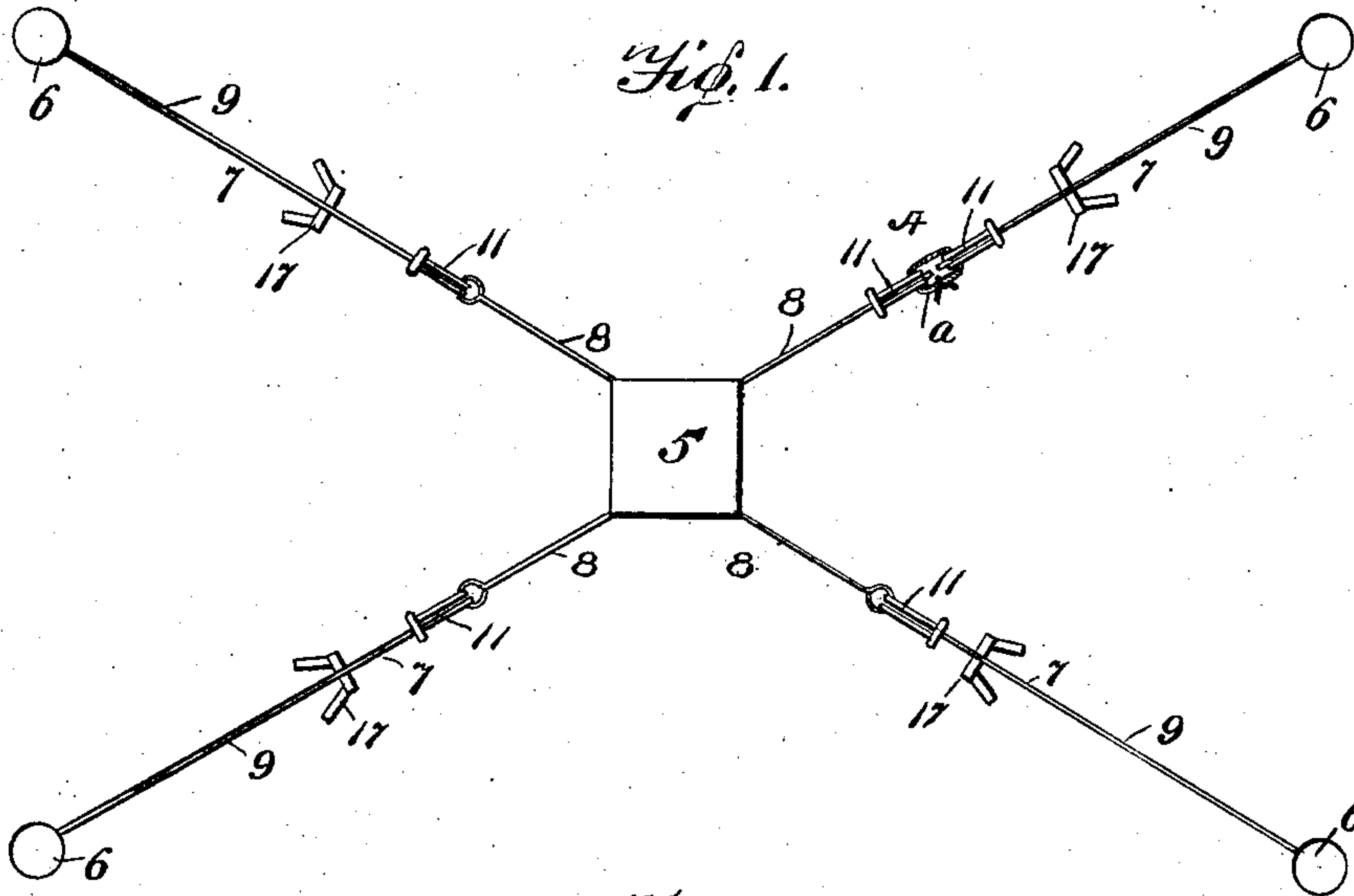


No. 845,647.

PATENTED FEB. 26, 1907.

A. M. & W. B. KLECKNER.
COUPLING FOR SHACKLE RODS.
APPLICATION FILED JAN. 24, 1906.



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UNITED STATES PATENT OFFICE.

ASAPH M. KLECKNER AND WILLIAM B. KLECKNER, OF CANEY, KANSAS.

COUPLING FOR SHACKLE-RODS.

No. 845,647.

Specification of Letters Patent.

Patented Feb. 26, 1907.

Application filed January 24, 1906. Serial No. 297,641.

To all whom it may concern:

Be it known that we, ASAPH M. KLECKNER and WILLIAM B. KLECKNER, citizens of the United States, residing near Caney, in the county of Montgomery and State of Kansas, have invented new and useful Improvements in Couplings for Shackle-Rods of Oil- Wells, of which the following is a specification.

This invention relates to couplings for shackle-rods of oil-wells.

In the operation of oil-wells it is customary to drive the well machinery of several wells from a common power-station arranged as near equidistant from the wells as possible, the means of connection between the wells and power station being in the form of a continuous shackle-rod. With the constructions and apparatus now in use should any of the shackle-rods or any of the well machinery break or should it become necessary to reduce the pumping capacity of a well the pumping system, including the power-station, would have to be stopped and the obvious difficulties experienced. By the present invention when these exigencies arise any one of the series of pumps may be disconnected from the power and repaired without interfering with the operation of the others. To these ends the shackle-rod is divided at an intermediate point and the adjacent ends connected by a coupling member which is constructed to be readily coupled and uncoupled from one part of the shackle, the strain and pull on the rod and coupling incident to the weight of the well machinery being arrested by a portable buffer-block, which may be interposed between the coupling and an abutment or guide to detach one part of the rod.

The detail construction and arrangement of parts will be better understood by reference to the following description and to the accompanying drawings, in which—

Figure 1 is a diagrammatic view of a system of pumps and the power-station therefor, showing the relative positions of the parts. Fig. 2 is a perspective view of the coupling member applied to the shackle-rod. Fig. 3 is a similar view, on an enlarged scale, the coupling member being inverted. Fig. 4 is an end elevation of the coupling member, and Fig. 5 is a perspective view of the buffer-block detached.

Making renewed reference to the drawings, and first to Fig. 1, 5 designates a power-station from which all of the wells 6 are driven,

the wells being disposed around the power-station, which is as near equidistant from the wells as possible. 7 designates the shackle-rods, which are connected at one end to the well machinery of the wells 6, the weight of the well machinery exerting a pull upon the rod to draw it away from the connection with the power or engine 5, the latter serving to alternately draw said shackle-rods in an opposite direction to that exerted by the weight of the well machinery and lift the sucker-rod in the well or operate valves or other parts, as the case may be. All of these constructions are common in oil-well systems and are only described here for the purpose of enabling those skilled in the art to understand the construction and association of our improvements.

The present invention comprehends instrumentalities by which one or more of the wells may be thrown out of operation independently of the others and without affecting the work of the power-station, and with this object in view we contemplate dividing the shackle-rod into two parts, which may be designated as 8 and 9 in Figs. 2 and 3, the part 8 being connected with the power or engine 5 and having an eye 10 formed in the end thereof, the part 9 being connected with the well and having its end clamped or secured to a coupling member 11, the end of which is adapted to engage with the eye 10 of the part 8 and couple the part together. This coupling member 11 preferably consists of two parts separable longitudinally and constituting a clamp for the part 9 of the shackle. As shown in Fig. 4, the clamping-plates 12 12 are provided with coincident grooves 13 13, preferably arranged axially of the coupling, and into which the end or ends of the shackle-rods may be inserted. The two clamping-plates are held together by means of bolts and nuts 14. At one end the clamp is provided with a broad flat head 15, and at its other end each plate is formed with a hook 16, the bend of which is directed downwardly when in use, but in the drawing in Fig. 3 it is shown as extending upwardly simply for the purpose of better illustration. The eye 10 in the part 8 of the shackle-rod is engaged by the hook 16, and the free end of the part 9 of the shackle-rod is clamped between the plates 12, the end of the part 9 being shoved far enough up in the coupling to give proper tension to the rod and prevent sagging and accidental disengagement of the

hook 16 with the eye 10, and when the power of the engine 5 draws upon the part 8 of the shackle-rod the coupling member 11 and the part 9 are also drawn in the direction indicated by the arrows in Fig. 1 to raise the pump-rod. At the completion of the stroke of the engine the weight of the pump-rod will draw back the shackle-rod and its coupling, and upon this return stroke the head 15 of the coupling member closely approaches an abutment or guide 17, in which the rod is guided. In case it becomes necessary to throw one of the pumps out of operation a buffer-block 18 (shown best in Fig. 5 as consisting of two side pieces 19 and an upper central piece 20) is inserted over the rod with one end against the abutment 17, as shown in Fig. 2. When the head of the coupling 11 contacts with the other end of the buffer-block, as shown in dotted lines in Fig. 2, the stroke of the coupling and the shackle-rod will be arrested by coming to a sudden stop, and the part 8 will loosen from its engagement with the hooks 16 and drop to the position shown in dotted lines in Fig. 2. One of the pumps is now out of operation and may be repaired without interfering with the operation of the other pumps. It will be obvious that the part 8 may be conveniently connected with the coupling 11 when it is desired to start again the pump, and the buffer-block 18 is then removed. In case a shackle-rod is broken the broken ends may be drawn together by securing a coupling to each end of the broken rods and then passing a rope over the hooks and drawing the couplings toward each other, the ends of the rods previously being extended beyond the hooked ends of the couplings, so that they may be repaired by welding or otherwise permanently coupled together. This adaptation and use is shown at A in Fig. 1, wherein the couplings 11 are arranged with their hooked ends toward each other and a rope or cord *a* engaged therewith.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. The combination with a two-part

shackle-rod, and an abutment and guide therefor, of a coupling for the parts of the shackle-rods comprising two clamping-plates between which the end of one part of the shackle-rod is clamped, each of said plates having a hook on one end to engage the end of the other part of the shackle-rod and also having a head on its other end, and a buffer-block adapted to be positioned upon the shackle-rod between the abutment and the head of the coupling to limit the stroke of the latter and release it from engagement with a last-mentioned part of the shackle-rod, substantially as specified.

2. The combination with a two-part shackle-rod, and a combined guide and abutment therefor, of a coupling constructed and arranged to clamp one end of one part of the shackle-rod and having a detachable connection with the end of the other part of the shackle-rod, and means positioned upon the shackle-rod between the abutment and the coupling for limiting the stroke of the latter and automatically releasing it from engagement with the last-mentioned part of the shackle-rod.

3. The combination with a two-part shackle-rod, and a detachable coupling therefor, of a combined guide and abutment on which the shackle-rods are supported, said abutment being located adjacent to the coupling, and a bifurcated buffer-block adapted to straddle the shackle-rod with one end engaging with the abutment, whereby, when the coupling contacts with the other end of the buffer-block, the movement of the latter will be arrested to permit the parts of the shackle-rod to be disconnected, substantially as specified.

In testimony whereof we affix our signatures in presence of two subscribing witnesses.

ASAPH M. KLECKNER.

WILLIAM B. KLECKNER.

Witnesses to Asaph M. Kleckner:

C. E. WINKLER,

VERGIE A. ARCHER.

Witnesses to W. B. Kleckner:

CLYDE MURRAY,

F. M. KLECKNER.