

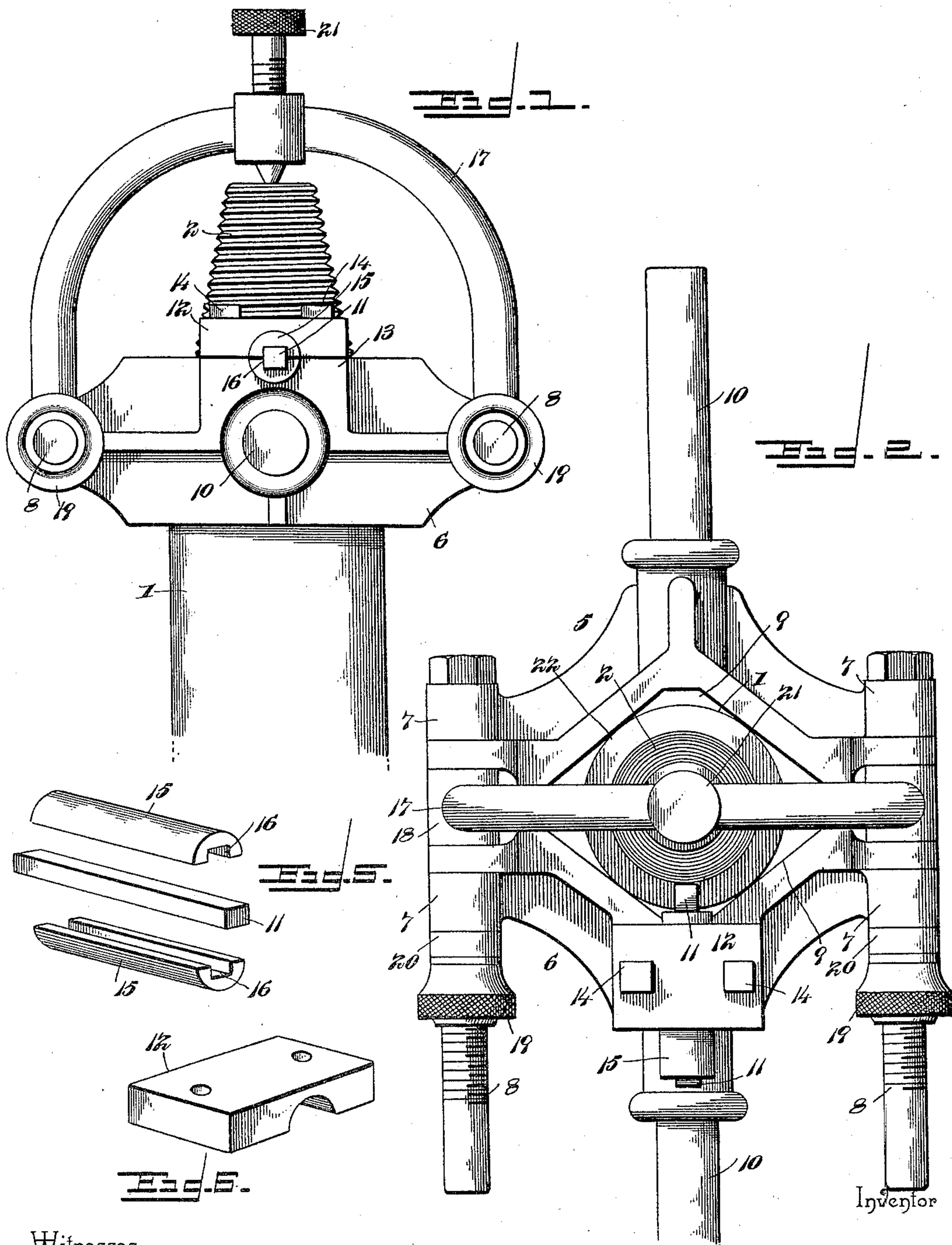
(No Model.)

2 Sheets—Sheet 1.

J. H. WIEHL.
TOOL FOR TRUING WELL ROD JOINTS.

No. 584,439.

Patented June 15, 1897.



Witnesses

E. H. Stewart,
U. B. Hillyard.

By *his* Attorneys,

Joseph H. Wiehl

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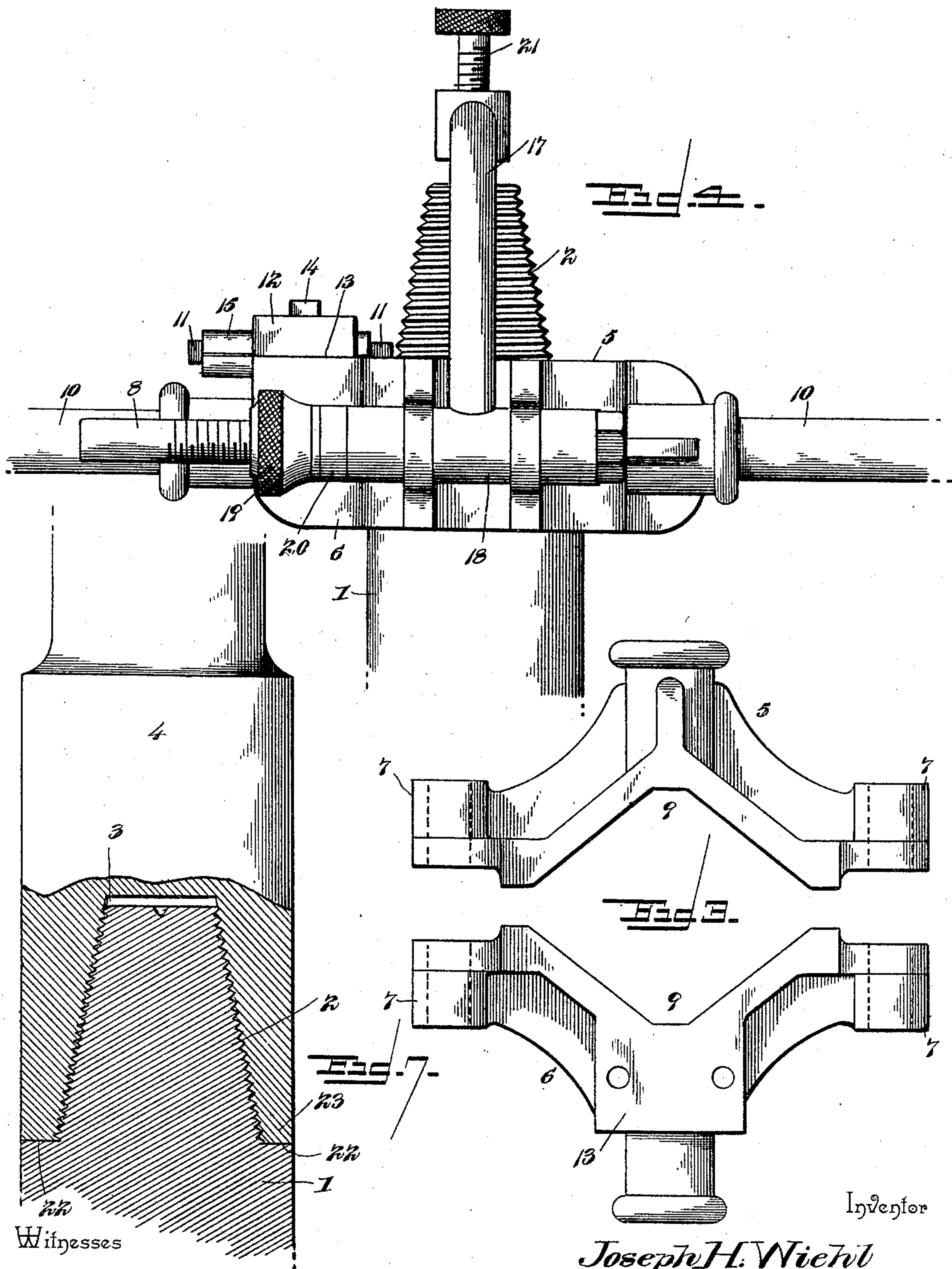
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UNITED STATES PATENT OFFICE.

JOSEPH H. WIEHL, OF HARMONY, PENNSYLVANIA.

TOOL FOR TRUING WELL-ROD JOINTS.

SPECIFICATION forming part of Letters Patent No. 584,439, dated June 15, 1897.

Application filed April 10, 1896. Serial No. 587,053. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH H. WIEHL, a citizen of the United States, residing at Harmony, in the county of Butler and State of Pennsylvania, have invented a new and useful Tool for Truing Well-Rod Joints, of which the following is a specification.

The purpose of this invention is to devise means for truing the joints of well drilling and boring machinery in the field and at the place of operation and thereby obviate the expense, loss of time, and annoyance occasioned by having to transport the parts to be repaired or trued to a machine-shop.

By this invention joints that have been loosened can be tightened, thereby enabling the operation of drilling and boring to proceed without necessitating the carrying of various sets of tools, so that one set can be used while another is sent to the shop for repairs, or without requiring the shutting down of operations during the interim of sending the tools to a distant shop.

This invention has for its object, further, to provide an apparatus or machine simple in construction and easy of manipulation and which will effect the desired end in a thorough manner.

For a full understanding of the merits and advantages of the invention reference is to be had to the accompanying drawings and the following description.

The improvement is susceptible of various changes in the form, proportion, and the minor details of construction without departing from the principle or sacrificing any of the advantages thereof, and to a full disclosure of the invention an adaptation thereof is shown in the accompanying drawings, in which—

Figure 1 is an elevation of a machine or apparatus for carrying out the objects of this invention. Fig. 2 is a top plan view thereof. Fig. 3 is a detail view of the yokes or clamps by means of which the machine is secured to the drill or tool. Fig. 4 is a side view showing the means for connecting the ends of the yokes or clamps and securing the adjacent end of the arch between them. Figs. 5 and 6 are detail views of the tool-holder. Fig. 7 is a detail view of the adjacent ends of the drill or tool and the tool-carrying staff.

Corresponding and like parts are designated in all the figures of the accompanying drawings and referred to in the following description by the same reference-characters.

The numeral 1 represents a drill, bit, or boring-tool of ordinary construction, such as generally employed for drilling Artesian and oil wells, and is formed at its upper end with a pin or shank 2 of frusto-conical shape and which is adapted to enter a socket 3 of corresponding outline provided in the end of the tool-carrying staff 4. These parts are illustrated simply to show the application of the invention.

The machine or apparatus comprises yokes or clamps 5 and 6 of similar construction and having transversely-apertured heads 7 at their ends, which aline when the parts are properly assembled and receive bolts 8, by means of which the yokes or clamps are connected together and secured upon the drill or boring-tool 1, as indicated in Figs. 1 and 2. V-shaped depressions 9 are formed in the inner faces of the yokes or clamps midway of their ends, so as to receive the drill or boring-tool 1 between them and enable the said yokes or clamps to secure an extended purchase against the sides of the said drill. Each yoke or clamp has a socket at its outer side to receive a handle 10, which is grasped when rotating the apparatus upon the drill to dress or true the pin or shank 2.

A holder for the truing or cutting tool 11 is provided and applied to one of the yokes, as 6, and comprises a plate 12, fitted against a flattened portion 13, formed on the said yoke 6 and secured thereto by clamp-bolts 14, and each of the parts 12 and 13 having a semicircular groove or channel, which when the said parts 12 and 13 are placed together provide a circular opening or passage for the reception of a sleeve 15, in which is fitted the truing-tool 11.

The truing-tool 11 is angular in cross-section and is of best tool-steel, highly tempered, and is adapted to be adjustably fitted in an opening 16 in the sleeve 15 of corresponding shape to the cross-sectional area of the said tool 11. The sleeve 15 is composed of longitudinal sections, preferably halves, which are adapted to be compressed so as to grip the tool 11 and hold the latter in the located po-

sition, the bolts 14 being employed for this purpose. By having the sleeve 15 circular in form it can be turned to any angle in the tool-holder so as to present the cutting edge of the tool 11 to the work at any desired inclination, according to the nature of the cut required. In addition to its rotary adjustment the sleeve 15 is capable of longitudinal movement within the tool-holder, and the same means employed for securing the sleeve likewise compress the same upon the tool 11, so as to hold it in the required position within the said sleeve. When it is required to adjust either the tool 11 or the sleeve 15, or both, the bolts 14 are loosened, and after the required adjustment is attained the said bolts are retightened and thereby fix the relative position of these parts.

An arch or stirrup 17 is provided at its ends with sleeves 18, which are transversely apertured and come between the heads 7 of the yokes 5 and 6, the openings in the sleeves 18 registering with the apertures or openings in the said heads 7, so as to receive the bolts 8, by means of which the parts are connected together. Adjusting-nuts 19 are mounted upon the threaded ends of the bolts 8 and serve to hold the yokes 5 and 6 in the adjusted position. Buffers 20, of rubber, or metallic springs are interposed between the adjusting-nuts 19 and the adjacent heads of the yoke 6 and are designed to provide for a slight movement and relative separation of the yokes when meeting with any unevenness or projection of the drill or boring-tool, thereby obviating a straining of the apparatus. A set-screw 21 is centrally located with respect to the stirrup or arch and operates in a threaded opening formed therein, and its inner end is pointed, so as to enter a central depression in the end of the pin or shank 2, whereby the machine is centered and steadied when in operation. By a proper adjustment of the set-screw 21 the apparatus or machine can be raised or lowered so as to dress, true, or turn down the shoulder 22, formed at the base of the pin or shank 2, when required to take up any looseness in the joint or to true the same.

Suppose it be required to dress the shoulder 22 of the drill or boring-tool. The apparatus or machine is fitted upon the said drill by receiving the latter between the yokes 5 and 6 and the set-screw 21 is adjusted so that the said shoulder may be dressed to the required depth, and the truing-tool 11 is adjusted to the required angle and so that its inner end will touch the base of the pin or shank 2, after

which the handles 10 are grasped and the apparatus rotated until the shoulder 22 is turned down or dressed the required distance to secure a true and tight joint.

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

1. In a machine for truing joints, the combination of similarly-formed yokes or clamps inversely disposed and having apertured heads at their terminals, a truing-tool having adjustable connection with one of the yokes, an arch having its extremities apertured and fitted between the heads of the yokes, fastenings passing through the alining openings of the said heads and apertured extremities of the arch, and adjusting means applied centrally of the arch to limit the advance of the cutter, substantially as set forth.

2. In a machine for truing joints, the combination of oppositely-disposed yokes having their end portions formed with transversely-alining openings, a truing-tool provided on one of the yokes, an arch having its end portions coming between the terminals of the yokes and formed with transverse openings to correspond with the openings in the yoke-terminals, a set-screw at the central point of the arch, and bolts passing through the alining and registering openings of the yokes and arch, substantially as set forth for the purpose described.

3. The herein-described tool for truing the joints of well-drilling apparatus, the same consisting of similarly-formed yokes or clamps inversely disposed and terminating in heads which are transversely apertured, a handle fitted to the yokes, a cutting-tool, means for adjustably securing the cutting-tool to a yoke, an arch having sleeves at its ends which are fitted between the heads of the yokes and which have openings alining with the openings of the said heads, a set-screw applied centrally of the arch, bolts passing through the openings of the heads and sleeves and connecting the arch and yokes, nuts mounted upon the threaded ends of the bolts, and buffers mounted upon the bolts and confined thereon between a yoke and the part securing the yokes and arch to permit of a slight spreading of the yokes, substantially in the manner set forth for the purpose described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOSEPH H. WIEHL.

Witnesses:

H. E. SEATON,
CHARLES STOKEY.