No. 765,589. PATENTED JULY 19, 1904.

R. NOLEN.

WRENCH.

APPLICATION FILED APR. 23, 1904.

NO MODEL.

FIG. V.

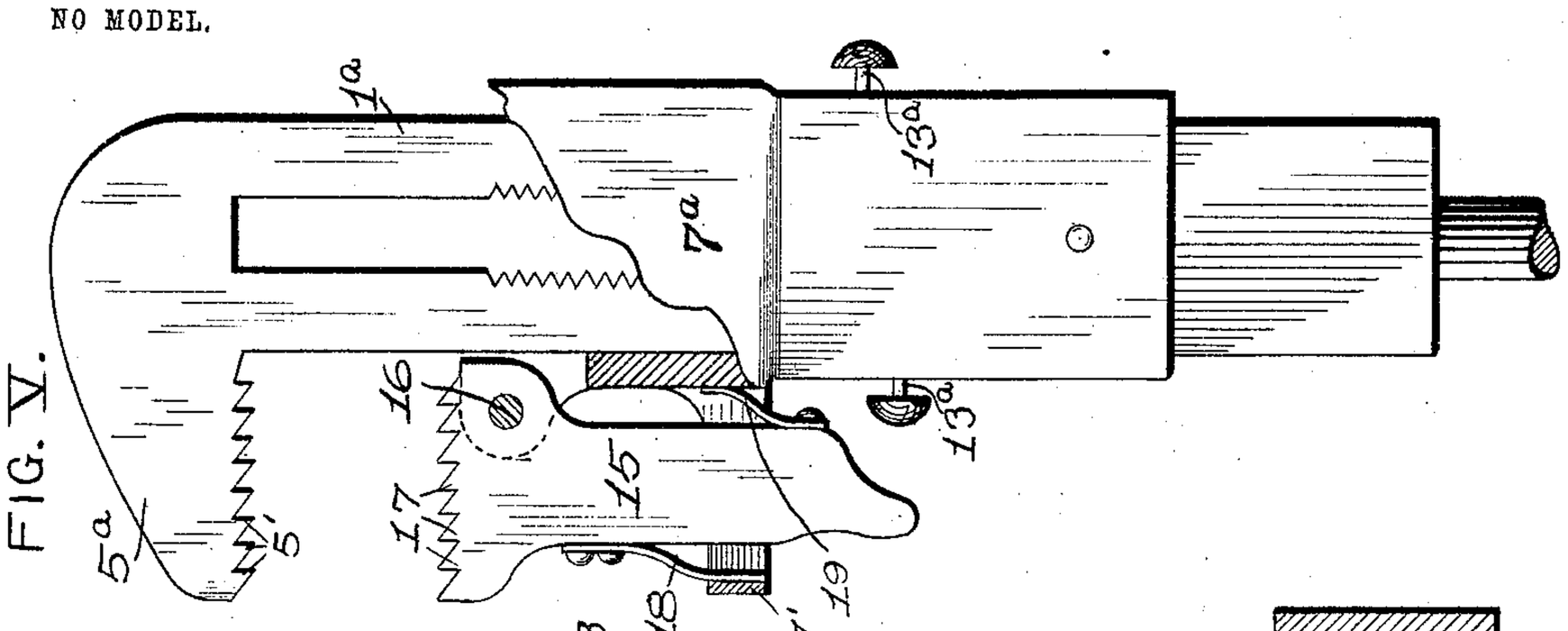


FIG. IV.

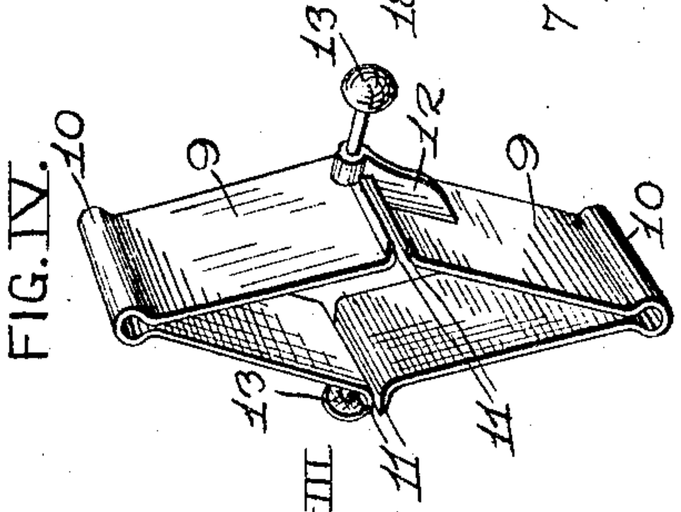


FIG. III.

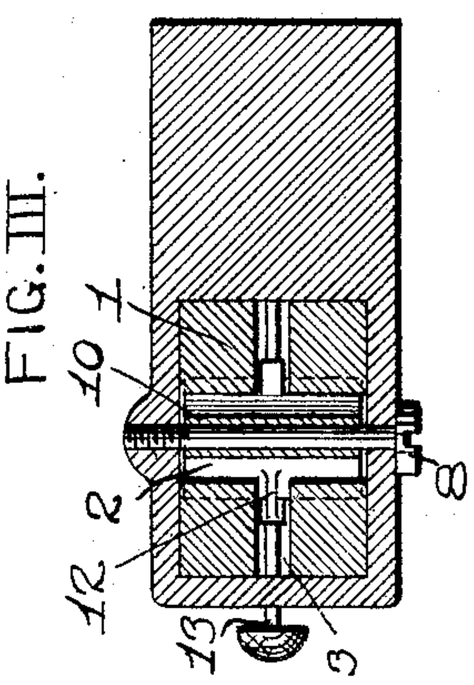


FIG. II.

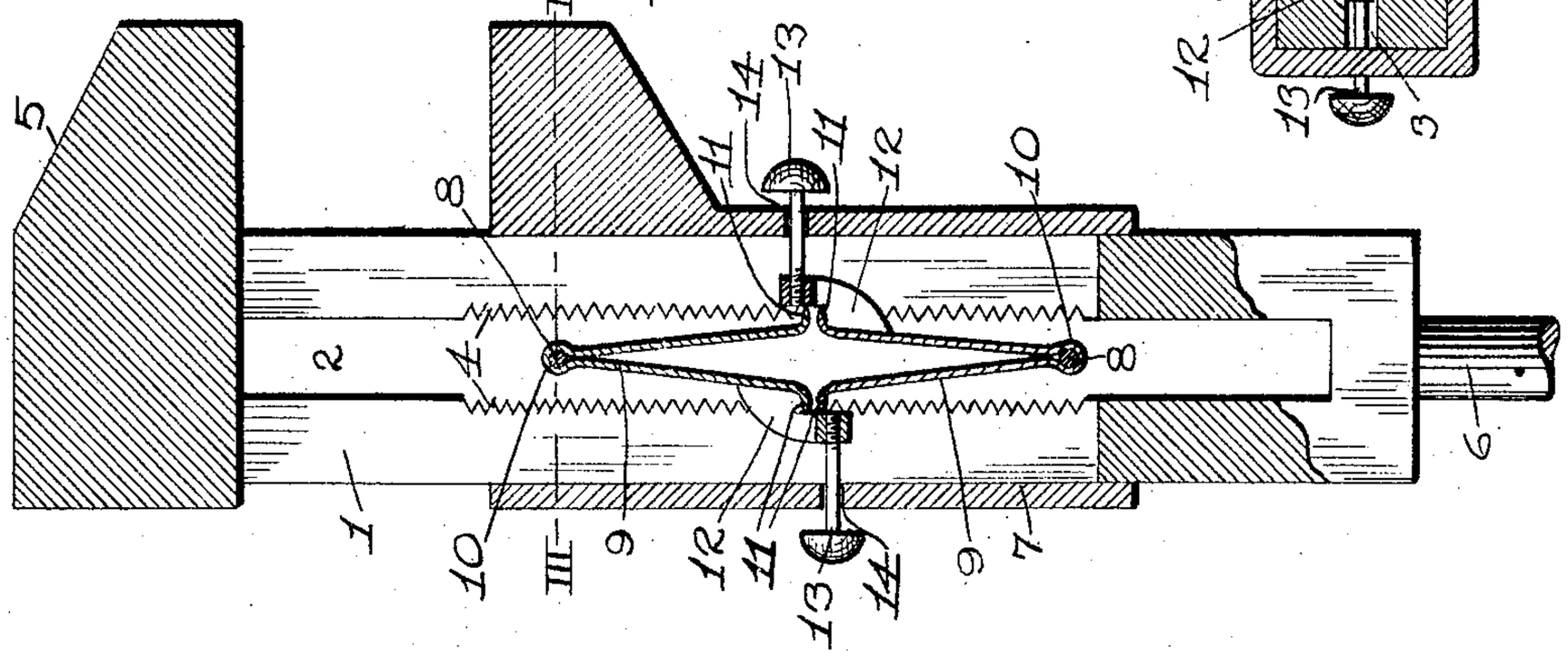
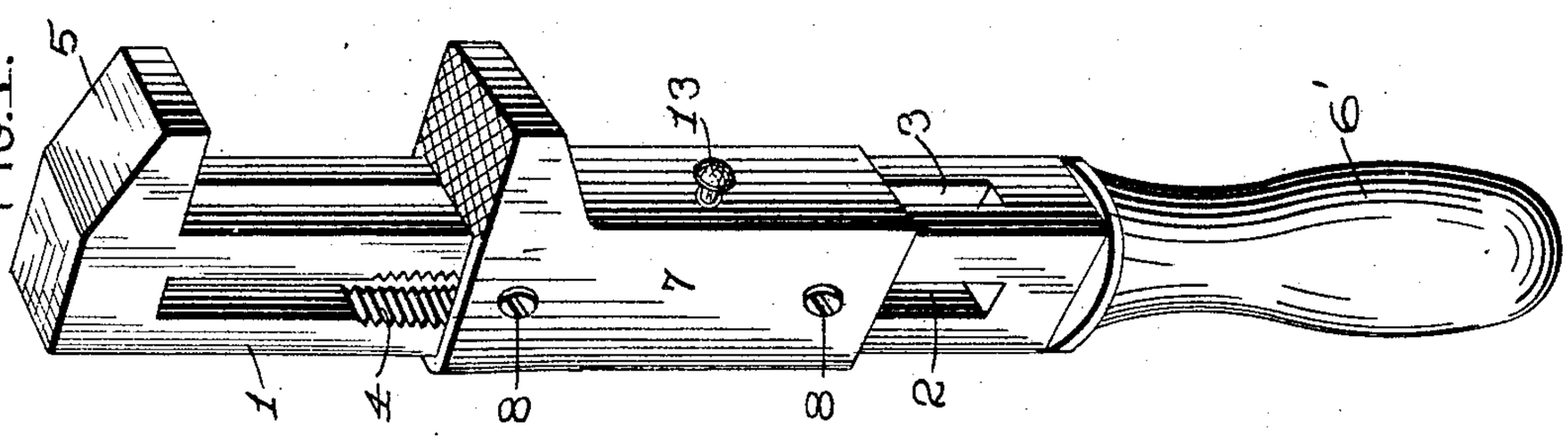


FIG. I.



ATTEST.

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ATTYS.

No. 765,589. Patented July 19, 1904.

UNITED STATES PATENT OFFICE.

ROBERT NOLEN, OF ST. LOUIS, MISSOURI, ASSIGNOR OF TWO-THIRDS TO JAMES JOHNSTON AND THOMAS J. NOLEN, OF ST. LOUIS, MISSOURI.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 765,589, dated July 19, 1904.

Application filed April 23, 1904. Serial No. 204,549. (No model.)

To all whom it may concern:

Be it known that I, ROBERT NOLEN, a citizen of the United States, residing in the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Wrenches, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a wrench having a slide-jaw and means whereby said slide-jaw is retained in a fixed position after it has been reciprocated with respect to the fixed jaw of the wrench, the construction being such as to permit quick and efficient setting of the slide-jaw.

Figure I is a perspective view of my wrench. Fig. II is an enlarged longitudinal section. Fig. III is a cross-section taken on line III III, Fig. II. Fig. IV is a perspective view of the spring retaining members associated with the slide-jaw of the wrench. Fig. V is a side view, partly broken away, illustrating my improvements incorporated in a pipe-wrench.

1 designates the body of my wrench, which is divided longitudinally by bisecting slots 2 and 3, thereby providing four longitudinal members in the body, on which the slide-jaw of the wrench operates and between which the retaining devices of the slide-jaw of the wrench are positioned. At the sides of the slots 2 are serrations 4.

5 is the fixed jaw of the wrench at the outer end of the body 1, and at the inner end of said body is a shank 6, to which the handle 6′ is secured.

7 designates a slide-jaw that operates on the body 1 and in which are seated pins 8, that pass through the body-slots 2.

9 designates a pair of V-shaped spring retaining members that are each contracted at one end, 10, and fitted to the pins 8. The opposite ends of the retaining members spread outwardly, and each arm of each retaining member is provided with outturned lips 11, that are arranged to engage in the serrations 4 to hold the slide-jaw 7 from reciprocation after it has been adjusted to the desired location. The spread ends of the retaining members 9 are disposed opposite to each other, and carried by one arm of each member is a finger 12, the fingers being so disposed as to project beyond the opposite retaining-arm of the other retaining member to bear thereagainst, as illustrated in Figs. II and IV.

13 designates push-pins carried by the fingers 12, operating in the wrench-body slots 3 and extending to the exterior of the slide-jaw 7 through openings 14 therein. When the slide-jaw is to be reciprocated, the two push-pins are pushed inwardly, thereby pressing the fingers 12 toward each other and contracting the spread retaining members, so that their lips are disengaged from the serrations 4 to permit reciprocation of the slide-jaw in either direction, and after the jaw has been moved to the desired location the push-pins are released, with the result that the retaining members again spring outwardly to engage said serrations and hold the slide-jaw. It will be observed that due to the fingers 12 being disposed at opposite sides of the retaining members and projecting into juxtaposition with the non-finger-carrying arms of the other retaining members only two push-pins are necessary to secure compression of said retaining members and free the slide-jaw for reciprocation.

In Fig. V, I have shown a modification of my wrench of a form for utility in connection with pipes or other round objects. In this construction the body 1^a of the wrench is of similar form to that hereinbefore described; but the fixed jaw 5^a is provided with teeth 5′. The slide-jaw 7^a operates on the wrench-body and contains retaining members similar to those before described, which are actuated through the medium of the push-pins 13^a. This slide-jaw carries an auxiliary jaw 15, that is pivoted at 16 to the slide-jaw and provided with teeth 17. The auxiliary jaw extends downwardly from the pivot-point 16 and is loosely positioned within a loop 7′, carried by the slide-jaw, and it bears springs 18 and 19, that rest against the slide-jaw and said loop at the front and rear sides of the auxiliary jaw, whereby its upper toothed face is held in a position parallel with the teeth of the fixed

jaw 5ª. When this wrench is applied to a round object, such as a pipe, the lower end of the auxiliary jaw is drawn rearwardly against the action of the spring 19, thereby rocking the outer end of said jaw to create a greater space between the points of the auxiliary jaw and fixed jaw for the more ready application of the wrench to the round object to which it is applied. It will be seen that when the wrench is removed from the object the auxiliary jaw will resume its normal position, due to the action of the springs 18 and 19.

I claim as my invention—

1. In a wrench, the combination of a slotted body provided with serrations and bearing a fixed jaw, a slide-jaw fitted to said body, V-shaped retaining members carried by said slide-jaw and engaging said serrations, fingers carried by one arm each of said retaining members and projecting beyond the opposing arm of the other retaining member, and push-pins connected to said fingers, substantially as set forth.

2. In a wrench, the combination of a slotted body provided with serrations and bearing a fixed jaw, a slide-jaw fitted to said body, pins seated in said slide-jaw and passing through said body, V-shaped spring retaining members having contracted ends fitted to said pins and having spread ends opposing each other, and arranged to engage said body-serrations, and means for compressing said retaining members for disengaging them from said serrations, substantially as set forth.

3. In a wrench, the combination of a slotted body provided with serrations and bearing a fixed jaw, a slide-jaw fitted to said body, pins seated in said slide-jaw and passing through said body, V-shaped spring retaining members having contracted ends fitted to said pins and having spread ends opposing each other, and arranged to engage said body-serrations, and push-pins carried by said retaining members for disengaging them from said serrations, substantially as set forth.

ROBERT NOLEN.

In presence of—
E. S. KNIGHT,
NELLIE V. ALEXANDER.