No. 832,098. PATENTED OCT. 2, 1906.

S. E. THOMAS.

WRENCH.

APPLICATION FILED SEPT. 2, 1905.

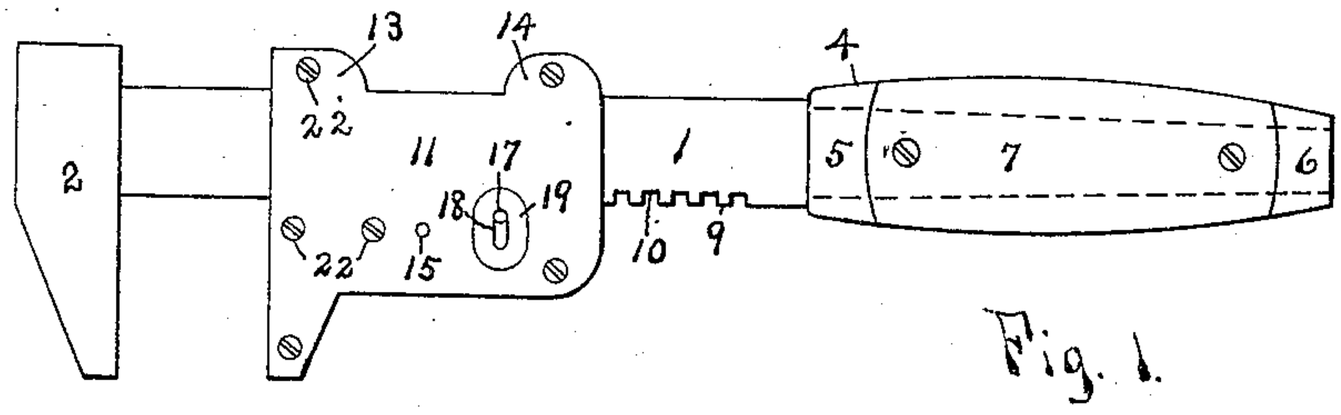

Fig. 1.

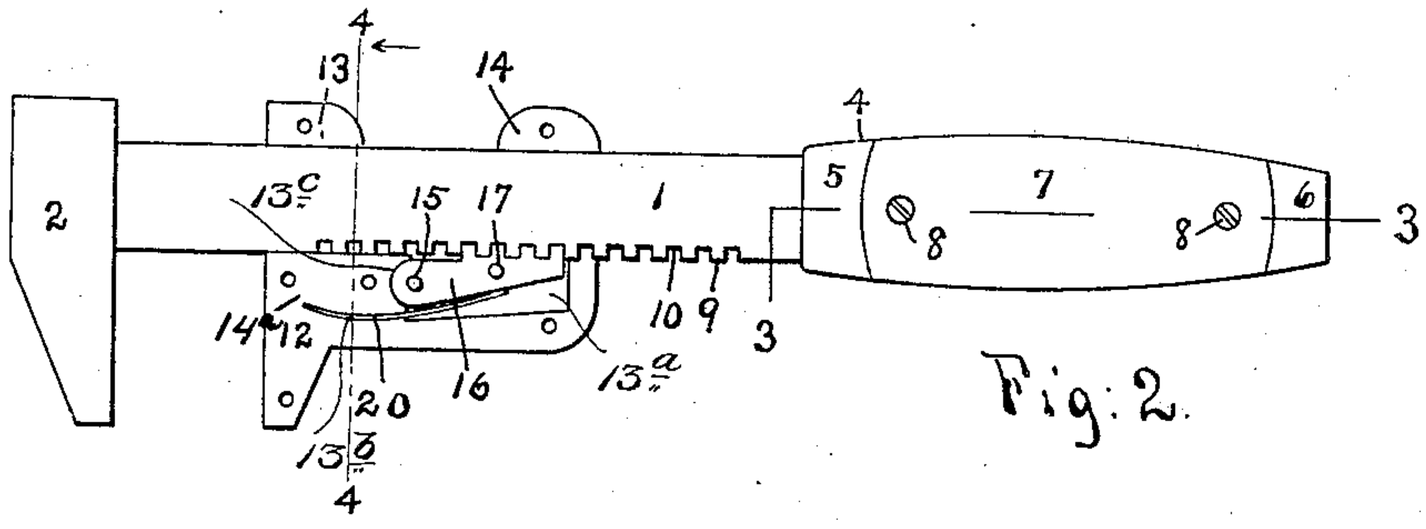

Fig. 2.

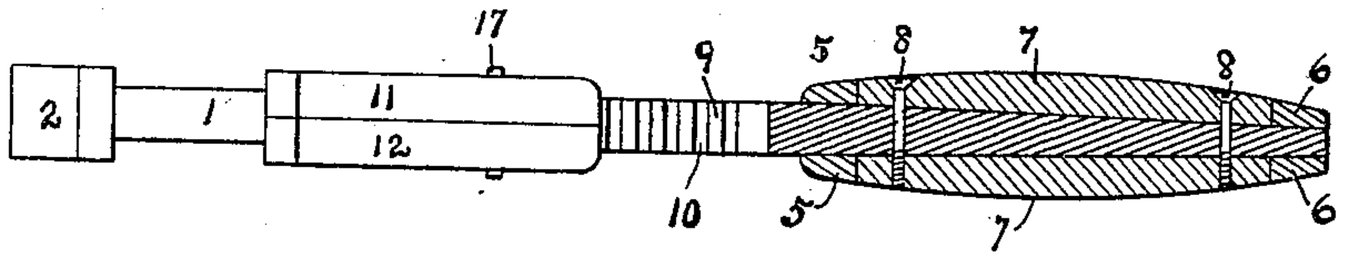

Fig. 3.

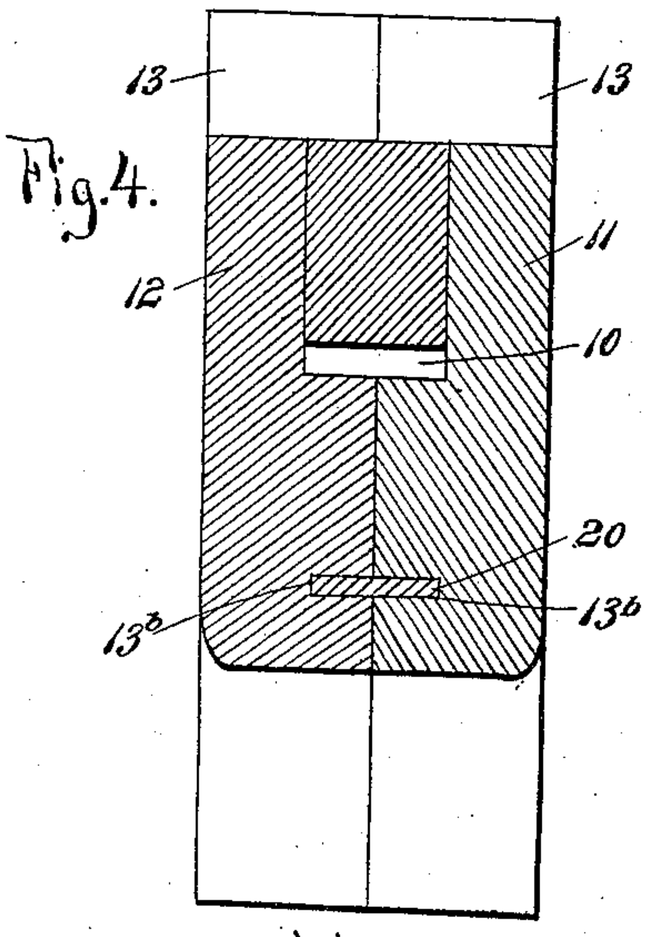

Fig. 4.

Witnesses:

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UNITED STATES PATENT OFFICE.

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WRENCH.

No. 832,098. Specification of Letters Patent. Patented Oct. 2, 1906.

Application filed September 2, 1905. Serial No. 276,788.

To all whom it may concern:

Be it known that I, STEPHEN EICHLEBURGER THOMAS, a citizen of the United States, residing at Hagan, in the county of Tattnall and State of Georgia, have invented new and useful Improvements in Wrenches, of which the following is a specification.

My invention pertains to that class of sliding-jaw wrenches in which a pivoted catch coöperates with a rack on the shank of the fixed jaw to adjustably fix the sliding jaw with respect to the fixed jaw; and it consists in the peculiar and advantageous construction, hereinafter described and claimed, calculated to lend strength to the wrench and materially prolong the usefulness of the same.

In the accompanying drawings, forming a part of this specification, Figure 1 is a side elevation of my novel wrench. Fig. 2 is a side elevation with one section of the body of the sliding jaw removed. Fig. 3 is an edge elevation of the wrench, showing the handle in cross-section on the line 3 3 of Fig. 2. Fig. 4 is an enlarged transverse section taken in the plane indicated by the line 4 4 of Fig. 2 looking in the direction indicated by the arrow.

Similar numerals designate corresponding parts in all of the views of the drawings.

Referring to the drawings, 1 is the shank of the wrench, which is provided at one end with a fixed jaw 2 and is also provided at an intermediate point of its length with a rack made up of rectangular teeth 9 and interdental spaces 10, as shown. At its opposite end with reference to the jaw 2 the shank 1 is provided with a handle portion. This handle portion may be of any construction compatible with the purpose of my invention without involving a departure from the scope thereof, though I prefer to have it comprise a yoke 4, which has end shoulders 5 and 6 and wood portions 7 interposed between the shoulders 5 and 6 and resting at opposite sides of the shank and connected thereto through the medium of transverse screws 8.

The slidable jaw is mounted and arranged to move longitudinally on the shank 1 between the handle portion thereof and the fixed jaw 2, and it comprises a body made up of two equally thick sections 11 and 12, the opposed faces of which meet above and below and in the same vertical plane as the longitudinal center of shank 1, a pivoted catch 16, and a spring 20, backing the catch and normally holding the same in engagement with the teeth of the rack. The body-sections 11 and 12 are provided in their inner sides with grooves or channels 12^a of a size in cross-section to snugly receive the shank 1, and they are also provided above and below the shank with transversely-apertured lugs 13, 14, and 14^a, designed to receive transverse screws 22 or the like, through the medium of which the sections are detachably connected together. In their inner sides the sections 11 and 12 are provided with recesses 13^a and 13^b, the recesses 13^a extending to the rack edge of the shank 1 and being provided with rounded forward ends 13^c and the recesses 13^b being arranged at the opposite side of the recesses 13^a with reference to the shank 1 and extending forwardly of the said recesses 13^a for a purpose which will presently appear. The catch 16 corresponds in thickness to the width of the combined recesses 13^a and is arranged in said recesses and pivotally connected through the medium of the transverse pin 15 to the body-sections 11 and 12. At its forward end the catch 16 is rounded and snugly fitted in the rounded ends 13^c of the recesses 13^a, and consequently it will be apparent that when the sliding jaw is subjected to pressure strain is removed from the pivot-pin 15 and liability of said pin to break is reduced to a minimum. On its inner edge, which normally rests parallel to the edge of the shank 1, the catch 16 is provided with a plurality of rectangular teeth, designed to engage the teeth 9 of the shank 1 after the manner shown in Fig. 2. When the teeth of the catch are thus engaged with the teeth of the shank, pressure exerted on the sliding jaw in a direction away from the fixed jaw 2 will tend to hold the catch in engagement with the rack and against casual release therefrom, and it will also be noted that the spring 20 and the pivot-pin 15 are relieved of strain.

The spring 20 bears at its rear end against the rear portion of the catch 16 and tends to hold the catch in and return it to the normal position. (Shown in Fig. 1.) The said spring 20 is snugly and removably arranged partly in the recess 13^b of body-section 11 and partly in the recess 13^b of the body-section 12, and hence it follows that with said body-sections 11 and 12 properly connected together the forward portion of the spring is clamped between the sections 11 and 12 and is inclosed and securely held throughout its

length and width. It also follows that when one body-section 11 or 12 is disconnected and removed from the other the spring 20 may be readily lifted from the groove 13[b] in such other and as readily replaced with a new spring, and it will further be noted that the extension of the spring 20 forward beyond the pivot of the catch 16 is advantageous, because it enables the body-sections 11 and 12 to strongly clamp and hold a considerable part of the spring between them.

Extending in opposite directions from the catch 16 are thumb-pieces 17, which are disposed and movable in slots 18 in the body-sections 11 and 12, while surrounding the slots at the outer sides of the body-sections 11 and 12 are depressions 19, said depressions being provided in order to enable the operator to readily bear against the said thumb-pieces 17.

In the practical use of my novel wrench the catch 16 is held out of engagement with the rack on the shank 1 and the sliding jaw is moved to the position desired relative to the fixed jaw 2 when the said catch 16 is released. When this is done, the spring 20 will obviously move the catch into engagement with the rack and in that way adjustably fix the sliding jaw on the rack. It will also be noticed that by reason of a number of teeth on the pivoted catch engaging a number of teeth of the rack at a point in rear of the pivot of the catch there is no liability of the catch casually flying out of engagement with the rack, and the parts are well adapted to withstand strain or pressure on the sliding jaw in a direction away from the fixed jaw.

It will be gathered from the foregoing that the pivoted catch and the spring backing the same are entirely inclosed in the body formed by the sections 11 and 12, and hence there is no liability of the said parts being injured or broken by striking against extraneous objects. It will also be gathered that my novel wrench is at once simple, inexpensive, and compact.

I claim—

In a sliding-jaw wrench, the combination with a shank having a fixed jaw at one end and a handle at its opposite end and also having a rack intermediate said jaw and handle; of a sliding jaw arranged on the shank and comprising equally thick, slotted body-sections having inner sides arranged to come together in the same vertical plane as the longitudinal center of the shank and also having recesses 13[a] in said inner sides, the forward ends of which are rounded, and recesses 13[b] in said inner sides at opposite sides of the recesses 13[a], with reference to the rack, and extending forward beyond said recesses 13[a] and to a point adjacent to the forward ends of the body-sections, means detachably connecting the body-sections together, a swinging catch for engaging the rack, pivoted adjacent to its forward end in the recesses 13[a] and having its said end rounded and snugly fitting the rounded ends of said recesses 13[a], thumb-pieces extending laterally from the catch and through the slots of the body-sections, and a flat spring removably arranged in the recesses 13[b] throughout the length of said recesses, whereby it is clamped between and held partly in one body-section and partly in the other, and extending rearwardly from the recesses 13[b] and having its rear portion disposed against the back of the catch.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

STEPHEN EICHLEBURGER THOMAS.

Witnesses:

H. W. PERKINS,

G. L. HUNT.