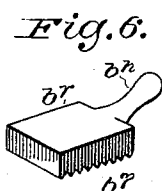
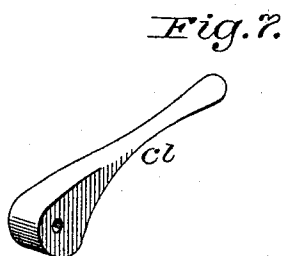
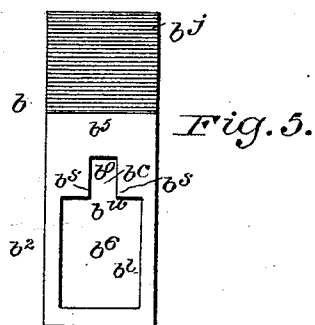
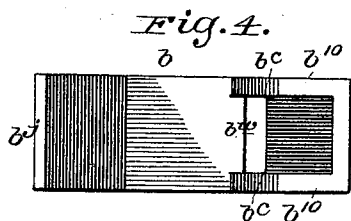
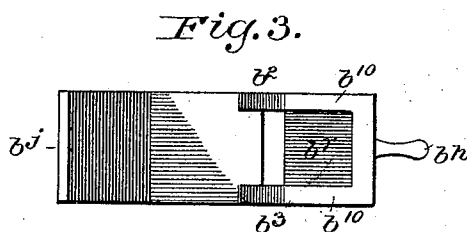
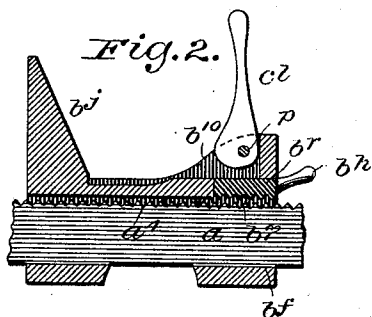
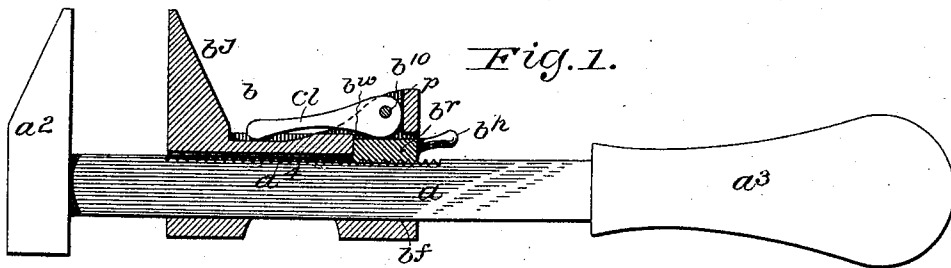


(No Model.)

D. A. CHENEY.
WRENCH.

No. 581,267.

Patented Apr. 27, 1897.



Witnesses
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Attorney

UNITED STATES PATENT OFFICE.

DANIEL A. CHENEY, OF CENTRAL PARK, MONTANA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 581,267, dated April 27, 1897.

Application filed March 19, 1896. Serial No. 583,898. (No model.)

To all whom it may concern:

Be it known that I, DANIEL A. CHENEY, a citizen of the United States, and a resident of Central Park, in the county of Gallatin, in the State of Montana, have invented a new and useful Wrench, of which the following is a correct description.

The invention relates generally to that class of wrenches which have a fixed holding-jaw at the outer extremity of the body or handle of the wrench and a movable holding-jaw which is slidable, by a central perforation or passage, upon the handle or body of the wrench; and it relates particularly to that class of slidable-jaw wrenches in which the top or upper surface of the handle or body of the wrench has a transversely roughened or ridged engaging surface and in which the slidable-jaw section has a correspondingly roughened or ridged engaging surface, and a pivoted cam-lever which is operated to produce or to discontinue engagement of the slidable-jaw section with the body or handle section of the wrench.

A leading object of the invention is to produce at a moderate cost a wrench in which a slidable-jaw section shall be brought quickly into engagement with the body or handle section and as quickly disengaged therefrom when engagement is no longer desired; and a further object is to provide in a slidable-jaw wrench a means whereby the engaging member of the slidable-jaw section shall be moved and automatically held out of engagement with the body or handle section, so that the slidable section may be moved to and fro upon the handle-section without causing abrasion of the transversely-extending roughened engaging surfaces upon either section.

The invention consists in a novel combination of the engaging portion of the slidable-jaw section of a wrench with the engaging portion of the handle thereof.

The invention consists also in a novel combination, with the body or handle of a wrench, of an engaging block within the body of the slidable-jaw section, whereby when the engaging parts are not in engagement to lock the slidable jaw in position upon the handle or body such slidable-jaw section may be moved to and fro along the body or handle of the wrench without contact, and consequently

without abrasion, of either of the engaging or interlocking surfaces.

The invention consists, further, in various novel parts or combinations of parts in a wrench, as will first be described with particular reference to its details of construction, and then specifically and distinctly summarized in the paragraphs which succeed such detailed description.

In the accompanying drawings, which constitute a part of this specification, Figure 1 represents a side elevation, partly in longitudinal vertical section, of a wrench in which my improvements are embodied, the cam-lever being shown in its depressed position, as when maintaining the grooved or serrated block in engagement with the correspondingly grooved or serrated surface of the handle or body of the wrench. Fig. 2 is a sectional side elevation of the slidable section detached, the pivoted cam-lever and the serrated engaging block being in their elevated or disengaged position. Fig. 3 is a top plan view of the slidable section, the cam-lever or depressing-arm having been removed. Fig. 4 is a top plan view of the slidable section, the cam-lever or depressing-arm and the vertically-adjustable engaging block having been removed. Fig. 5 represents a rear elevation of the body or shell of the slidable section. Fig. 6 represents the vertically-movable engaging block detached. Fig. 7 represents the cam-lever detached.

The transversely-rectangular body or handle *a*, the terminal fixed holding-jaw *a*², the detachable grasping section or handle proper, *a*³, and the transversely-grooved or rack surface *a*⁴, upon the upper surface of the shank or body *a* of the wrench, are or may be of an ordinary construction. The slidable section *b*, the vertical sides *b*² and *b*³ and the vertical ends *b*⁴ and *b*⁵ of which are by preference parallel to each other, has the terminal holding-jaw *bj* and the longitudinal passage or way *b*⁶, which is adapted to receive the rectangular portion of the body or handle *a*.

In the rear portion of the shell of the slidable section *b* and extending from the upper extremity to the bottom plate or floor *bf* thereof is provided a rectangular well or way *bw*, the lower and main portion or section *bl* of which is occupied by the stem or shank of the

body *a*, the upper portion or section of which, between the parallel vertical bearings *b*¹⁰ *b*¹⁰, is occupied by the cam-lever *cl*, and the intermediate portion or chamber *bc* of which is occupied by the movable and adjustable rack-faced engaging block *br*.

The shank or stem of the body *a* of the wrench is adapted to move freely within the longitudinal way *b*⁶ of the slidable section except when the rack-faces *a*⁴ and *b*⁷ of the two sections are in engagement.

The engaging block *br* is of such dimensions as to adapt it to fit snugly and accurately within the side walls of the intermediate section of the well or way *bw*, and it has at its rear a horizontal outwardly-projecting lug or handle *bh*, which in its inner portion is received in a rectangular notch or recess *bo* between the two shoulders *bs bs* in the rear wall of the shell. When the slidable section is separated from the body or handle of the wrench, the block *br* may, by its lug or handle *bh*, be inserted in its place, the movement being first longitudinally inward from the rear and then vertically upward until in its proper position its sides are snugly gripped by the walls of the shell.

Mounted upon the pivot-pin *p*, in its bearings *b*¹⁰ *b*¹⁰, the cam-lever *cl* is operative, when moved to its depressed or horizontal position, to push the engaging block *br* downward for a short distance, to bring its transversely-grooved or rack face *b*⁷ into engagement with the rack-face *a*⁴ of the body or handle *a*. When the cam-lever *cl* is returned to its vertical position, the body or handle *a* is given a slight zigzag movement in a vertical plane in its passage or way *b*⁶, acting alternately upon each extremity of the bottom surface of the engaging block and causing it to move upward to its original position of frictional engagement with the walls of its section of the rectangular well or way *bw*. It will thus be seen that the cam-lever is operated to move the engaging block into engagement with the handle or body and to maintain it in such engagement, and that when, by a reverse movement of the lever, the engaging block has been released the handle itself is employed to move the block out of its engagement with the rack-face of the handle and to return it to its frictional engagement within the walls of the shell of the slidable section, in which position, as will be apparent, either of the two sections may be moved back and

forth, one upon or within or along the other, without bringing the rack-surfaces into contact, and consequently without producing abrasion of such surfaces.

In the drawings the parts are represented as drawn to their natural or working scale, and it will be seen that the extent of movement of the engaging block *br* from its point of greatest depression to its point of greatest elevation is less than one-eighth of one inch, a distance so short that the change in adjustment may be effected in the briefest possible period of time.

The invention having been thus fully described, what is claimed is—

1. In a wrench, the combination of a rack-faced body or handle and a slidable section which loosely receives the body or handle, which is provided above the plane of the handle with a vertically-movable rack-faced block which is inclosed and normally held in frictional engagement within the shell of such slidable section, and which receives also a pivoted cam-lever upon the rack-faced block, the cam-lever being operated to depress the block into engagement with the body or handle, and to release it therefrom, and the body or handle being operated, upon such release, to elevate the block above the plane of the rack-face upon the body, and thereby to permit the parts to be moved, one upon the other, without causing contact of the respective rack-faces.

2. A wrench which embraces a handle or body section which has a terminal holding-jaw, and a top rack-face; and a slidable section which is received upon the handle or body section and which is provided with a vertically-movable rack-faced block which is frictionally supported within the section, and with a surmounting pivoted cam-lever; the cam-lever being adapted to move the rack-faced block downward from its frictionally-held position, and the handle or body section being adapted to move the rack-faced block upward and to return it to its frictionally-supported position; as and for the purposes set forth.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

DANIEL A. CHENEY.

Witnesses:

JOHN T. MCLELLAN,
CLYDE CORBLY.