(No Model.)

J. A. VON GYLLENBERG.

WRENCH.

No. 392,152. Patented Oct. 30, 1888.

Fig. 1.

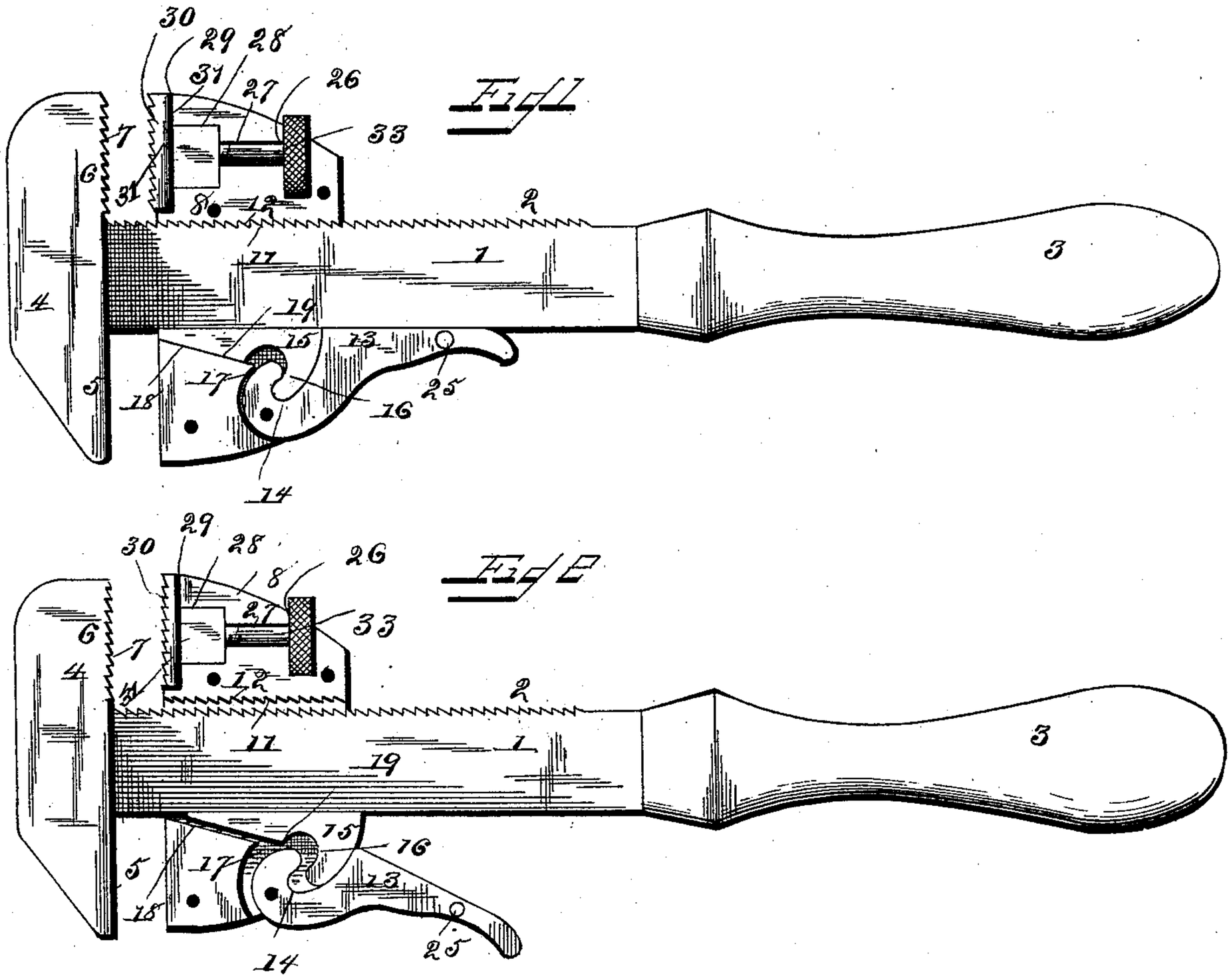


Fig. 2.

Fig. 3.

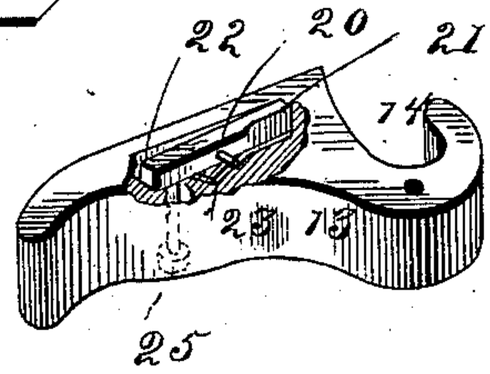


Fig. 4.

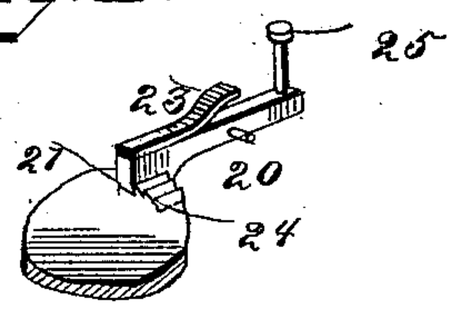
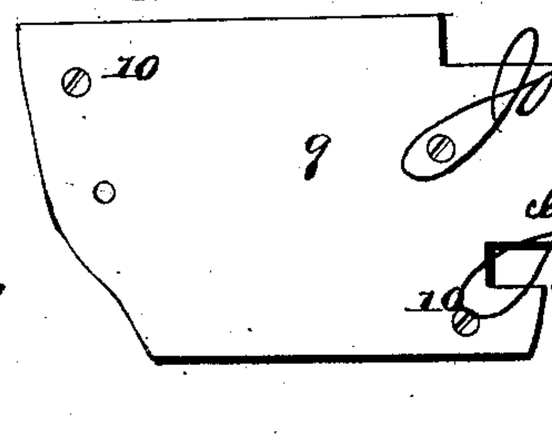


Fig. 5.



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UNITED STATES PATENT OFFICE.

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WRENCH.

SPECIFICATION forming part of Letters Patent No. 392,152, dated October 30, 1888.

Application filed April 28, 1888. Serial No. 272,140. (No model.)

To all whom it may concern:

Be it known that I, JOHN ALFRED V. GYLLENBERG, a citizen of the United States, and a resident of Hecla, in the county of Beaver Head and Territory of Montana, have invented certain new and useful Improvements in Wrenches; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side view of my new and improved wrench, taken with that side of the casing removed, and showing the adjustable jaw clamped at the point to which it has been adjusted. Fig. 2 is a similar view showing the clamping-piece unlocked or thrown back to permit of the movable jaw being adjusted. Fig. 3 is a detail view, partly in section, of the small clamping-lever. Fig. 4 is a detail view, hereinafter referred to; and Fig. 5 is a plan view of the removable plate.

The same numerals of reference indicate corresponding parts in all the figures.

My invention consists in a new and improved wrench, which will be hereinafter fully described and claimed.

Referring to the several parts by their designating-numerals, 1 indicates the main bar of the wrench, which is formed on one side with the usual series of teeth, 2, and which has at one end a suitable handle, 3, and at the other end the head 4. This head is centrally arranged upon the end of the bar 1, and the inner or operative face of one projecting end, 5, is left perfectly smooth, like an ordinary nut-wrench, while the operative face of the other projecting end, 6, is formed with the series of teeth 7, to adapt it to operate as a pipe-wrench.

8 indicates the movable casing or block which forms the adjustable jaw of the wrench. This block, one side of which is closed by a removable plate, 9, which is held in place by screws 10, is formed with a central vertical opening, 11, through which the bar 1 of the wrench passes, one side of this opening being formed with the series of teeth 12, which are adapted to engage with the teeth 2 on the side of the bar 1. The opposite side of the block is recessed, and in this rounded recess is pivoted the hook-shaped upper end of a small lever, 13, the point of this hook-shaped end extending inward, as shown. The hooked upper end of this lever engages with the hook-shaped lower end of the clamping-block 15, the inner face of this clamping-block being perfectly flat, while on its outer side its upper half is beveled upward, while its lower part is formed with the hook 16, with which the hook 14 on the upper end of the lever 13 engages. The inner side of the block, above its recess 17, is also inclined or beveled at 18 to coincide with the bevel of the outer side of the clamping-block. The clamping-block is of such size that when the lever 13 is pushed toward the bar 1, as shown in Fig. 1 of the drawings, the clamping-block is caused to move toward the rigid jaw, with its inclined surface 19 in contact with the inclined side 18 of the main block, thus forcing the teeth on the opposite side of the said bar into engagement with the teeth 12, which are formed on that side of the central opening through the block. The block 8, and consequently the movable jaw of the wrench, will thus be firmly locked at the point to which it is adjusted. The surface of the outer end of the recessed side of the block 8 is formed perfectly flat, to coincide with the flat fixed jaw formed by that end of the head of the wrench, while the other end of the block is formed with an adjustable corrugated jaw, which will be hereinafter described.

When the lower end of the lever 13 is moved in toward the wrench-bar, as shown in Fig. 1 of the drawings, it is held in this locked position by the following device: A latch, 20, consisting of a straight piece of metal formed near one end with a tooth or side projection, 21, is centrally pivoted in a longitudinal recess, 22, on one side of the lever below the hook-shaped end of the same, a small spring, 23, normally pressing the upper toothed end of the lever outward, so that the said tooth 21 projects out beyond the side of the lever. When the free end of the lever 13 is pushed toward the bar 1, as in Fig. 1, this projecting tooth will enter a corresponding tooth, 24, in the inner side of the recessed end of the block, as shown in Fig. 4 of the drawings, and the lever will be thus held locked in position. When the

adjustable jaw of the wrench is to be moved and the free end of the lever is to be thrown outward, the tooth 21 is withdrawn from the tooth 24 by pressing on a small pin or button, 25, the inner end of which bears against one end of the centrally-pivoted latch, and as the said latch is thus turned the tooth 21 will be drawn in and free from the tooth 24. When the latch is freed, the inner end of the lever 13 can be pushed out, and when so moved its hooked end, engaging with the hooked end of the clamping-block, will draw the said block inwardly, the inclined meeting faces of the clamping-block and the main block permitting this movement, and the clamping-block will thus be withdrawn from the wrench-bar, permitting the said bar to be moved to the side to free its teeth 2 from the teeth 12 of the block 8, when the block can be adjusted as desired.

That side of the block 8 which has the teeth 12 formed in its inner side is formed with a vertical slot, 26, near its lower end and a horizontal recess, 27, leading up from the center of the vertical recess, and at the upper end of this horizontal recess is formed a square recess, 28, which is enlarged at its upper end to extend entirely across the upper end of that side of the block, as shown at 29. 30 indicates the adjustable corrugated jaw, the outer part of head 31 of which is of the same width as the block 8 itself, to adapt it to fit in the enlarged recess 29, while the lower half of the jaw is squared to adapt it to fit in the square recess 28, this squared lower part of the jaw being formed with a central threaded aperture. In this aperture fits and works the threaded upper end of an adjusting-screw, 33, the milled head of which fits and turns in the vertical recess or slot 26, while the screw proper fits in the horizontal recess 27. This corrugated adjustable jaw is on the same side of the bar as the stationary toothed or corrugated fixed jaw of the head 4.

When the wrench is to be used as a pipe-wrench, the block 8 is adjusted as previously described, and the corrugated jaw 30 is thus adjusted as near the required point as is possible; but by this adjustment the block 8 can only be adjusted tooth by tooth, and when a finer closer adjustment than the teeth 2 and 12 will permit is required, this is secured by turning the adjusting-screw 33 by means of its milled head, and as the thread on the said screw is very fine it will be seen that the corrugated jaw 30 can be thus adjusted for the minutest distances—a great advantage, as will be readily understood. The squared part of the jaw 30, moving in the square recess 28, guides the head and prevents it from turning or twisting to either side.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a wrench, the combination, with the bar having a head at one end and a series of teeth formed in one of its sides, of the block formed with the central opening, having the series of teeth at one side, the curved recess and inclined upper inner side, and the tooth 24, the clamping-block formed with the hook-shaped inner end and the inclined face, the pivoted lever having the hook-shaped outer end and formed with the longitudinal recess, and the spring-actuated catch formed with the side tooth and centrally pivoted in the said recess, and the pin for swinging the same, substantially as set forth.

2. In a wrench, the combination, with the bar having at one end a head formed with a plain and a corrugated jaw, and having a series of teeth formed in one of its sides, of the block formed with a central opening, having the series of teeth in one side, the curved recess and inclined inner side, and having the recesses and vertical slot formed in its other side, the clamping-block formed with the hook-shaped lower end and the inclined outer face, the pivoted lever formed with the hook-shaped upper end and having the catch, the corrugated jaw formed with the squared lower part having the threaded aperture, and the adjusting-screw, substantially as set forth.

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

JOHN ALFRED V. GYLLENBERG.

Witnesses:
WM. H. RICE,
JOHN L. RICEDORFF.