W. E. PEARCE.

WRENCH.

APPLICATION FILED FEB. 12, 1910.

968,970.

Patented Aug. 30, 1910.

Fig. 1.

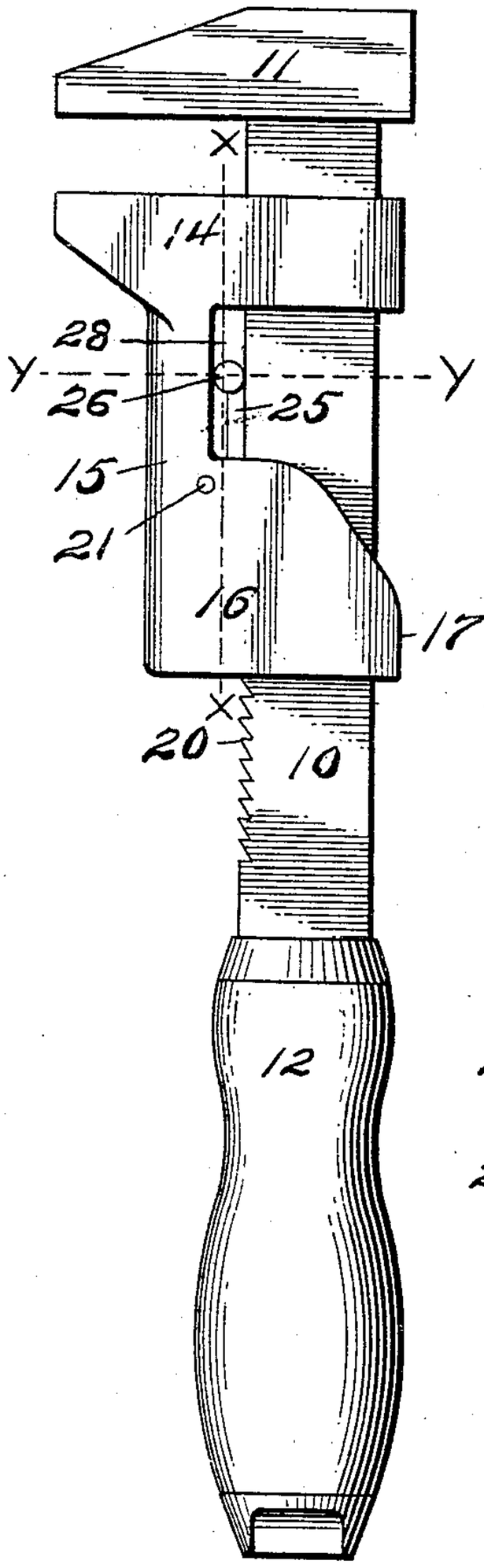


Fig. 2.

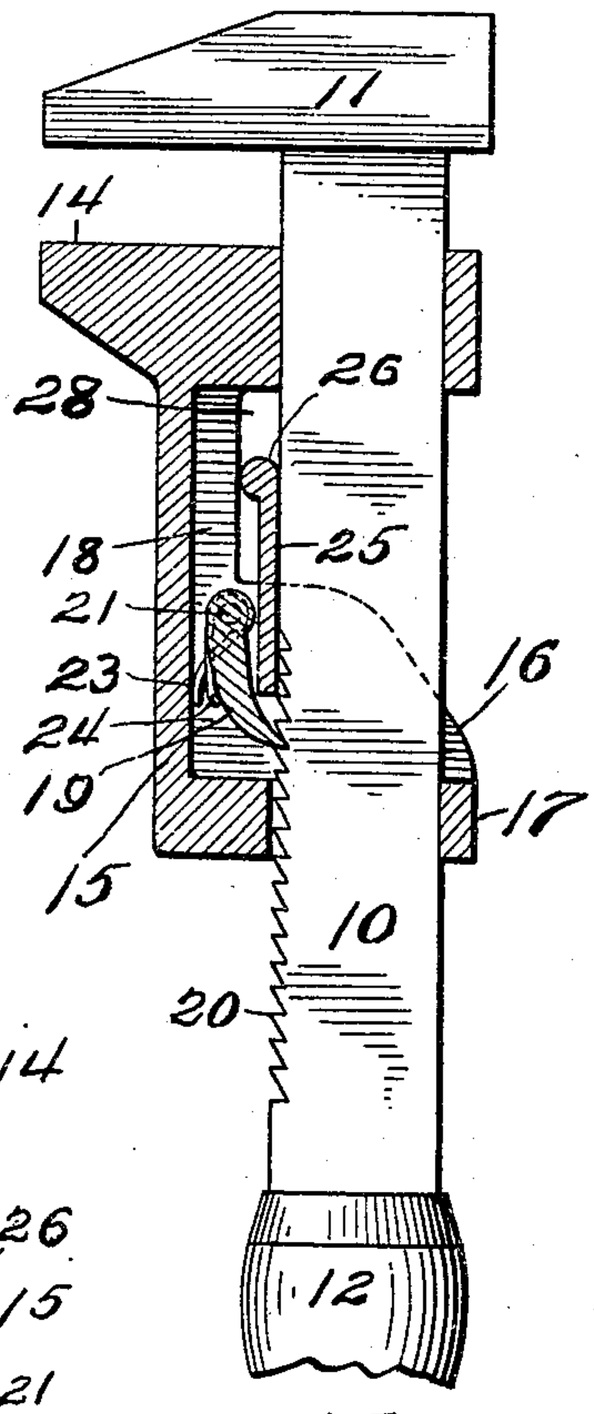


Fig. 3.

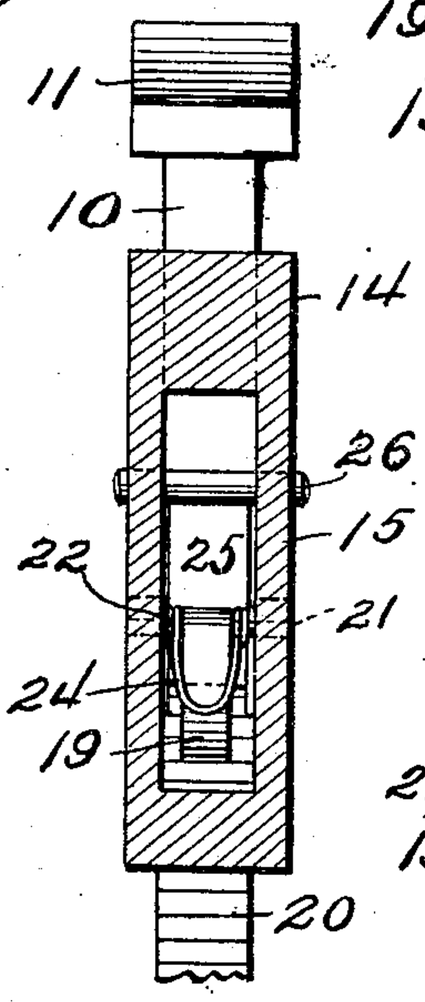


Fig. 4.

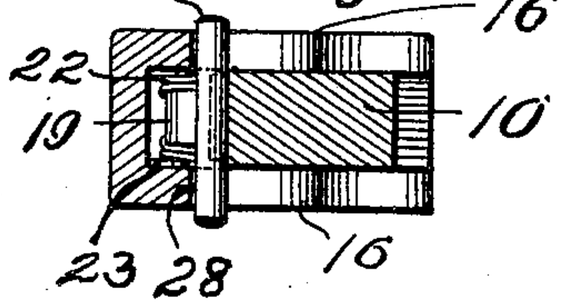
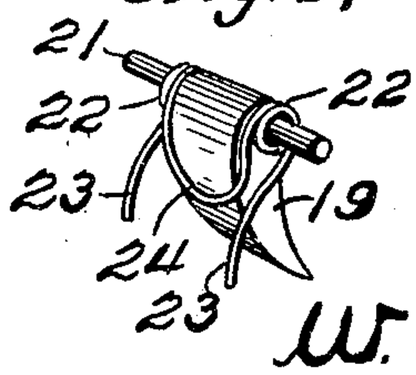


Fig. 5.



WITNESSES:—

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WRENCH.

968,970. Specification of Letters Patent. **Patented Aug. 30, 1910.**

Application filed February 12, 1910. Serial No. 543,562.

To all whom it may concern:

Be it known that I, WALLACE E. PEARCE, a citizen of the United States of America, residing at Allison Park, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Wrenches, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to wrenches, and relates more particularly to that type of wrenches generally known as monkey wrenches, and in which means is provided for the rapid adjustment of the movable jaw of the wrench.

The invention has for its main object the provision of a wrench of the above-described type in which the elements employed for holding the movable jaw in adjusted position are housed within the jaw in such manner as to protect the same from possible injury, and a further object of the invention is to provide novel means for releasing the movable jaw securing element so as to permit of the adjustment of the movable jaw upon the wrench shank.

The invention will be hereinafter described in detail, and in such description reference will be had to the accompanying drawing illustrating the preferred embodiment of the invention, and wherein like numerals of reference indicate like parts throughout the several views of the drawing, in which:

Figure 1 is an elevation of a wrench constructed in accordance with my invention. Fig. 2 is a similar view with the wrench handle broken away and the movable jaw in section. Fig. 3 is a longitudinal sectional view through the movable jaw taken on line X—X of Fig. 1 with the wrench handle broken away. Fig. 4 is a transverse sectional view taken on the line Y—Y of Fig. 1 with the wrench handle broken away, and Fig. 5 is a detail perspective view of the securing element for the movable jaw detached therefrom.

Wrenches of the type referred to embody a wrench shank having a fixed jaw on the outer end and a handle on the inner end, the wrench shank being herein designated by the numeral 10, the outer jaw by the numeral 11 and the handle by the numeral 12. The movable jaw is provided for sliding movement on the wrench shank toward and away from the fixed jaw 11. This movable jaw in my invention comprises the jaw proper 14, through which the wrench shank extends, and which carries a housing 15, the cheek pieces 16 of which lie on opposite sides of the wrench shank 10 and are connected by a strap 17 across the rear or back face of the wrench shank 10. In the chamber 18 of the housing 15, which chamber lies adjacent the front edge of the wrench shank 10 is mounted the securing element for holding the movable jaw in adjusted position. In the present illustration of the invention, this securing element is shown as comprising a pawl 19, the free end of which engages with the teeth 20 provided on the forward edge or face of the wrench shank 10. The said pawl 19 is mounted on a pivot pin 21, the ends of which are journaled in the side walls of the housing 15, and the pawl is held in normal engagement with the teeth 20 of the wrench shank by means of a suitable spring, the tension of which normally tends to hold the pawl in engagement with the wrench shank teeth. The form of spring I prefer to employ is clearly illustrated in Fig. 5 of the drawings, wherein the spring is shown as being formed from a piece of suitable spring wire shaped to provide a pair of coils 22 which receive the ends of the pivot pin 21, the free ends 23 of the spring wire forming arms which rest against the inner face of the front wall of the housing, and the spring being bent intermediate the coils 22 to form a loop 24 which bears against the outer face of the pawl 19. Obviously, the spring exerting its tension normally against the outer face of the pawl 19 will hold the free end of the latter in normal engagement with the teeth 20 of the wrench shank 10.

Since the securing element for holding the jaw in adjusted position is entirely inclosed by the housing of the movable jaw, means must be provided for releasing the securing element from the wrench shank so as to permit adjustment of the movable jaw on said wrench shank. This means as herein shown comprises the plate or dog 25 having a T-shaped outer end or head 26, the ends of such head projecting through slots 28 and slightly beyond the side faces of the housing 15. The pawl 19 is pivotally-mounted within the housing at a point so as to provide sufficient distance between the front face of the wrench shank and the pawl for the entry of the dog 25, as clearly seen by

reference to Fig. 2 of the drawings. The length of the dog 25 is slightly greater than the length of the slots 28 and consequently at its extreme outer position, it is securely held within the housing, and since the head 26 of the dog is guided by the walls of the slots 28 and one face of the wrench shank, the dog will always be in position for shifting the pawl 19 out of engagement with the teeth 20 of the shank when occasion so requires.

If it is desired to move the jaw 14 toward the jaw 11, the same can be readily forced in that direction, since the pawl 19 will ride over the teeth 20. If however, it is desired to adjust the movable jaw so as to move the same away from the fixed jaw 11, the operator slides the dog 25 toward the handle end of the wrench, thereby engaging the said dog with the curved inner face of the pawl 19 and forcing the latter outwardly, disengaging it from the wrench shank teeth 20, so that the movable jaw can be freely moved along the wrench shank.

The construction, it will be noted is extremely simple, yet all weaker parts of the wrench are securely housed so as to prevent danger of breakage in use, and while a preferred embodiment of the invention is herein shown and specifically described, it will be evident that various changes may be made in the details of construction without departing from the spirit or scope of the invention.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A wrench comprising a shank having a fixed jaw on the outer end thereof and provided on its front face with teeth, a movable jaw slidable on the wrench shank comprising a jaw proper provided with a housing having cheek plates at the inner ends thereof, a pawl pivotally-mounted within the housing, a spring normally holding the free end of said pawl in engagement with the teeth of the wrench shank, and a dog slidable in the housing between the pawl and the wrench shank for releasing the pawl and having a T-shaped head, the ends of which project beyond the side faces of the housing.

2. In a wrench of the type described, a wrench shank provided with a fixed jaw, and having teeth on the front face thereof, a movable jaw slidably-mounted on the wrench shank and provided with a housing, a pivot pin mounted in the side walls of said housing, a pawl carried by said pivot pin within the housing, a spring carried by the pivot pin and having the free ends thereof engaging the housing with a loop of said spring bearing against the pawl and holding the same normally in engagement with the teeth of the wrench shank, and a dog mounted for sliding movement within the housing between the front face of the wrench shank and the pawl for releasing the latter from engagement with the teeth of the wrench shank.

In testimony whereof I affix my signature in the presence of two witnesses.

WALLACE E. PEARCE.

Witnesses:
KARL H. BUTLER,
EVA A. MILNE.