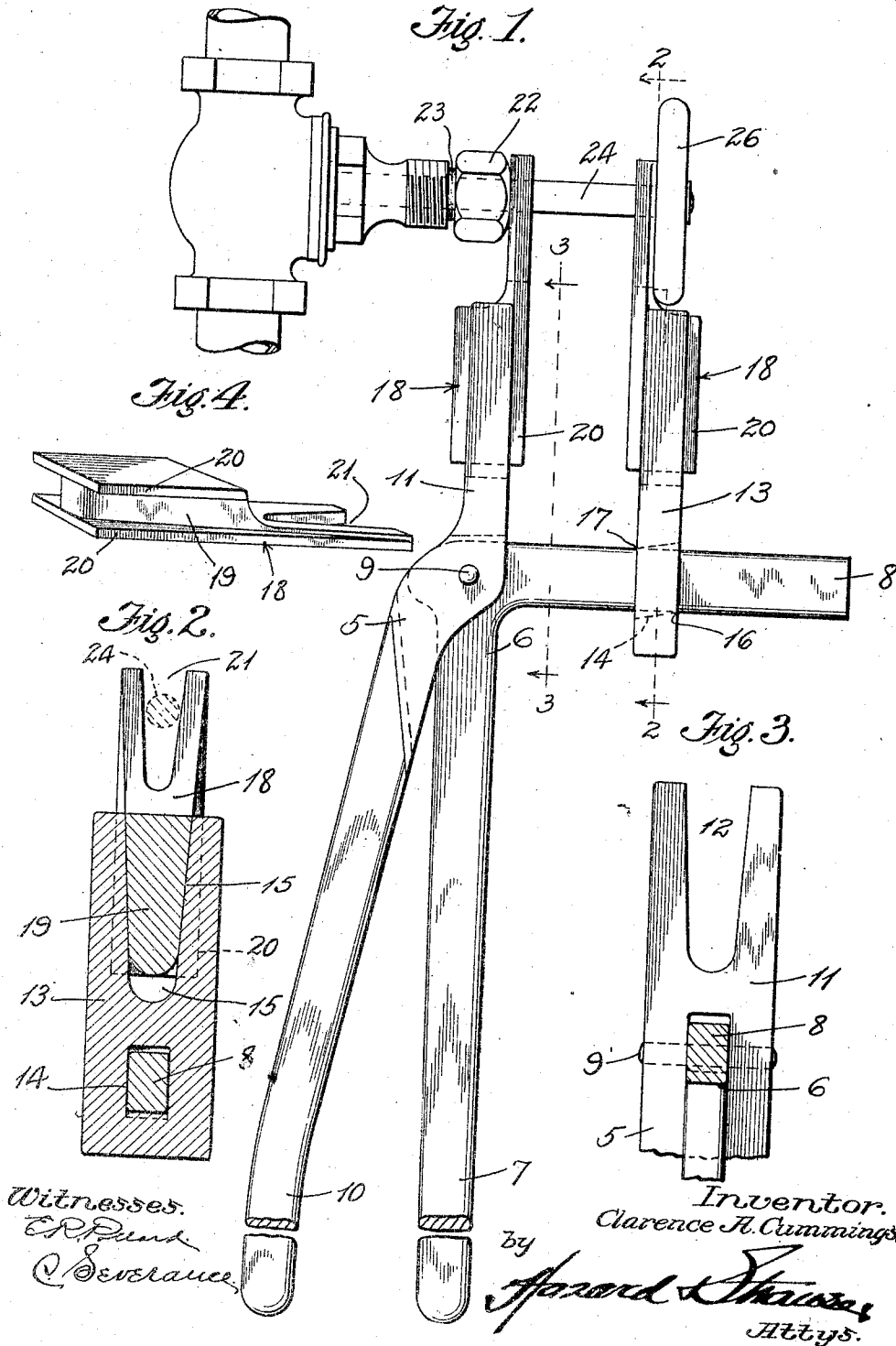


C. A. CUMMINGS.
ADJUSTABLE PACKING PLIERS.
APPLICATION FILED NOV. 18, 1911.

1,019,605.

Patented Mar. 5, 1912.



UNITED STATES PATENT OFFICE.

CLARENCE A. CUMMINGS, OF FRESNO, CALIFORNIA.

ADJUSTABLE PACKING-PLIERS.

1,019,605.

Specification of Letters Patent.

Patented Mar. 5, 1912.

Application filed November 18, 1911. Serial No. 661,043.

To all whom it may concern:

Be it known that I, CLARENCE A. CUMMINGS, a citizen of the United States, residing at Fresno, in the county of Fresno and State of California, have invented new and useful Improvements in Adjustable Packing-Pliers, of which the following is a specification.

This invention relates to improvements in pliers and particularly to spreading pliers.

It is an object of the invention to provide the spreading pliers which are adapted to hold articles in proper position for adjustment with a suitable pressure thereon.

It is also an object of the invention to provide pliers which are adapted to exert a pressure upon the packing material of packing glands so that the packing of such glands may be more successfully accomplished.

It is a further object of the invention to provide spreading pliers with jaws having adjustable means facilitating the application of the device to different sized mechanisms, and particularly to facilitate the packing of valve glands having larger or smaller sized valve stems.

In the accompanying drawing forming a part of this specification, Figure 1 is a side elevation of the improved spreading pliers embodying the features of this invention and showing the same applied to the stem of a valve. Fig. 2 is a detail sectional view taken upon the line 2-2 of Fig. 1. Fig. 3 is a detail sectional view taken upon the line 3-3 of Fig. 1. Fig. 4 is a perspective view of a removable jaw, adapted to be employed in connection with the pliers.

The details and features of the invention will now be more particularly described, reference being had to the said drawing in which 5 and 6 represent the members of spreading pliers, the members 6 of which is preferably of an angular character having a straight handle portion 7 and a laterally projecting jaw carrying arm 8. The said jaw carrying arm 8 is usually formed at right angles to the handle portion 7 and the angular corner of the said member 6 thus formed is pivotally secured in a slot formed in the member 5, the pivot 9 being employed for movably holding the parts together. The handle 10 of the member 5 is shaped to diverge from the handle 7 so that pressure may be exerted on the handles for operating the pliers. The member 5 is formed with a

projecting jaw portion 11 which is bifurcated at its end as at 12 and thus adapted to slip upon a valve stem or other similar device. A movable jaw 13 is mounted upon the arm 8, and is formed with a slot 14 therein adapted to slip over the said arm 8 and allow of the adjustment of the jaw at different points upon said arm. The said jaw 13 is also provided with a bifurcation at its end as shown at 15. The two jaws of the pliers may thus be slipped upon a valve stem or other article and be forced apart for exerting pressure upon a packing gland or other device. The jaw 13 is adjustably held in place on the arm 8 by means of gripping edges 16 and 17 which are formed by making the ends of the slot 14 with inclined surfaces as indicated in dotted lines in Fig. 1. Inward pressure upon the bifurcated end of the jaw 13 will thus cause the edges 16 and 17 to bite and grip the said arm 8 and hold the jaw firmly thereon. The said jaw 13 can be quickly adjusted to new positions upon the arm 8 by tipping the said jaw so as to disengage the edges 16 and 17 therefrom.

In order to permit the pliers to be adjustable to devices such as valve stems and the like, of different sizes and diameters, the jaws are preferably provided with removable extension jaws 18 which are preferably formed as shown in perspective in Fig. 4. The extension jaws may be interchangeable so as to be used on either of the plier jaws 11 or 13 and the said extension jaws are formed with tapering body portions 19 having flanges 20 extending from the sides thereof and adapted to receive the bifurcated ends of the main jaws. The extension jaws are also formed with bifurcated end portions 21, the recesses therein being of a smaller diameter than the recesses in the jaws 11 and 13.

The recesses in both sets of jaws are preferably slightly flared from their inner ends outwardly as disclosed in the drawing whereby they can be made to fit upon different sized articles with facility. The action of the pliers is the same whether the plier jaws 11 and 13 are used or the extension jaws are inserted therein. As illustrated in Fig. 1 the extension jaws are in place.

While the device is adaptable to various purposes and for the spreading of articles with respect to each other, the pliers are

found especially useful in assisting in the packing of glands or packing boxes of various kinds.

As illustrated in the drawing the pliers are used upon a valve and when it is intended to pack the stuffing box of the said valve, the cap 22 of said stuffing box is of course unscrewed and the packing material 23 is then wound snugly in place about the valve stem 24. It is found that when it is endeavored to pack a gland of this kind without the use of suitable means for forcing the packing in place that it is quite difficult to use a sufficient amount of packing and yet secure the cap 22 in position. With the present invention after placing a suitable quantity of packing about the stem 24 the pliers are put in position with their jaws embracing the valve stem 24. By spreading the pliers, the jaw 13 having been first approximately adjusted to the proper spreading distances, the said jaws are forced apart, one jaw engaging the handle 26 of the valve as an abutment while the other jaw is pressed against the nut cap 22. The packing may thus be forced tightly into position by the pliers and the nut brought down over the same so as to engage the threads upon the stuffing box when the nut may be turned by an ordinary wrench. The pressure of the pliers upon the said nut cap 22 does not interfere in the least with the turning of the nut and makes it possible to accomplish the desired result in an easier and much more effective manner. The packing of stuffing boxes surrounding the piston rods may be accomplished in a similar manner, any portion of the adjacent machinery being employed as an abutment. The movable and adjustable mounting of the jaw 13 makes it possible to adapt the pliers to

various kinds of mechanism and the employment of removable jaws also makes it possible to use the pliers upon devices of different sizes.

What I claim is:

1. Spreading pliers comprising members pivoted together, one of said members having a work engaging jaw, and an adjustable work engaging jaw carried by the other member, the operation of the said members being capable of forcing the jaws apart to exert pressure upon a given object.

2. Spreading pliers comprising pivoted members having operating handles, one of said members having a laterally projecting arm, an adjustable jaw having gripping means for securing it in different positions upon said lateral arm, and a fixed jaw carried by the other member of the pliers, the drawing together of the handles operating to force the jaws apart.

3. Spreading pliers comprising members pivotally connected having operating handles, one of said members having a bifurcated jaw formed with a tapering recess therein, the other member having a lateral arm, an adjustable jaw thereon, having a tapering recess and removable jaws adapted to be inserted in said tapering recess, the said removable jaws also having bifurcated work engaging portions, the drawing together of the handles operating to spread the jaws and exert pressure upon a given mechanism.

In witness that I claim the foregoing I have hereunto subscribed my name this 9th day of November, 1911.

C. A. CUMMINGS.

Witnesses:

EDMUND A. STRAUSE,
EARLE R. POLLARD.