

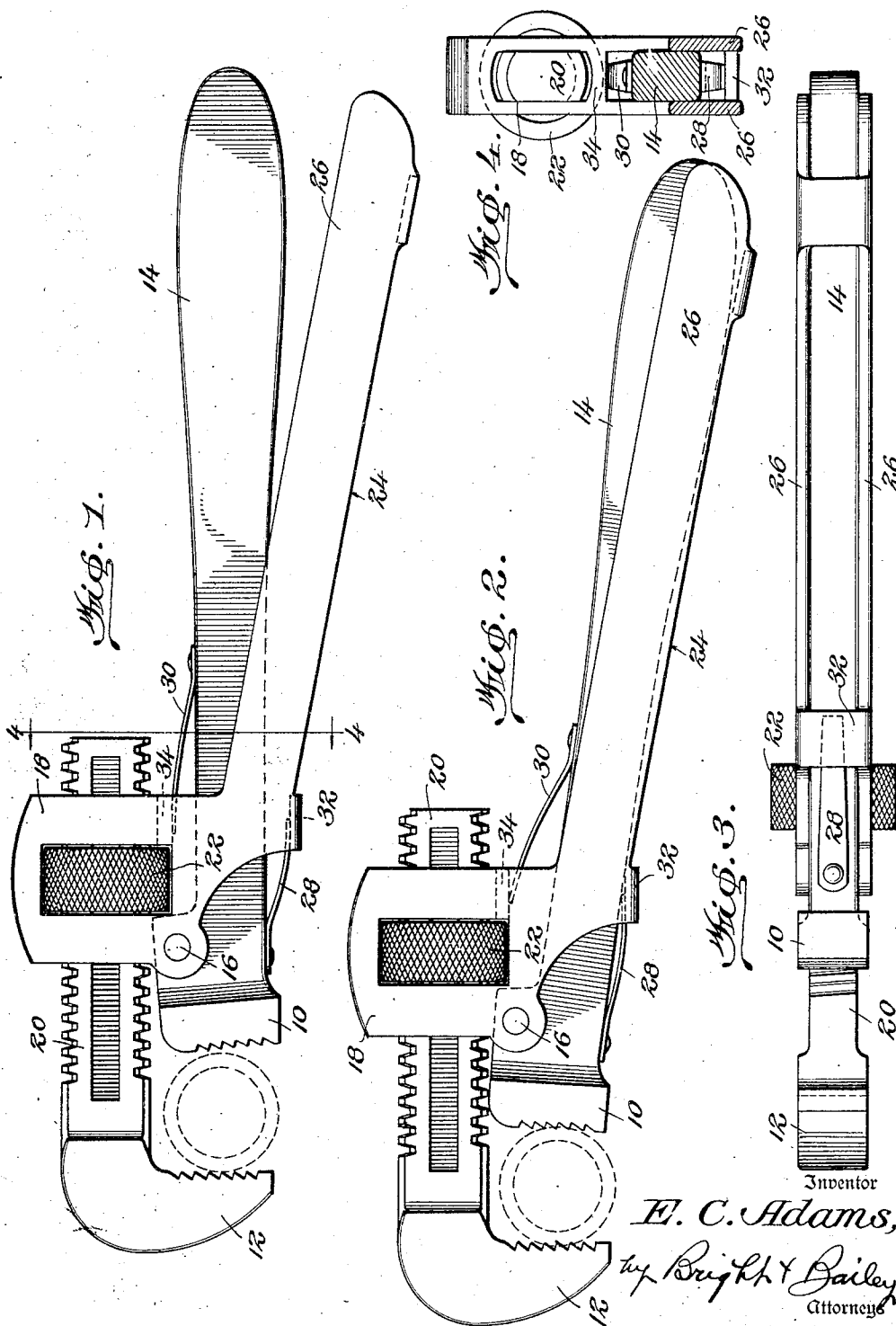
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WRENCH

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UNITED STATES PATENT OFFICE

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WRENCH

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My invention relates to improvements in pipe wrenches of the well known "Stillson" type, and my purpose, generally speaking, is to provide a wrench of this type which may quickly and positively be engaged in gripping relation upon a pipe, which will become automatically disengaged from a pipe when the grip on the handle is relaxed, and which is of relatively simple, inexpensive construction, strong, durable, and thoroughly reliable and efficient in use.

With the foregoing and other purposes in view, my invention consists in the novel features of construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawings and defined in the appended claim.

In the drawings, wherein like characters of reference denote corresponding parts in the different views:

Fig. 1 is a side elevation of my wrench, showing the parts thereof in the relation they normally bear to one another;

Fig. 2, a side elevation of my wrench showing the parts thereof in the relation they bear to one another when the wrench has been operatively engaged with a pipe in readiness to turn same;

Fig. 3, an edge view; and

Fig. 4, a transverse section on the line 4—4 of Fig. 1.

My wrench as aforesaid is of the well known "Stillson" type and includes inner and outer jaws 10, 12, respectively. Jaw 10 is inclusive of a handle 14 and is pivoted to one side of the longitudinal center of said handle, near said jaw, as at 16, between the side walls of a hollow guide-casing 18, while jaw 12 is inclusive of a threaded shank 20 extending rearwardly through a nut 22 which is mounted for rotation and held against longitudinal movement with respect to said guide-casing, whereby rotation of said nut in one direction is effective to adjust said jaws apart and in the opposite direction is effective to adjust said jaws towards one another.

Formed on and extending rearwardly from and at an inward inclination with respect to the guide-casing 18 is a handle 24 composed

of spaced side elements 26, 26 between which the handle 14 of the inner jaw 10 is adapted to operate during application of the wrench to a pipe and its release therefrom, leaf springs 28, 30 secured, respectively, to the inner and outer edges of the handle 14 of the jaw 10, cooperating with cross members 32, 34, on the handle 24 and the guide-casing 18, respectively, to hold the handles 14 and 24 normally at an angle to one another in which their rear or free ends are spaced apart as shown in Fig. 1 of the drawings, so that the jaws 10, 12 will be moved towards one another, due to the offset relation of the pivot 16 with respect to the longitudinal center of the handle 14, when said handles are brought together.

In the use of my wrench the jaws 10, 12 are adjusted towards or away from one another by means of the nut 22 until the distance between them approximates the diameter of the pipe desired to be turned. The wrench then is engaged with the pipe in the usual manner as shown in Fig. 1, after which the handles 14, 24 are moved together by the natural hand grip of the person using the wrench to move the jaws 10, 12 towards one another and thus cause the teeth on the pipe engaging faces of said jaws to bite into the pipe, liability of the wrench slipping around the pipe when pressure is applied to the handle 14 in a direction to turn the pipe thus being effectually eliminated. Upon the grip of the person using the wrench being relaxed, the handles 14, 24 will be restored to their normal position shown in Fig. 1 by the springs 28, 30 as is obvious, in which relation of said handles the handle 14 is capable of being moved not only inwardly, but also outwardly with respect to the handle 24 to enable the jaws 10, 12 to be readily engaged with a pipe without the necessity of accurately adjusting said jaws by means of the nut 22.

I claim:—

A pipe wrench comprising a tubular casing, a toothed outer jaw having a stem extending longitudinally through the casing, a thread and nut device for adjusting the outer jaw and stem longitudinally of the casing, a toothed inner jaw having a handle extending

longitudinally through and pivoted to the casing, the casing being prolonged into a handle to receive, and extending contiguous to and of substantially the same length as, the handle of the inner jaw, whereby said handles are adapted to be simultaneously gripped to swing them toward each other on the pivot between the casing and inner jaw handle, thereby to force the inner and outer jaws into operating biting relation to a pipe therebetween prior to the application of a turning force to the wrench.

In testimony whereof I hereunto affix my signature.

EDWARD C. ADAMS.

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