P. E. ERICKSON.

PIPE WRENCH.

APPLICATION FILED AUG. 9, 1910.

993,231. **Patented May 23, 1911.**

Fig 1

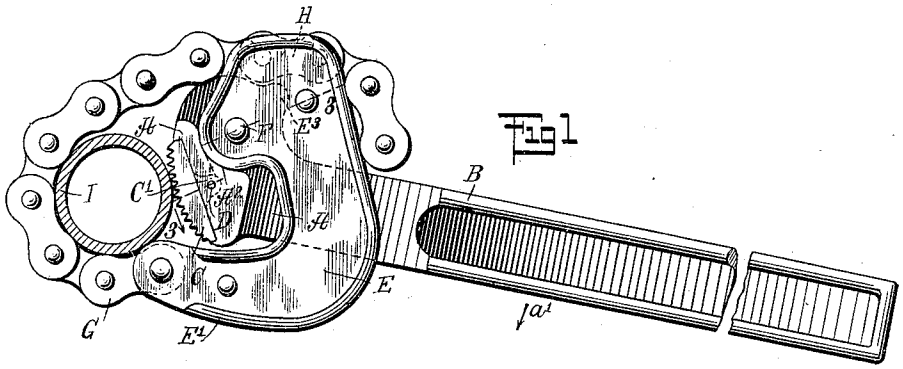


Fig 2

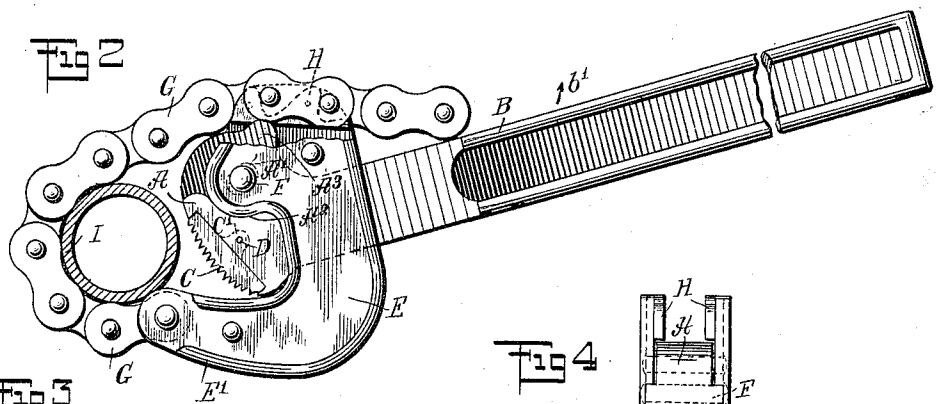


Fig 3

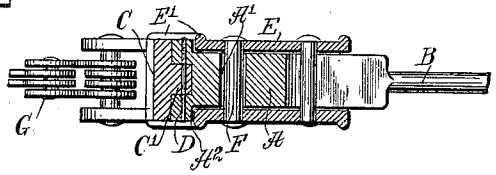


Fig 4

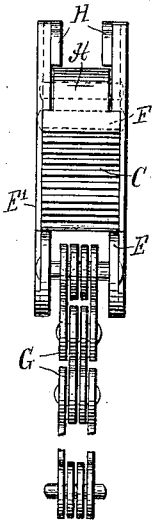
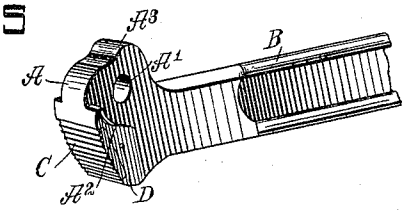


Fig 5



WITNESSES:

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PIPE-WRENCH.

993,231. Specification of Letters Patent. Patented May 23, 1911.

Application filed August 9, 1910. Serial No. 576,342.

To all whom it may concern:

Be it known that I, PETER E. ERICKSON, a citizen of the United States, and a resident of Port Chester, in the county of Westchester and State of New York, have invented a new and Improved Pipe-Wrench, of which the following is a full, clear, and exact description.

The invention relates to pipe wrenches having a chain and lever, for instance, such as shown and described in the Letters Patent of the United States Number 968,182, granted to me August 2, 1910.

The object of the present invention is to provide a new and improved pipe wrench, arranged to permit firm gripping of pipes of different sizes, and to quickly release the chain when releasing the grip of the pipe. For the purpose mentioned use is made of a serrated convex head or jaw forming one end of a handle, and on the said head is pivoted a bifurcated lever having a plurality of teeth for engagement by the loose end of a chain attached at its other end to the said lever, the said head being provided on its fulcrum end with a release projection adapted to engage the inner edge of the chain to lift the same out of engagement with the said teeth on moving the wrench into released position.

Another feature of the wrench is the arrangement of loosely pivoting the lever on the head, and providing the latter with shoulders for the lever to abut against, so as to relieve the pivot of all strain when the wrench is in use.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the wrench as applied to a pipe, the latter being shown in section, and the parts of the wrench being in gripping position; Fig. 2 is a like view of the same, showing the wrench in released position and part of the lever broken out; Fig. 3 is a sectional plan view of the same on the line 3—3 of Fig. 1; Fig. 4 is a front end view of the wrench; and Fig. 5 is a perspective view of the head and part of the handle.

The convex serrated head or jaw A of the wrench is fixed at one end of a handle B, and for small wrenches the teeth or serrations C are integral on the peripheral face of the head, while for large wrenches the teeth or serrations C are on a separate piece provided with a lug C′ engaging a recess in the head A and fastened thereto by a transverse pin D, as plainly indicated in the drawings.

The bifurcated lever E is provided with a transversely-extending pivot F, engaging an elongated aperture A′ formed in the head A, so that the pivot F is eccentric to the head A and to the handle B, as will be readily understood by reference to Figs. 1 and 2. The free end of the lever E is provided with a forwardly-extending angular arm E′, on which is secured one end of a chain G, adapted to be hooked at its other end on teeth H formed on the other end of the lever E, as plainly indicated in the drawings. By the arrangement described, the chain G is permanently connected with one end of the bifurcated lever E and is removably connected with the other end of the said lever, so that the chain G can be readily passed around a pipe I or other part to be turned, it being understood that the teeth C of the head or jaw A engage the pipe I or other part at a point approximately intermediate the portions of the pipe I engaged by the chain G. When the handle B is swung downward in the direction of the arrow *a′*, it is evident that the head or jaw A by the teeth C firmly grips the pipe I, and as the head A and the lever E are eccentrically connected with each other, it is evident that the harder the operator bears on the handle B in a downward direction, the firmer the head A and the chain G grip the pipe I to prevent slipping. The opposite sides of the head A are provided with segmental shoulders A^2 for engagement by the peripheral edge of the fulcrum end of the lever E, so that when the operator bears down on the handle B in the direction of the arrow *a′*, then the said edge abuts against the shoulders A^2 thus relieving the pivot F of all strain, it being understood that the pivot F has sufficient movement in the elongated aperture A′ to allow the edge of the lever E to abut against the shoulders A^2.

The head A is provided on top with a release projection A^3, adapted to engage the inner edge of the free end of the chain G when swinging the handle B in the direction of the arrow *b′* for releasing the grip on the pipe I, so that the release projection A^3 lifts the chain G sufficiently out of en-

gagement with the teeth H to move the chain in released position relative to the teeth H, as indicated in Fig. 2.

The chain G may be in various shapes, but is preferably provided with projecting pivotal pins for engagement with the teeth H of the lever E.

The pipe wrench shown and described is very simple and durable in construction, and is formed of comparatively few parts, not liable easily to get out of order.

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

1. A pipe wrench, comprising a serrated convex head forming one end of a handle and provided with segmental shoulders, a bifurcated lever loosely pivoted on the said head and adapted to abut with its fulcrum portion against the said shoulders to relieve the pivot of strain, one end of the lever having a plurality of teeth, and a chain connected with the other end of the lever and adapted to pass around the pipe and removably engage the said teeth, the said head having a release projection adapted to engage the inner edge of the chain, to release the chain relative to the teeth when releasing the grip on the pipe.

2. A pipe wrench, comprising a serrated convex head forming one end of a handle, a bifurcated lever pivoted on the said head, a plurality of teeth on the fulcrum end of the said lever, a chain attached to the other end of the lever and removably engaging the said teeth, and a release projection on the fulcrum end of the said head, for engaging the inner edge of the chain to lift the same out of engagement with the said teeth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

PETER E. ERICKSON.

Witnesses:
H. L. MARSHALL, Jr.,
WM. O. REMSEN.