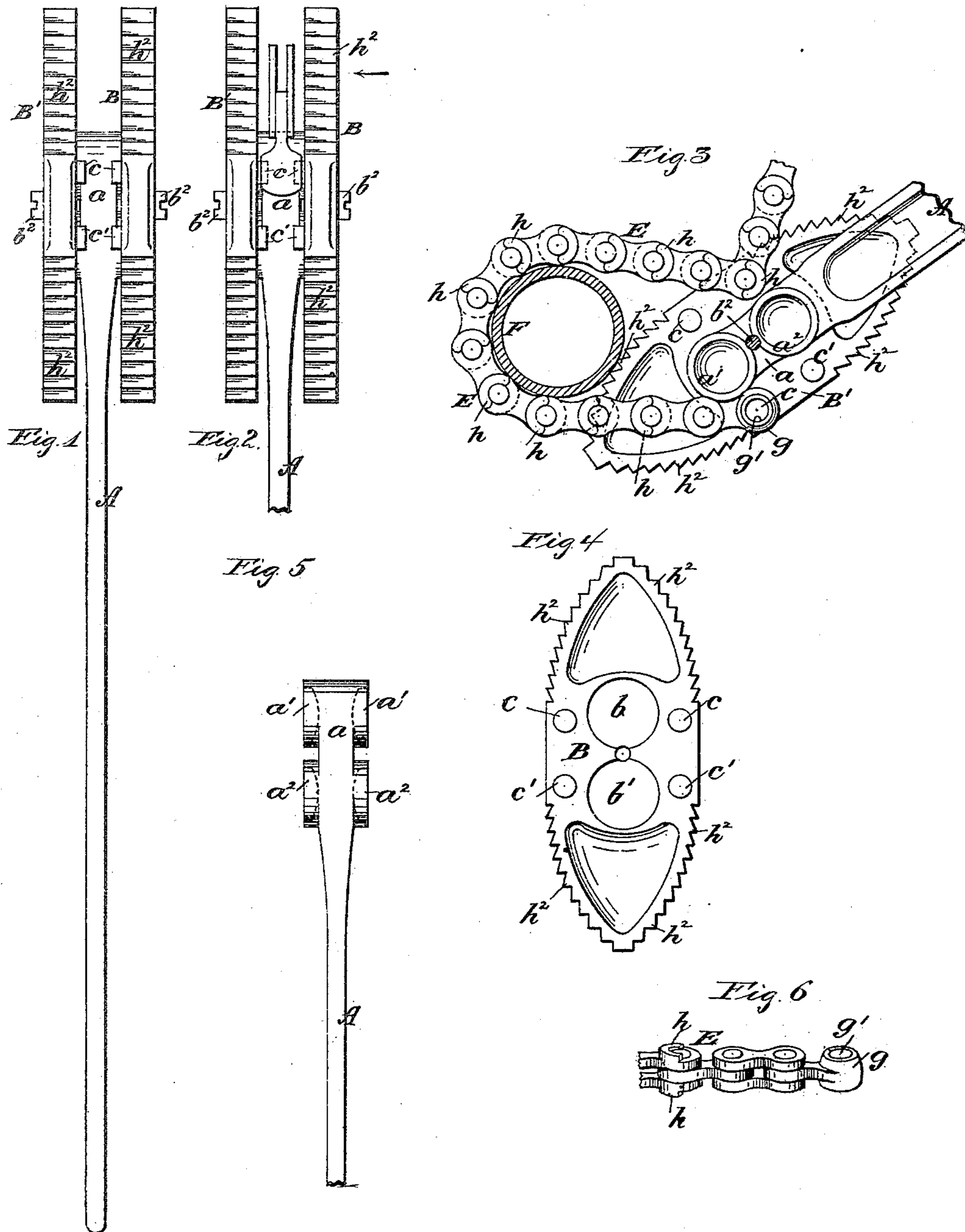


(No Model.)

G. W. BUFFORD.
PIPE TONGS.

No. 442,306.

Patented Dec. 9, 1890.



Witnesses

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PIPE-TONGS.

SPECIFICATION forming part of Letters Patent No. 442,306, dated December 9, 1890.

Application filed February 10, 1890. Serial No. 339,789. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. BUFFORD, of Brooklyn, in the county of Kings and State of New York, have invented a certain new and useful Improvement in Pipe-Tongs, of which the following is a specification.

My improvement relates to that class of pipe-tongs usually called "chain tongs."

I will describe in detail pipe-tongs embodying my improvement, and then point out the novel features in claims.

In the accompanying drawings, Figure 1 is an edge view of pipe-tongs embodying my improvement. Fig. 2 is a similar view, partly broken away to save space and looking at the pipe-tongs at the edge opposite the edge shown in Fig. 1. Fig. 3 is a detail view showing one of the jaws removed from the tongs and looking in the direction of the arrow, Fig. 2. Fig. 4 is a view of one of the jaws detached. Fig. 5 is a view of the handle detached, but partly broken away to save space. Fig. 6 is a detail in perspective, showing a portion of a chain which I may employ.

Similar letters of reference designate corresponding parts in all the figures.

A designates a handle, and *a* the head thereof. In the example of my improvement shown the head *a* of the handle is provided upon opposite sides with lugs or projections *a' a²*. These lugs or projections are cast upon the head *a*, and are preferably cylindrical. The lugs *a'* are opposite each other, as are also the lugs *a²*. I have shown such projections as somewhat cored out near their outer ends in order to save weight of metal.

B B' designate jaws. These jaws are shown as of oval shape. Upon the inner faces of the jaws and near the middle of their length they are provided with recesses *b b'*, which recesses are shown as cylindrical. In placing the jaws upon the handle *A* the projections *a' a²* are caused to extend into the recesses *b b'*. Screws *b²* are then passed through the jaws *B B'* and into the head *a* between the projections *a' a²*. The jaws will thus be secured upon the head firmly and will be prevented by the projections *a' a²*, engaging the recesses *b b'*, from either independent longitudinal or rotary movement. By making the projections *a' a²*

and the recesses *b b'* cylindrical a very extended and consequently firm fulcrum for the tongs is secured. Of course the projections *a' a²* might be upon the jaws *B B'* and the recesses *b b'* be upon the head *a* of the handle. The result would be the same, and I should consider such a mere inversion of the arrangement I have shown. Each of the jaws *B B'* is also provided upon its inner side and near the middle of its length with pins or projections *c c'*, there being two of each upon each of the jaws. The pins or projections *c* will be approximately opposite each other when the jaws are placed upon the head, as will also the pins or projections *c'*. These pins or projections are for the purpose of furnishing anchorages for a chain *E* at one of the ends of the latter, as well as affording a means for securing said chain near its other end after the latter has been placed about a pipe *F*, as shown more clearly in Fig. 3. One end of the chain is shown as provided with a head *g*, in the sides of which are formed recesses *g'*, which recesses are opposite each other. When the chain is to be anchored upon the pipe-tongs, two of the pins or projections *c* upon the jaws *B B'*, or two of the pins *c'*, as the case may be, are passed into the recesses *g'* in the head *g* of the chain. This is of course done prior to the securing of the jaws *B B'* upon the head *a* by means of the screws *b²*. When such securing is accomplished, it will be clear from an examination more particularly of Fig. 2 that the chain will be firmly anchored to the tongs at one of its ends. Of course the head *g* of the chain might be provided upon its sides with pins or projections and the jaws *B B'* be provided with recesses corresponding in position to the pins *c c'*, so that the pins upon the head *g* would be passed into recesses upon the jaws *B B'*, instead of as shown. This I should also consider a mere inversion of the method of anchorage which I have shown.

Any suitable means may be employed for securing the free end portion of the chain to the jaws after the chain has been passed about a pipe and it is desired to operate the tongs to turn the pipe. I have shown, however, a chain so constructed that upon the

outer side of its links and opposite each other will be formed arc-shaped hooks h .

By referring more particularly to Fig. 3 it will be observed that when the chain is brought into proper position the hooks h may be caused to engage one or the other of the pins $c c'$, as desired, or, in fact, with both of said pins. Longitudinal strain is thus borne by the hooks h , acting upon the pins or projections $c c'$, which form part of the jaws.

As previously stated, the jaws $B B'$ are substantially oval-shaped. Beyond the central portion of the jaws, or that portion in which the recesses $b b'$ and pins or projections $c c'$ are arranged, each of the jaws is provided with teeth or serrations h^2 upon both of its edges. They are, therefore, each double-jawed and provided with serrations upon opposite end portions and upon both edges. This construction is very advantageous, for the reason that the life of the tool may be very much prolonged thereby. When the teeth or serrations h^2 upon one of the edges of one of the end portions of the jaws $B B'$ have become worn, the jaws may be removed from the head a and be turned end for end thereon and again secured upon the jaws, which will bring an additional pair of serrated edges h^2 into position for use. When this pair of serrated edges has become worn, the said jaws may be turned over and their positions upon the head a interchanged. This will bring another pair of the serrated edges h^2 into operative position. When this pair of serrated edges has become worn, the jaws may be removed from the head

a and again turned end for end, which will bring the fourth pair of serrated edges h^2 into operative position. Thus it will be seen that by changing the position of the jaws $B B'$, so as to bring new sets of serrated edges into operative position as desired, the life of the tool may be very much prolonged.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In pipe-tongs, the combination of a handle and a pair of serrated jaws located on opposite sides of the handle, the opposite sides of the handle and the face of the jaws adjacent thereto being provided the one with cylindrical projections and the other with cylindrical recesses fitted to receive the projections, means for securing the jaws to the handle, and a chain engaged with the jaws, substantially as set forth.

2. In pipe-tongs, the combination, with a handle and two jaws secured to the handle upon opposite sides thereof, of a chain secured at one end to the jaws, the connection between the chain and the jaws, consisting of a swinging end link, the swinging link and the jaws being provided the one with pivotal projections extending in opposite directions and the other with sockets to receive the pivotal projections, said end link forming at the same time an anchor and a freely-swinging section of the chain, substantially as set forth.

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Witnesses:

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