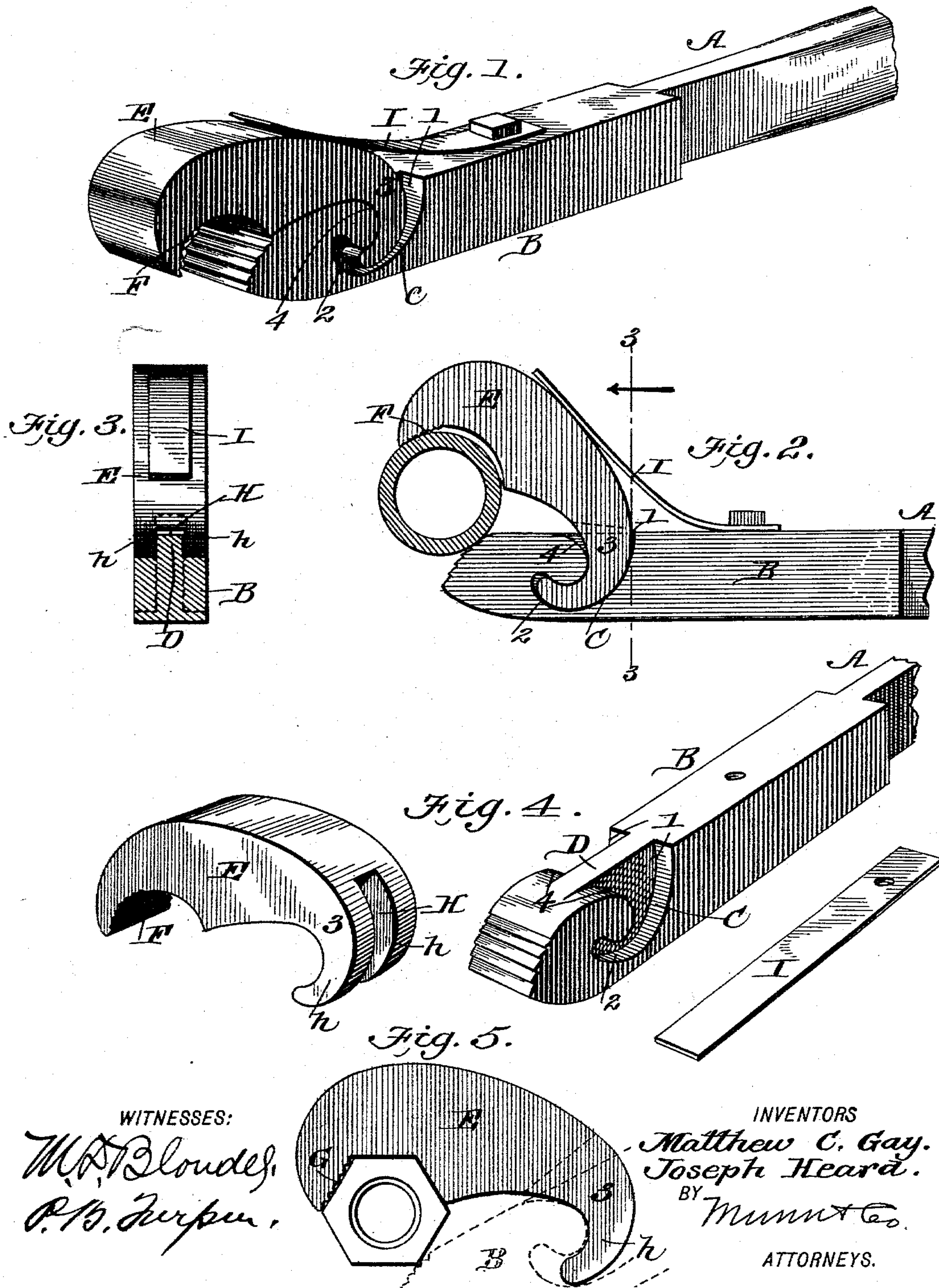


(No Model.)

M. C. GAY & J. HEARD.
WRENCH.

No. 551,311.

Patented Dec. 10, 1895.



WITNESSES:
M. D. Bloude,
P. B. Surpen,

INVENTORS
Matthew C. Gay.
Joseph Heard.
BY *Munn & Co.*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

MATTHEW C. GAY AND JOSEPH HEARD, OF ARCADIA, FLORIDA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 551,311, dated December 10, 1895.

Application filed October 19, 1895. Serial No. 566,198. (No model.)

To all whom it may concern:

Be it known that we, MATTHEW C. GAY and JOSEPH HEARD, of Arcadia, in the county of De Soto and State of Florida, have invented
5 a new and useful Improvement in Wrenches, of which the following is a specification.

This invention is an improvement in wrenches, and has for an object to provide a novel simple construction by which the fixed
10 head and hinged jaw are detachably connected so jaws for pipes or for nuts may be interchangeably used, the connection being so effected that the pivot portions of the hinged jaw are guided and slip longitudinally into
15 their seats and move longitudinally within such seats in the tilting movements of such hinged jaw; and the invention consists in certain novel constructions and combinations of parts, as will be hereinafter described, and
20 pointed out in the claim.

In the drawings, Figure 1 is a perspective view, and Fig. 2 is a side view, partly broken away, of a wrench constructed according to our invention. Fig. 3 is a cross-section on
25 about line 3 3 of Fig. 2. Figs. 4 and 5 are detail views.

The handle A has the fixed head B, which is preferably serrated, as shown, so it may properly engage with either a pipe or a nut.
30 In the opposite sides of this head B we form seats C, curving downward and forward from their open ends 1 toward their opposite ends 2, and these are also tapered or narrowed from their said open ends toward their closed
35 ends, as shown. This tapered formation is important, as it permits the ready insertion of the rear ends of the hinged jaw in applying the same and also provides for the reception within the wide open ends of the seats of the
40 thicker portions of the hinged jaw at 3 when such jaw is spread to fit the wrench to a large nut or pipe. The front walls of the seats C at 4 curve forward until they merge in the top of the head of the wrench, and this construction serves to guide the hinged head both
45 in applying and removing the same. These seats C range on opposite sides of an intermediate rib D and possess several marked characteristics. They curve downward and

forward from their open to their closed ends, 50 are tapered or narrowed from said open ends inward, and have their forward walls returned or curved forward and merged in the top surface of the head. Each of these several features of construction is designed for and efficiently serves its particular purpose, as before
55 described, and co-operates with the hinged jaw in furnishing a simple effective convertible pipe and nut wrench.

The jaw E shown in the figures has its jaw-face F formed to engage a pipe, while that F shown in the figures has its face G formed to engage a nut; but at their rear ends or heels both jaws are alike and are slotted longitudinally at H, forming the legs h, curved toward
60 their ends or heels and gradually tapered thereto, as shown.

On the handle just in rear of the open ends of the seats C is fixed one end of a spring I, which extends forward, with its free end bearing
70 above a point slightly in advance of the open end of said seats, so it will bear upon the rounded back edge of the hinged jaw at about midway between the ends thereof and tend to normally close said jaw, permitting,
75 at the same time, the necessary slight longitudinal rearward movement of the hinged jaw to start the said jaw preparatory to removing the same. In removing and inserting the hinged jaw the rear ends or heels of its
80 legs ride upon the returned or forwardly-curved walls 4 of the seats C and are thus smoothly and accurately guided into and out of engagement with the fixed head.

It is manifest that by the provision of the
85 two hinged jaws, one for the pipe and the other for nuts, we furnish in one tool both a pipe-wrench and a nut-wrench, and one which can be instantly converted from one to the other, the device being at the same time simple,
90 inexpensive and durable.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The improved wrench herein described composed of the handle provided with the fixed
95 head and having in the opposite sides of such head recesses or seats opening out of the top

of the head curving thence downward and forward, gradually tapering or narrowing from their open toward their inner closed ends and having their front walls returned or curved forward and merging in the top of the head, the hinged jaw having at its rear end legs curved and tapered corresponding to said seats and movable at their points or heels along the returned walls thereof into and out of the seats, and the spring held at one end to the handle and arranged at its free end to

bear upon the hinged jaw all substantially as and for the purposes set forth.

MATTHEW C. GAY.
JOSEPH HEARD.

Witnesses to signature of Matthew C. Gay:

R. H. FLETCHER,
GEO. H. BUNKER.

Witnesses to signature of Joseph Heard:

J. J. TURNER,
G. W. BOSTICK.