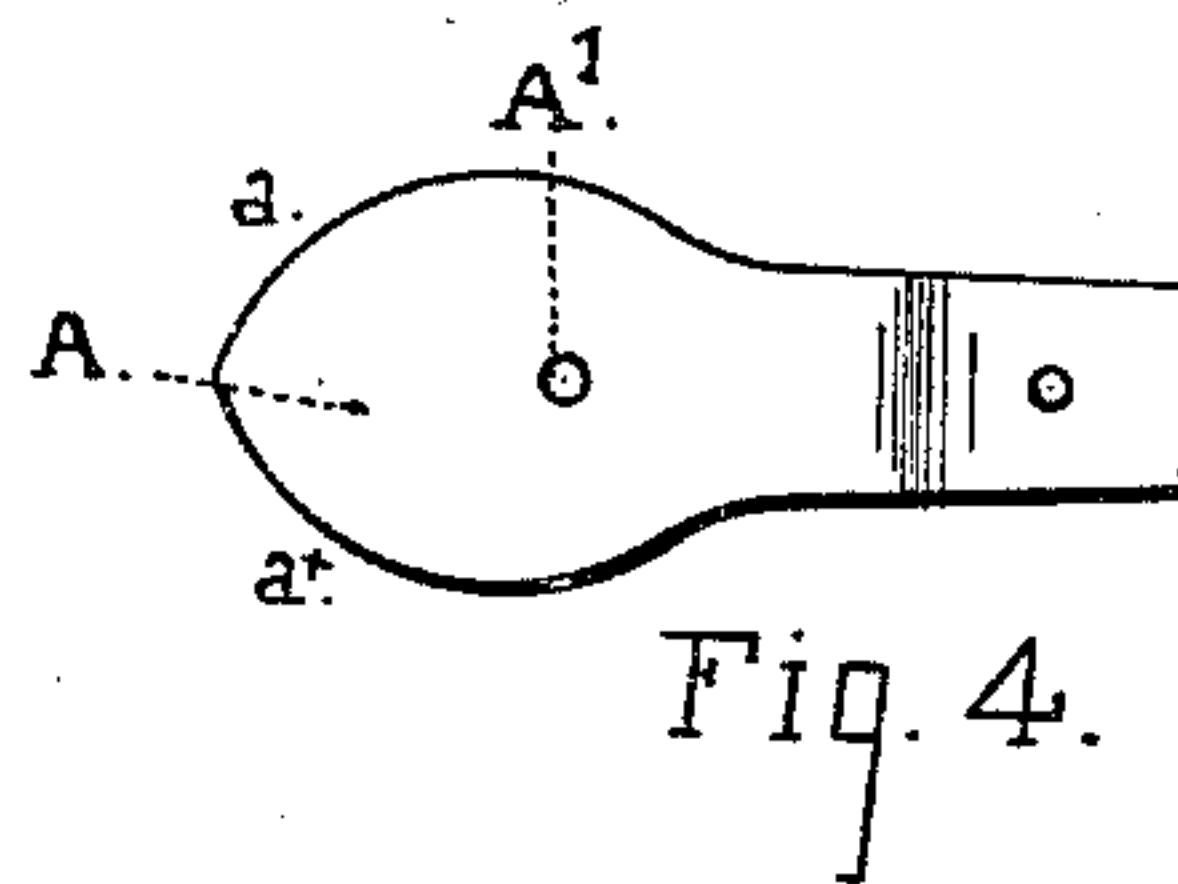
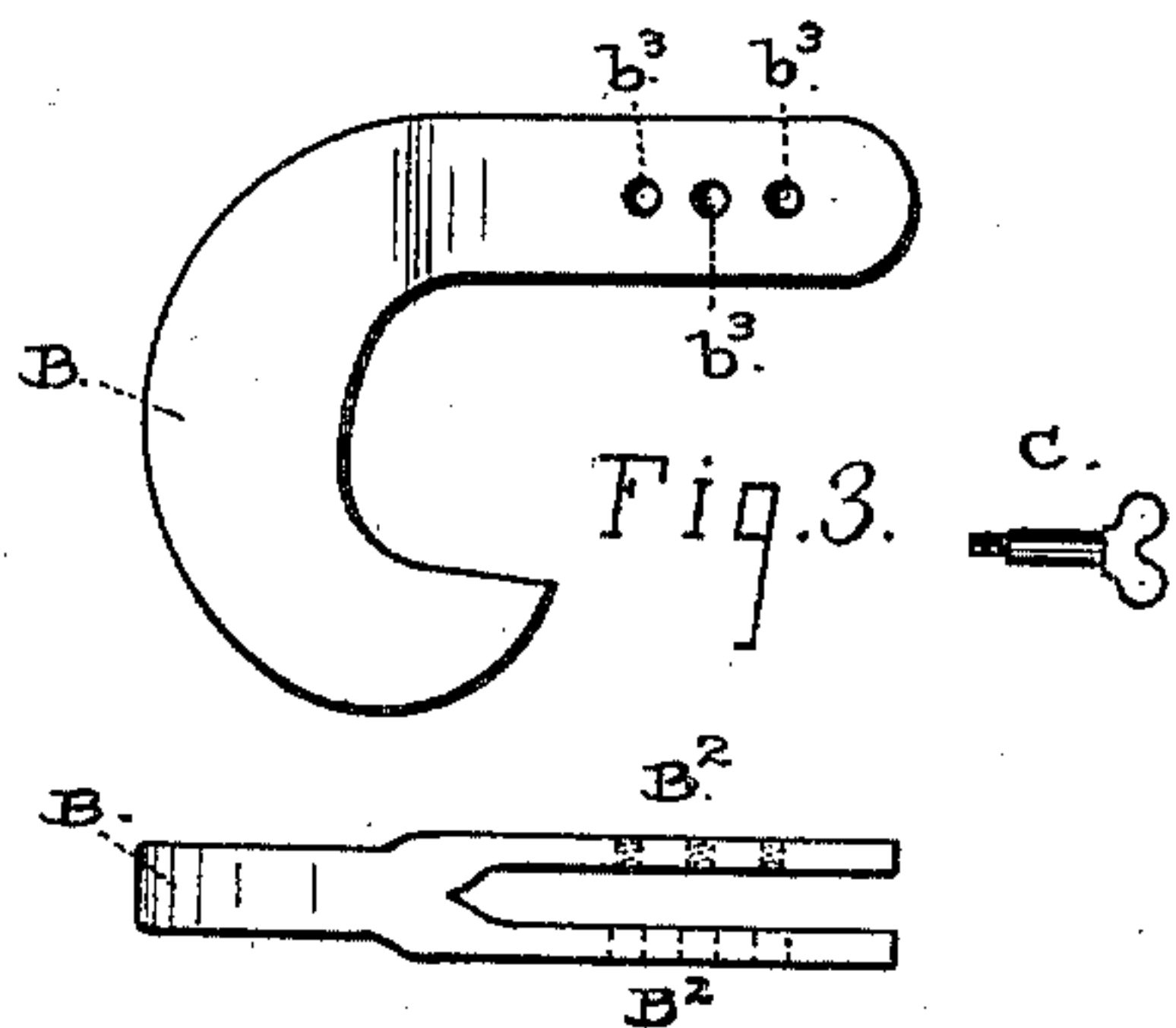
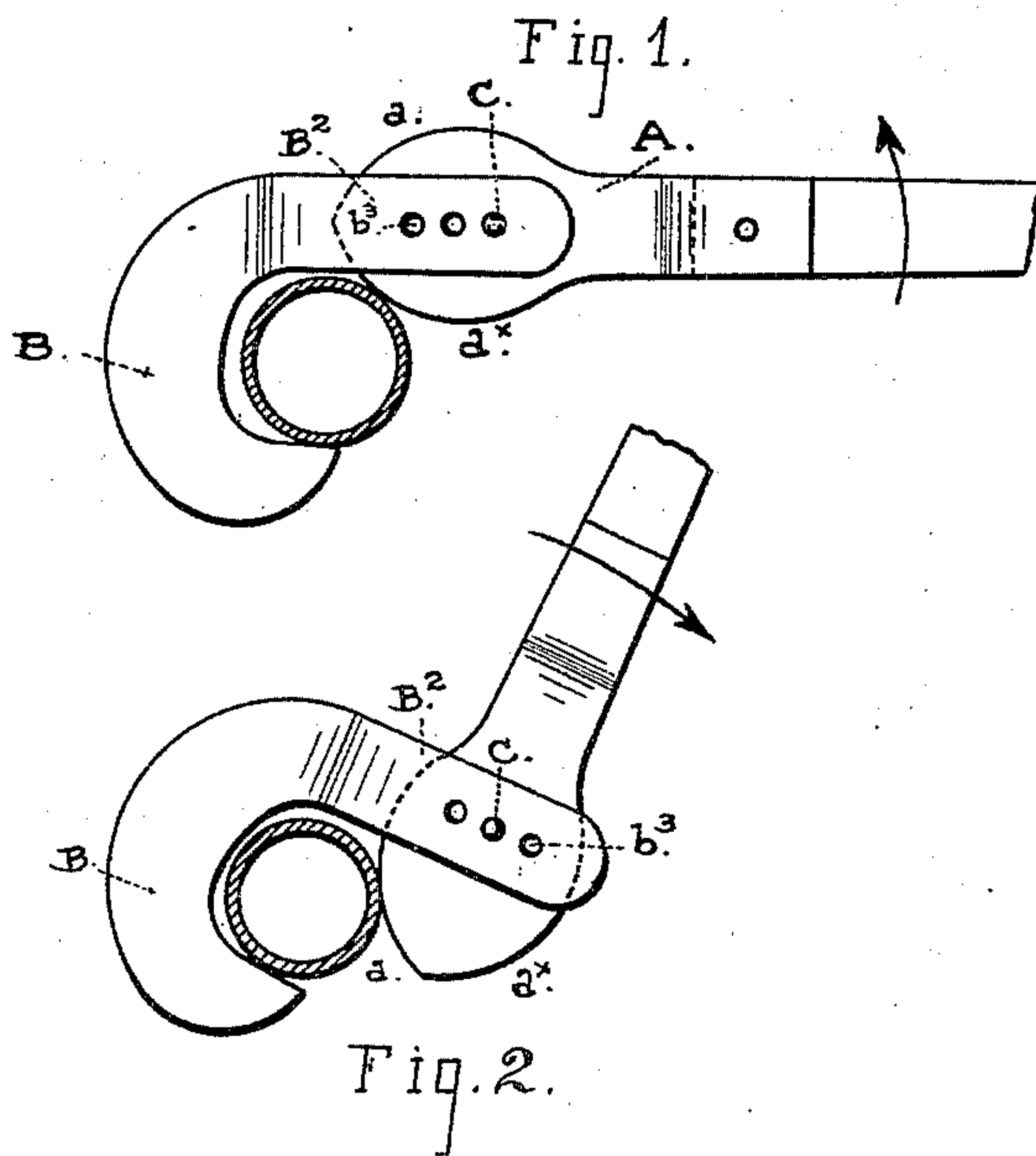


(No Model.)

C. V. GREENAMYER.
PIVOTED JAW WRENCH.

No. 444,777.

Patented Jan. 13, 1891.



Witnesses:

Wm. Mayer
E. K. Kach

Inventor:

Clarence V. Greenamyre
By Smith & Saborn
his atty.

UNITED STATES PATENT OFFICE.

CLARENCE V. GREENAMYER, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR
TO THE VERNER WRENCH CAR MOVER AND POWER MANUFACTURING
COMPANY, OF SAME PLACE.

PIVOTED-JAW WRENCH.

SPECIFICATION forming part of Letters Patent No. 444,777, dated January 13, 1891.

Application filed August 7, 1890. Serial No. 361,374. (No model.)

To all whom it may concern:

Be it known that I, CLARENCE V. GREENAMYER, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented certain new and useful Improvements in Adjustable Wrenches, of which the following is a specification.

My invention relates to an improved wrench or implement for gripping and turning screw-
rods, shafting, pipe-couplings, nuts, and similar work; and it has for its object to provide a simple and efficient implement that will afford a firm grip upon the work, that has capacity of adjustment for different sizes of work, is readily applied, and will not cut or mar the surface which it grasps, and which can be made to grasp a pipe upon either face of the double cam of the wrench and turn it in either direction without changing the hook, but only by swinging the cam upon its pivot. These valuable features and qualities are secured by means of the construction herein described, and illustrated in the accompanying drawings.

Figure 1 of the drawings represents the implement applied to a pipe-coupling for turning it in one direction, and Fig. 2 shows it in reverse position for turning the piece in the opposite direction. Figs. 3 and 4 represent the parts separated.

In its general character and principle of operation this invention follows the implement heretofore invented by me, upon which Letters Patent of the United States No. 329,642 were granted and issued on the 3d day of November, 1885; but it will be seen to differ from that device in possessing certain features of adjustability, whereby it is made capable of properly seizing and firmly grasping pieces of work of different sizes. It is therefore of much greater scope and usefulness than the patented device above mentioned, and is not restricted to specific work.

The novel point or feature of the present invention consists of a wrench or implement having one jaw or part formed with double smooth curved faces and the other jaw or part of a swinging hook that is pivoted to

the double-face part at a point eccentric to but equidistant from both faces, and is adjustable on said pivot to vary the space between the said gripping parts—that is, the curved faces and the hook—the working edges or faces of the parts being finished smoothly.

A indicates the part with double curved faces $a a^x$, regularly converging and meeting together in a more or less acute point, and B the swinging hook. The part A is fixed on the end of a handle of suitable length, or is formed in one piece with a handle. The faces $a a^x$ are smooth toothless surfaces, which will grip the pipe without cutting or marring it.

C is a pivot by which the hook is attached to the other part. The hole A' for the pivot is located in the longitudinal center line of the part A at a point which is eccentric to each curved face $a a^x$, and the shank B² of the hook is split to take over the part A and swing clear of the point, so that it may be brought into working position with either one of the curved faces by simply swinging the cam in the hook and without changing or shifting the hook, and the same adjustment will serve when gripping with either face upon the same-sized pipe, as both smooth rounded faces of the cam are equidistant from the pivot at any point of adjustment, as will be evident from the fact that the holes b^3 and A' are in the center line of cam, handle, and shank.

By varying the length of the hook-jaw from its pivot C outward the tool is adapted to properly seize and hold without slip pieces of different sizes with considerable range of sizes, and for this purpose the shank of the hook is provided with a number of spaced pivot-holes b^3 , so that by shifting the pin C from one hole in the shank to another the jaws are readily set farther apart or closer together, as may be required. This is a simple and ready mode of adjusting the hook part to the double-face part of the tool. I do not confine myself to this particular mode of changing the length of the swinging hook, however, as the desired adjustment could be provided for in various ways; but I employ the pin and spaced holes in the hook part as

having the features of strength and simplicity, which are the essential ones in a tool of this character.

As thus constructed my improved wrench
5 has considerable scope and capacity, and especially it will be found to have the advantages before mentioned, of affording a firm grip of the work and not defacing the surfaces upon which it takes hold.

10 Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a pipe-wrench, the combination of a handle portion provided with a head having
15 smooth toothless cam-gripping faces a a^x and

a swinging hook pivoted on said head, whereby a pipe is held without being cut or marred by the wrench, as set forth.

2. The combination of a handle portion having a double cam-faced head, with a swinging hook having a bifurcated shank adjust- 20 ably pivoted to the head, the pivot in all points of adjustment being equidistant from the cam-faces, as set forth.

In testimony that I claim the foregoing I 25 have hereunto set my hand and seal.

CLARENCE V. GREENAMYER. [L.S.]

Witnesses:

EDWARD E. OSBORN,
H. J. LANG.