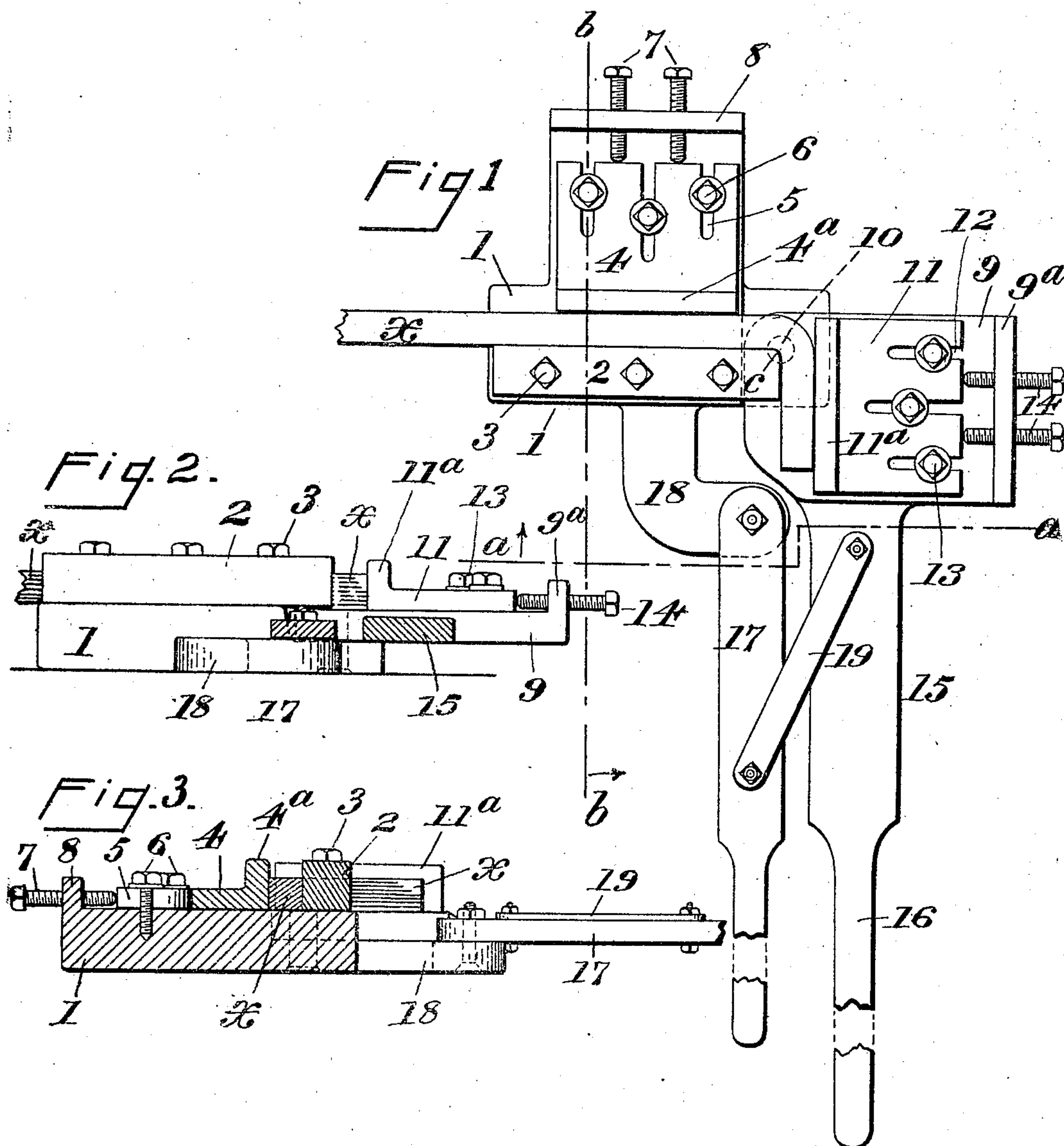


No. 896,207.

PATENTED AUG. 18, 1908.

L. P. HAZEN.
METAL BENDING TOOL.
APPLICATION FILED DEC. 21, 1906.



ATTEST.
Homer Bradford
M. L. Derrman

INVENTOR.
L. P. Hazen,
by John Elias Jones,
his attorney.

UNITED STATES PATENT OFFICE.

LEVI P. HAZEN, OF CINCINNATI, OHIO.

METAL-BENDING TOOL.

No. 896,207.

Specification of Letters Patent.

Patented Aug. 18, 1908.

Application filed December 21, 1906. Serial No. 348,842.

To all whom it may concern:

Be it known that I, LEVI P. HAZEN, a citizen of the United States of America, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Metal-Bending Tools, of which the following is a specification.

This invention relates to devices for bending metal bars or the like, and it consists in the provision of a base, a shaping-block or head on said base, a block movably mounted on said base to form, with said shaping-block, a pair of jaws for holding the metal to be bent, a block pivotally-mounted on said base adjacent the said jaws, a block movably-mounted on said pivotal-block and forming a carrying or forcing jaw for the portion of the metal to be bent, and a suitable lever mechanism mounted on said pivotal-block whereby the latter is manipulated in the bending operation.

Other features of the invention will be referred to in the description of the accompanying drawings, in which,

Figure 1 is a plan view showing my invention in which a pair of levers are used, the bending-jaw being shown at the close of a bending-stroke in connection with a piece of metal that is held in the clamping-jaws; Fig. 2, a transverse section taken on the dotted-line *a, a*, of Fig. 1; and Fig. 3, a cross-section taken on the dotted-line *b, b*, of Fig. 1.

In these views, 1 indicates the base-block having a flat upper surface and of irregular, but of any suitable shape in outline to conveniently, firmly, substantially and economically support the working parts of the device that I will now describe.

2 indicates an elongated bar forming a shaping-block and rigidly attached to the upper face of the base-block by means of screws 3. Block 2 has a rounded inner corner *c*, around which the bars to be bent are shaped, the inner portion of the bend in the bar taking around this rounded corner for facilitating the operation.

4 indicates a metal block having a series of open slots 5 made therein and adjustably secured to the base-block by means of screws 6 passing through said slots 5. The fore end 4^a of the block 4 is upturned or flanged to form a jaw-edge parallel to the inner face of the shaping-block 2, the space between the fore edge of block 4 and the inner edge of the block 2 being adapted to receive the metal

bars to be bent and said shaping-block and block 4 forming a clamping-jaw to securely hold the metal in place for bending.

7, 7, indicate a pair of set-screws in the upturned portion 8 at the rear edge of the base 1, for use in setting up the jaw-block 4 toward the shaping-block 2 to suit the width or thickness of the metal to be held or placed between the jaws for bending. The screws 6 are loosed when it is desired to adjust the clamping-block 4 on the base, and the screws 7 serve not only in adjusting the block 4 toward the block 2, but form a firm back-stop for said block 4 to obviate any undue strain on the screws 6 when the device is being operated.

9 indicates a swinging-block, pivoted at 10 to the upper face of base 1 and provided with a plate 11 having a series of parallel open slots 12 through which pass screws 13 whereby the plate 11 is adjustably mounted on the block 9 similar to block or plate 4 on the base 1.

11^a is an upturned flange at the inner end of plate 11, similar to the flange 4^a on the plate 4 and serving to increase the jaw-surface to suit the various widths of material placed in the device for bending.

9^a is an upturned flange on the swinging-block 9, at its rear end, screws 14 being provided therein, similar to screws 7 in the flange 8 of the base 1, for use in forwardly-adjusting and back-stopping the movable-plate 11 to suit the width of material to be bent.

15 represents a lever projecting from one side of the swinging-block 9 and provided with a suitable narrow grip or handle 16 for manipulating said swinging-block on its pivot 10 to and from contiguous-contact with the rearward part of base 1 that carries the jaw-block on plate 4.

17 is an auxiliary lever pivotally connected at one end with an angular arm 18 projecting from the fore end of the base 1 and coupled to said lever 15 by means of a link 19 so that they may operate in unison when using both hands in exerting the desired power to operate the device especially on thick or heavy metal bars, such as is shown at *x* in Figs. 1, 2 and 3.

In operation, the lever 15 is extended laterally so that the straight bar of metal to be bent can rest in the space between the jaws formed by the blocks 2 and 4 and the part to be bent extending outwardly and laterally

beyond the rounded edge or corner *c* of the block 2. The lever 15 is then drawn toward the person, carrying with it the swinging-block 9 carrying the jaw 11, the latter carrying with it the end of the metal to be bent. The result of the bending operation is shown in Fig. 1 and it is obvious that, instead of making a right-angled bend as shown, the swinging-jaw could be brought forward a lesser distance to suit the angle at which it is desired the metal is to be bent.

One of the most important objects in the use of the device is to prepare reinforcing rods or bars for use in concrete work, where many bends of different degrees are desired and necessary and which heretofore have been made by heating the bars and bending them by hammering over anvils and shaping-blocks, which has been a very slow and expensive method and the heating of the metal weakening the same at the bending point.

In the use of my device the metal is bent cold and thus no material weakening thereof at the bending point results and no skilled labor is required in handling the device such as is necessary when the metal is heated and hammered.

I claim:—

A device of the character described, comprising a base-block, a shaping-block or jaw-member, a movable jaw-member adjacent said shaping-member, a swinging-member mounted on said base to coact with one end of said shaping-member, a hand-lever on said swinging-member, a hand-lever on the base-block and a link connecting both said levers to act in unison.

LEVI P. HAZEN.

Witnesses:

JOHN ELIAS JONES,
NORMA KEISER.