Nov. 30, 1926. 1,609,103

S. S. BALDWIN

WORK HOLDER

Filed Oct. 5, 1925

FIG. 1

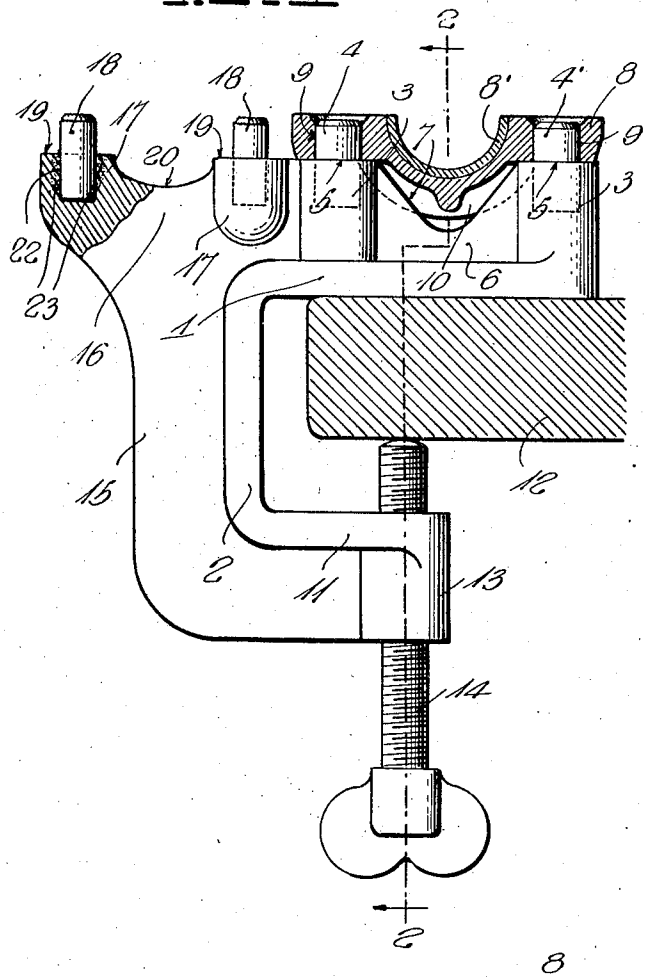
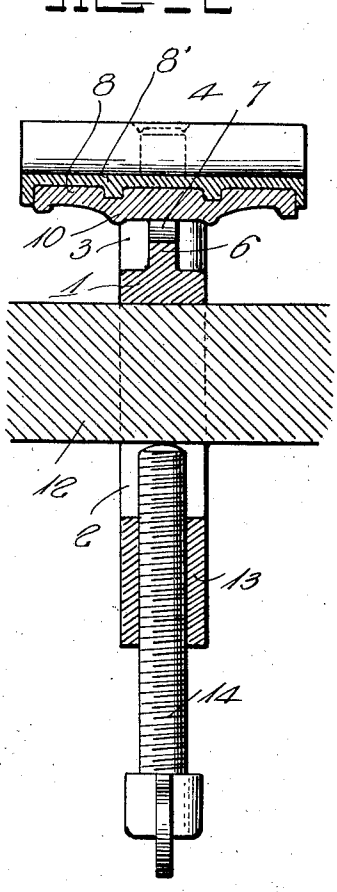


FIG. 2



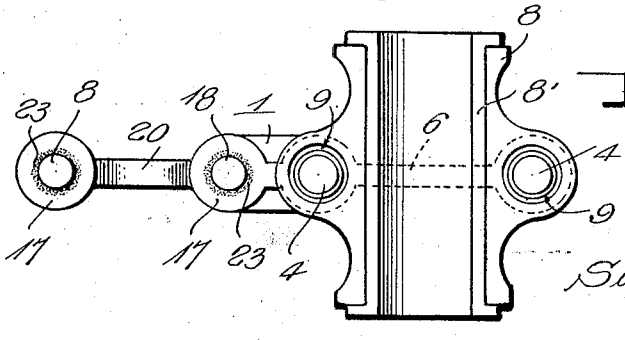


FIG. 3

INVENTOR.
Simeon S. Baldwin,
BY
A. A. Hines, ATTORNEY

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UNITED STATES PATENT OFFICE.

SIMEON S. BALDWIN, OF KEWANEE, ILLINOIS.

WORK HOLDER.

Application filed October 5, 1925. Serial No. 60,527.

This invention relates to work-holders, and particularly to a device for holding the main or connecting rod bearing sections of automobile or other similar motors during the operation of filing cap, babbitting, or scraping the Babbitt metal bearing linings for the removal of high spots, etc.

The main object of the invention is to provide a device of this character which is simple of construction, adapted to hold the bearing section in a firm and secure manner while it is being worked upon, and which is applicable to any convenient support, such as a work bench, a work table, the running board of an automobile, or any other like support.

A further object of the invention is to provide a holder which may be employed for holding either a main bearing section or connecting rod bearing section, or both, while work is being performed thereon.

The invention consists of the features of construction, combination and arrangement of parts, hereinafter fully described and claimed, reference being had to the accompanying drawing, in which:—

Figure 1 is a view partly in section and partly in elevation showing the application of the invention to a work bench or the like.

Figure 2 is a transverse section taken substantially on the line 2—2 of Figure 1.

Figure 3 is a top plan view of the device with a bearing section held thereon.

The holder comprises a bar 1 fixed at one end to an upright 2 and having formed thereon a pair of spaced upstanding bosses 3 provided with work holding pins or projections 4. These pins or projections 4 are of less diameter than the top surfaces of the bosses, whereby said top surfaces of the bosses form supporting seats 5. A web 6 extends between the bosses and is provided in its upper edge with a cutout space or recess 7.

The parts 3 and 4 are adapted, in the example shown, to receive and support a main bearing section 8 provided with the lining 8′, of Babbitt metal or the like, which is to be trued or shaped. The ends of the outer surface of this bearing are adapted to be received upon the seat faces 5, and the pins or projections 4 are properly spaced to engage the bolt receiving openings 9 in such ends of the bearing, whereby the bearing will be supported in position. These pins are of less length than the depth of the openings 9, so that they will be countersunk, leaving the abutment faces or lining clear and free from obstructions for ready and convenient performance of the work thereon. The center of the outer face of the bearing is adapted to be received in the space or recess 7 of the web 6. Usually such bearings are provided with reinforcing ribs 10 at opposite sides of the center of the outer face thereof. The arrangement of the web 6 provides spaces on opposite sides of and between the bosses 3 in which these ribs 10 are received. The ribs are thus disposed on opposite sides of the center of the holder, permitting contact between the same and the sides of the bosses 3, so that in the event of any play, due to wear, between the pins 4 and the openings 9, the bearing will be held from lateral tilting or canting motion on the holder while the lining or outer surface is being worked upon. It will be observed that the bearing will be held by the holder so as to expose the abutment faces of the bearing so that they may be filed or dressed for accurate fit against its companion bearing member, and also to fully expose the lining 8′ in order that the same may be easily scraped or trimmed for a fitting operation.

Arranged below the bar 1 is a bar 11, parallel therewith, and which is carried by the upright 2. The upright 2 connects the bars 1 and 11 at one end, the bar 11 being somewhat shorter than the bar 1, and the bar 1 serving as a main support to rest upon the surface of the top of a work bench or table 12, the running board of an automobile, or other similar support. The bar 1 is provided with an internally threaded eye or boss 13 receiving a clamping screw 14, the bars 1 and 11 and screw 14 forming the three members of a clamp, whereby the device may be firmly secured in position in the manner shown in Figures 1 and 2.

The device may be constructed with a single set of pins of the character described, of proper size and properly spaced to support a main bearing. In the present instance I have also shown the tool constructed to hold a smaller connecting rod bearing section. The tool is provided for this purpose with a web or extension 15 reinforcing the parts 1, 2 and 11 and including an extension support 16 on which are formed spaced bosses 17 carrying pins 18, the upper surfaces of the bosses forming seat faces 19 and

the support 16 between said bosses being provided with a cutout space or recess 20 serving the same function as the cutout 7 of the main rod bearing support. The pins 18 are of proper diameter and arrangement for engagement with the openings in the ends of a connecting rod bearing or the like, so that by the construction disclosed a holder is provided for supporting either a main rod bearing section or a connecting rod bearing section for separate operations at different times or for supporting both bearings at one and the same time. The frame structure of the device comprising the bars, bosses, etc., may be conveniently formed of aluminum, steel or cast iron or other metal and the pins 4 and 18 of steel or other hard metal, in which event each pin is shown entering a recess 22 in the boss and held therein by swaging or suitably compressing the metal of the boss about it, as at 23, whereby the pin will be firmly held in position and against any possibility of displacement.

The operation of the device will be readily understood from the foregoing description, and it will be seen that it provides a device which is simple of construction and which enables the bearing section to be held in position while being worked upon in a firm and stable manner. Other advantages will be apparent to those versed in the art without a further and extended description.

Having thus fully described my invention, I claim:—

1. A work holder comprising a top bar, a bottom bar spaced from and extending parallel with the top bar, a connection arranged substantially at right angles to and rigidly uniting said bars at one end, a clamping device carried by the bottom bar for clamping coaction with the top bar, a pair of spaced work supporting seats carried by the top bar, and a work engaging pin carried by each work supporting seat, said pins being of reduced diameter with respect to the work supporting surfaces of the seats.

2. A work holder comprising a top bar, supporting members carried by the top bar, holding pins carried by said supporting members, a bottom bar, an extension integral with said bars, a second pair of supports carried by said extension and provided with holding pins, and a clamping device carried by the second-named bar for clamping coaction with the first-named bar.

In testimony whereof I affix my signature.

SIMEON S. BALDWIN.