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A. P. WITTEMAN.

CRANK SHAFT SUPPORT.

APPLICATION FILED MAY 9, 1912.

1,080,797.

Patented Dec. 9, 1913.

Fig. 1.

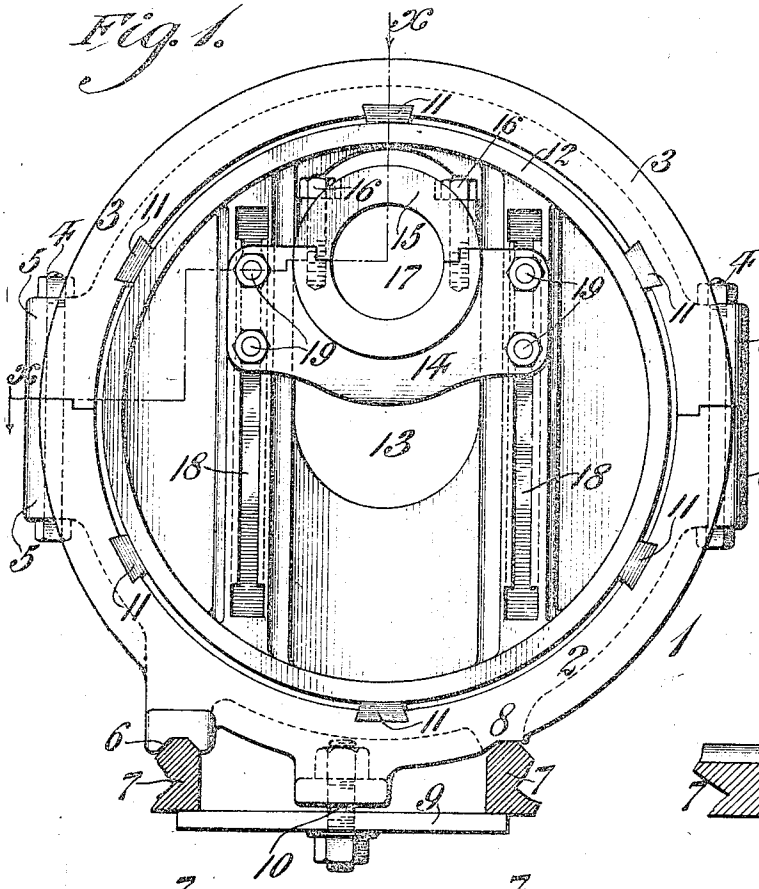
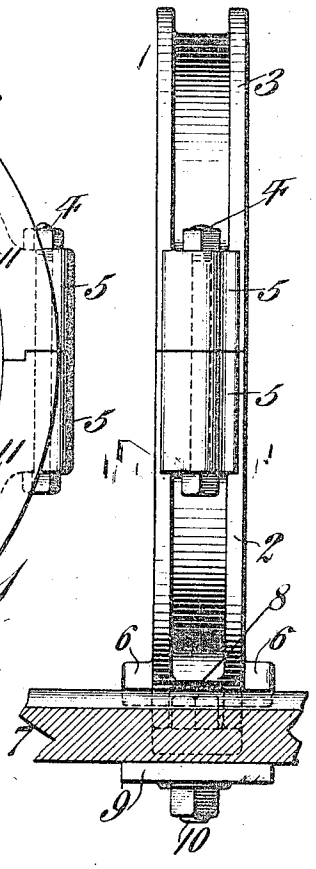



Fig. 2.



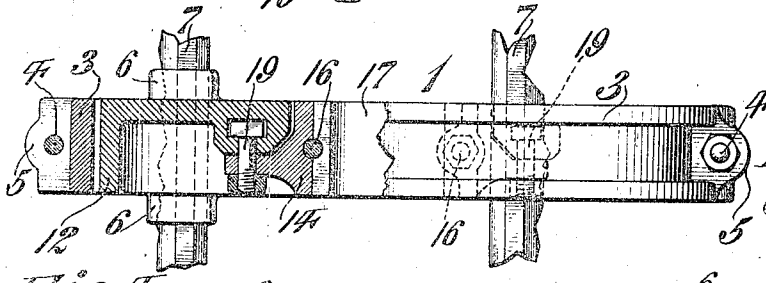




Fig. 3.

Fig. 4.

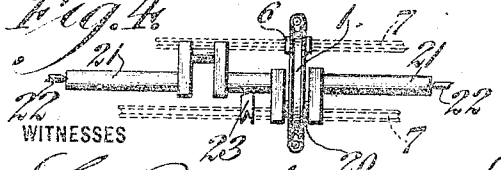
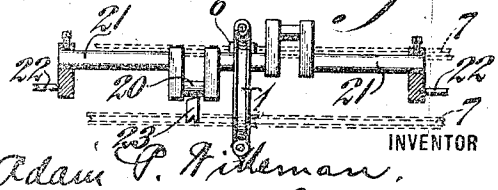



Fig. 5.




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## CRANK-SHAFT SUPPORT.

1,080,797. Specification of Letters Patent. Patented Dec. 9, 1913.

Application filed May 9, 1912. Serial No. 696,055.

*To all whom it may concern:*

Be it known that I, ADAM P. WITTEMAN, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Crank-Shaft Support, of which the following is a specification.

This invention relates to machine rests and more particularly to a rest adapted to support a crank shaft or the like, while being machined and finished, and has for an object to provide a suitable support adapted to be positioned intermediate the centers of a lathe for holding a piece of stock rigidly whereby heavy cuts may be made without springing the stock and without chattering of the tool in operation.

It has for a further object to provide a rest adapted to support an eccentrically rotating part during a machining operation and has particular reference to the finishing of the journals and crank pins of a crank shaft.

It further consists of other novel features of construction, all as will be hereinafter fully set forth.

For the purpose of illustrating my invention, I have shown in the accompanying drawing one form thereof which is at present preferred by me, since the same has been found in practice to give satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized and that my invention is not limited to the precise arrangement and organization of these instrumentalities as herein shown and described.

Figure 1 represents a side elevation of a rest embodying my invention. Fig. 2 represents an end elevation of the same. Fig. 3 represents a section on line $x$—$x$ of Fig. 1. Fig. 4 represents the device as applied to a crank shaft in the operation of turning the journal. Fig. 5 represents the device as applied to a crank shaft in the operation of turning the crank pins.

1 designates generally the frame or main supporting member of my novel device, and in the present instance, the same is formed of a base section 2, and a cap section 3, secured together by means of the clamping bolts 4 passing through suitable lugs 5 of the respective sections 2 and 3. The base section 2 is preferably provided with a transverse groove or seat 6 adapted to conform to and rest upon one of the ways 7 of a machine lathe, while 8 designates a shoulder or abutment adapted to rest upon the opposite way 7, the frame in this way being suitably supported upon the two ways, as will be apparent.

In order to maintain the frame fixedly seated upon the ways 7, I preferably provide a plate 9, adapted to pass beneath the two ways 7, and secured by means of an ordinary type of bolt fastening 10 to the base section 2 of the frame, this construction permitting the frame to be adjusted longitudinally of the ways and properly positioned with respect to the work or stock, which it is to support.

11 designates wear blocks seated at suitable spaced intervals on the inner face of the frame 1, said inner face, as will be noted, being preferably circular and adapted to receive a disk 12 mounted for rotation with the said frame and having bearing on the said wear blocks. The disk 12 is provided with a transverse opening 13 for the purpose of receiving a block 14 having a cap 15 secured thereto by means of the bolts 16 or like fastening devices, the said parts 14 and 15 being suitably bored to form in assembled position a clamp 17 which is adapted to receive and support the stock being machined. The block 14 is adjustably mounted with respect to the opening 13, said adjustment being effected by the provision of transverse undercut slots 18 in the disk 12 and arranged in parallel relation and adapted to receive the bolts 19 of the block 14. In the present instance, the undercut slots 18 are substantially T-shaped to permit sliding movement of the bolts and to provide for proper clamping action whereby the block 14 is fixed in any desired position.

In the operation of the device, the frame 1 is fixedly secured to the guide ways 7 of a lathe or the like through the medium of the plate 9 and the clamping bolt 10 and the part to be machined is then inserted and clamped within the clamp 17 by action of the block 14 and cap 15. The block 14 is now adjusted with respect to the disk 12 so as to allow the parts to rotate eccentrically with the stock, whereby a rigid means of support is provided which prevents springing of the shaft or like article being machined.

In Fig. 4, I have shown the device engaging the crank pin 20 of a crankshaft, the

journals 21 of which are supported on the centers 22 in the process of finishing by means of the tool 23. In Fig. 5 the device is mounted to support the journals 21 and the crank pin 20 is being machined by the said tool 23.

It will now be apparent that I have devised a complete unitary structure, simple in construction, well adapted for the purpose intended, whereby a moving part may be supported intermediate its centers in order to prevent flexing or springing of the said parts and also eliminate chattering of the tool.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

In a device of the character stated, an annular sectional bearing frame adapted to be fixedly secured to the ways of a lathe, wear blocks disposed at suitable intervals about the inner periphery of said frame, a disk journaled to rotate on said blocks as bearings, said disk having a radial opening and provided with an undercut slot at each side of said opening and parallel to the walls forming said opening, a block located in said radial opening, clamping devices slidably mounted in said slots and connecting with said block to adjust the radial position of said block, a cap for said block, and clamping means for said block and cap, whereby a part is fixedly secured between said cap and block.

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