(No Model.)

A. H. DICK.

GRINDSTONE TOOL HOLDER.

No. 422,743. Patented Mar. 4, 1890.

Fig: 1.

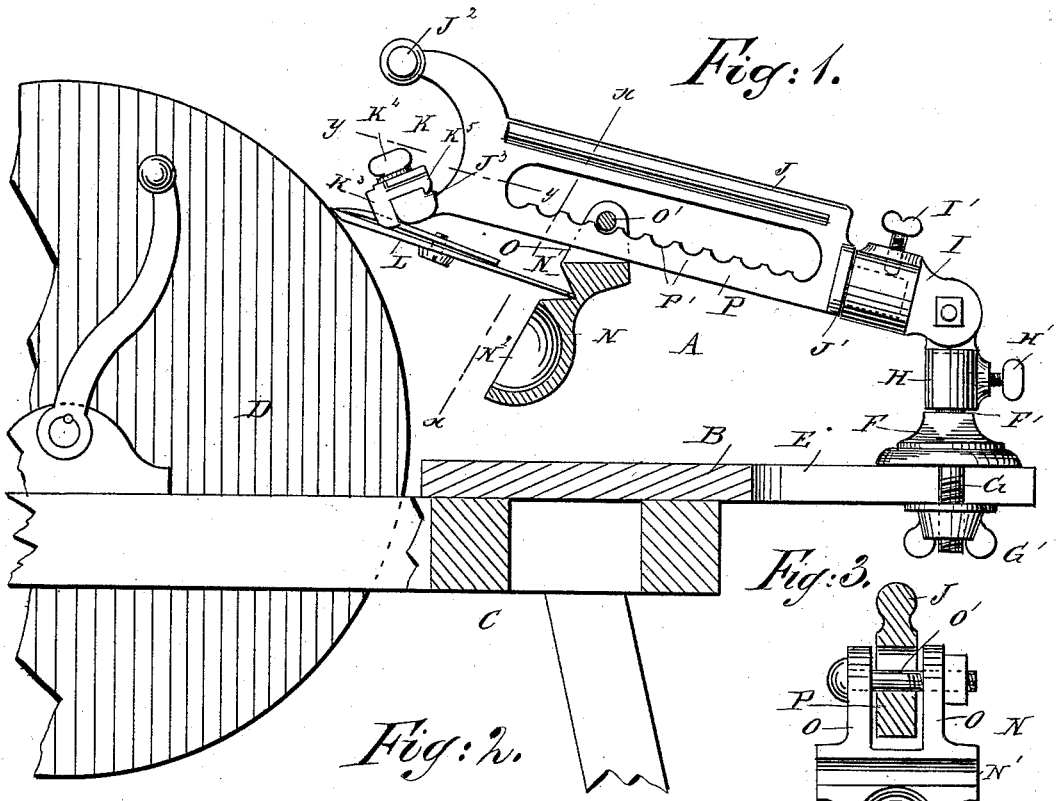


Fig: 3.

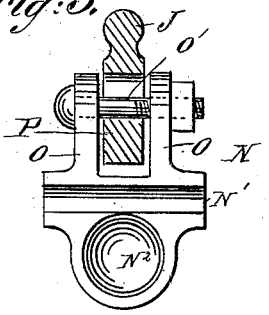


Fig: 2.

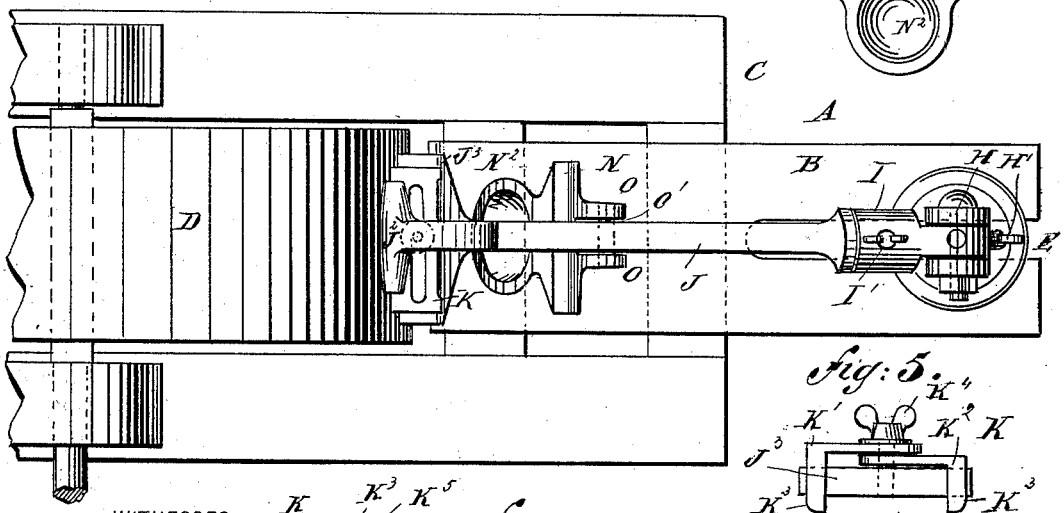
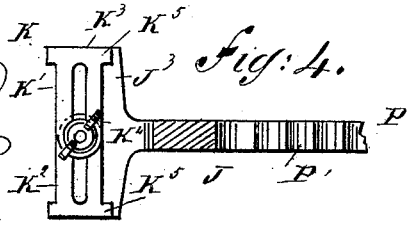


Fig: 5.

Fig: 4.



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GRINDSTONE TOOL-HOLDER.

SPECIFICATION forming part of Letters Patent No. 422,743, dated March 4, 1890.

Application filed November 23, 1889. Serial No. 331,352. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER H. DICK, of Cramer's Hill, in the county of Camden and State of New Jersey, have invented a new and Improved Grindstone Tool-Holder, of which the following is a full, clear, and exact description.

The invention relates to grindstone tool-holders such as shown and described in the United States Letters Patent No. 411,217, granted to me September 17, 1889.

The object of the present invention is to provide a new and improved grindstone tool-holder which is simple and durable in construction, permits of grinding any desired bevel on the tool, and allows of moving the tool transversely across the periphery of the stone, so that the former can be ground conveniently.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement as applied and with parts in section. Fig. 2 is a plan view of the same. Fig. 3 is a transverse section of part of the improvement on the line *x x* of Fig. 1. Fig. 4 is a sectional plan view of part of the improvement on the line *y y* of Fig. 1, and Fig. 5 is an end elevation of the tool-clamp.

The improved tool-holder A is provided with a bed-plate B, secured by screws, nails, or other means on one end of the grindstone-frame C, supporting in the usual manner the grindstone D. The bed-plate B is provided in its outer end with a slot E, and it supports the post F, provided with a downwardly-extending screw-rod G, passing through said slot E, and on which screws a nut G', screwing against the under side of the bed-plate B, to clamp the post F in any desired position on the outer end of the bed-plate B. The post F is provided with the upwardly-extending pin F', on which is mounted to turn a sleeve H, adapted to be secured in any desired position on the said pin F' by a set-screw H'. The upper end of the sleeve H is preferably connected with a second sleeve I, in which is fitted to turn a pin J' of an arm J, supporting on its front end a tool-clamp K, for holding the tool-blade L in place and to the grindstone D. The pin J' of the arm J can be secured in place in the sleeve I by means of a set-screw I', screwing in the said sleeve.

The clamp K is provided with two clamping-arms K' and K^2, each provided on its outer end with a downwardly-extending flange K^3, between which flanges the tool-blade L is placed, the back of the tool-blade resting against the under side of the transversely-extending bar J^3, formed on the arm J and carrying the clamping-arms K' and K^2. Each of the latter is provided with a transversely-extending slot, through which passes the bolt K^4, for clamping the clamping-arms K' and K^2 in position on the bar J^3 after the tool-blade L is placed between the flanges K^3 of the said arms. Each of the arms K' and K^2 is provided on its rear end with a downwardly-extending lug K^5, engaging a correspondingly-shaped groove at the rear of the transversely-extending bar J^3, so as to hold the said clamping-arms K' and K^2 in place on the bar.

The handle end of the tool-blade L is supported on a support N, provided on its upper end with lugs O, forming a fork, through which passes a bar P, provided on its top with a series of notches P' and secured to the under side of the arm J. The notches P' are adapted to be engaged by a transversely-extending pin O', secured to the lugs O of the said support N. By lifting the latter it can be moved forward or backward on the said bar P and dropped with its pin O' in any one of the notches P' in the said bar, according to the length of the tool held by the clamp K. The support N is provided in its front with a transversely-extending notch N', adapted to receive the back end of the tool-blade, and is also provided with a spherical recess N^2, adapted to receive the handle end of the tool, if the latter is provided with a handle.

On the free end of the arm J is held a transversely-extending handle J^2, for conveniently moving the arm J up or down or sidewise when grinding the tool-blade.

The device is used as follows: The support

N is adjusted on the notched bar P according to the length of the tool to be ground. The blade L of the tool is clamped between the flanges K^3 of the clamping-arms K′ and K^2, and rests with its back end either in the notch N′ or the recess N^2 of the support N. The cutting-edge of the tool L is then brought in contact with the periphery of the grindstone D, the operator taking hold of the handle J^2 of the pivoted arm J, and pressing the same downward with more or less force to hold the tool with more or less force in contact with the grindstone D, which is rotated in the usual manner. When the set-screw H′ is loosened, the operator can conveniently move the arm J sidewise, so that the tool is moved crosswise on the periphery of the grindstone D, said arm J turning with its sleeve I and the sleeve H on the pin F′ of the post F.

The operator can lift the arm J with the tool out of contact with the grindstone D, the pivotal connection between the sleeves I and H permitting said movement. By loosening the set-screw I′ the arm J may be turned in the sleeve I so that the tool-blade L will be held at an angle to the grindstone D for grinding an angular edge. It will thus be seen that by the connection of the pivoted arm J with the post F the arm J is made universal in its movement—that is, it can be moved up or down or sidewise, as desired.

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

1. In a grindstone tool-holder, the combination, with an arm carrying a tool-clamp at its end, of a support adjustably mounted on the said arm and constructed to receive and support the end of the tool carried by the clamp, substantially as described.

2. In a grindstone tool-holder, the combination, with the arm J, provided with the notched bar P and carrying a tool-clamp at its end, of the support N, provided with the lugs O, the pin O′, secured to the lugs, the notch N′, and a recess N^2, substantially as herein shown and described.

3. In a grindstone tool-holder, the combination, with a bed-plate and a post secured thereto, of an arm connected to the post by a universal joint, a tool-clamp on the end of the arm, and a support adjustably mounted on the arm and constructed to receive and support the end of the tool carried by the clamp, substantially as herein shown and described.

4. In a grindstone tool-holder, the combination, with a post and a sleeve adjustably mounted on said post, of the sleeve I, pivoted to the first-named sleeve, the arm J, adjustably secured in the sleeve I and provided with the transverse bar J^3, the handle J^2, and the notched bar P, the tool-clamp K, secured to the transverse bar J^3 of arm J, and the support N on the notched bar P, substantially as herein shown and described.

5. In a grindstone tool-holder, the combination, with a bed-plate and a post adjustably secured thereto, of a sleeve adjustably mounted on the post, a second sleeve pivoted to the first-named sleeve, an arm adjustably secured in the second sleeve, a tool-clamp on the end of the arm, and a support for the end of the tool adjustably mounted on said arm, substantially as herein shown and described.

6. In a grindstone tool-holder, the combination, with the arm J, provided with the transversely-extending bar J^3, of the clamping-arms K′ K^2, each provided on its outer end with the downwardly-extending flange K^3 and with the downwardly-extending lug K^5 on its rear end, and the bolt K^4, substantially as herein shown and described.

ALEXANDER H. DICK.

Witnesses:
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