(No Model.)

T. DOWMAN.

PORTABLE TOOL POST.

No. 579,965. Patented Apr. 6, 1897.

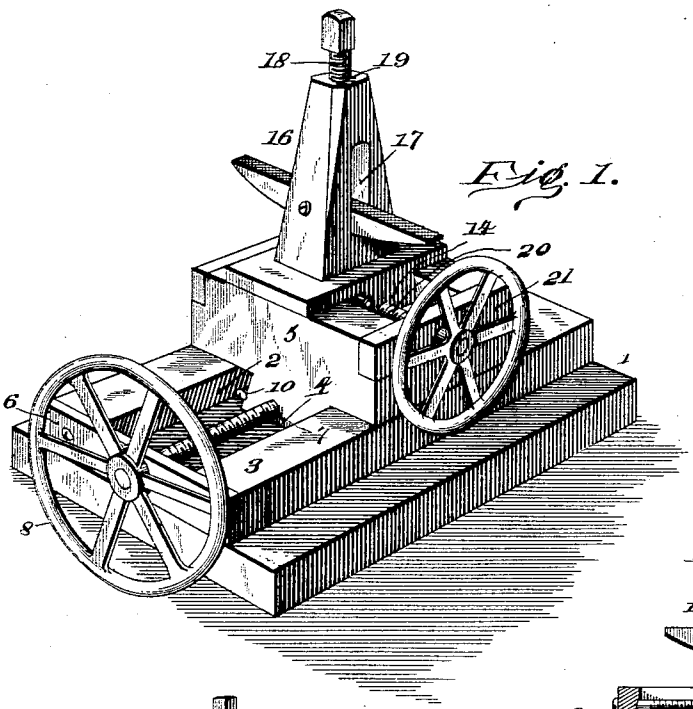


Fig. 1.

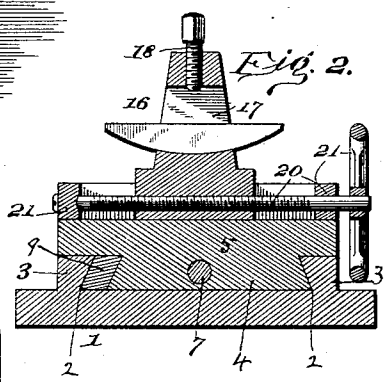


Fig. 2.

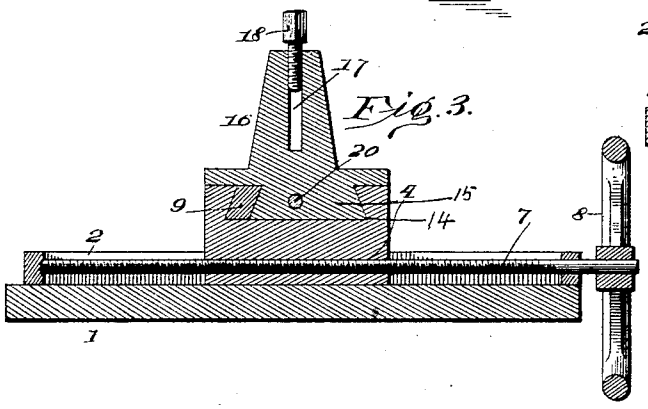


Fig. 3.

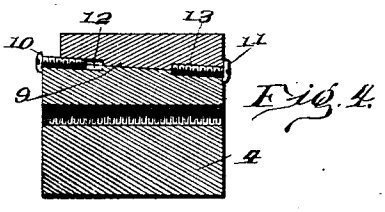


Fig. 4.

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UNITED STATES PATENT OFFICE.

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PORTABLE TOOL-POST.

SPECIFICATION forming part of Letters Patent No. 579,965, dated April 6, 1897.

Application filed May 28, 1896. Serial No. 593,497. (No model.)

To all whom it may concern:

Be it known that I, THOMAS DOWMAN, a citizen of the United States, residing at Chester, in the county of Randolph and State of Illinois, have invented certain new and useful Improvements in Portable Tool-Posts; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in portable tool-posts, the same being particularly designed for attachment to a stationary part of the frame of dynamo-electric machines for the purpose of truing up the commutators thereof without the necessity of removing the armature and taking it to the shop for repairs.

The invention consists of a base-piece adapted to be clamped or otherwise secured to the frame of the dynamo, the said base having a dovetailed groove in its upper surface, a plate secured to one end of said base and closing one end of said groove, and a block having a dovetailed tongue fitting within said groove and adapted to be adjusted back and forth relative to the base by means of a screw-bolt passing through the plate within the groove in said base and through the tongue on said block. The said block is itself formed with a dovetailed groove in its upper surface running at right angles to the groove in said base-piece, and in this works a tongue, upon which is the tool-post proper, the latter being provided with an opening through which the tool projects and in which the latter is secured by means of the screw passing through the end of said post and engaging the upper side of the tool in said slot. I also provide a means for taking up lost motion between the tongues on said post and on said block and the dovetailed grooves in which they respectively work.

The invention also consists in other details of construction and combinations of parts which will be hereinafter more fully described and claimed.

In the drawings forming part of this specification, Figure 1 represents a perspective view of my device complete. Fig. 2 is a vertical central section through the same. Fig. 3 is a similar section taken at right angles thereto. Fig. 4 is a horizontal section through the dovetailed tongue of the shifting block, showing the mechanism for taking up lost motion.

Like reference-numerals indicate like parts in the different views.

The base 1 of my device is adapted to be secured by portable clamps or otherwise to a stationary part of the frame of a dynamo-electric machine upon which my device is adapted to be used. In the upper surface of the base-piece 1 is a dovetailed groove 2, formed by the side pieces or projections 3, and in this groove works a dovetailed tongue 4 of a sliding block 5. To the outer end of the base-piece 1 is secured a plate 6, which projects over the end of the groove 2 and is formed with an opening therein through which projects a screw-bolt 7, engaging the tongue 4 of the block 5 and formed with a hand-wheel or operating-lever 8 upon its outer end. By means of this screw-bolt the block 5 may be shifted back and forth in the groove 2. One side of the tongue 4 is cut away in an angular direction, and within the cut-away portion fits a wedge 9, whose outer edge is adapted to engage the edge of the dovetailed groove 2, as clearly shown. This wedge 9 is adapted to be moved back and forth for the purpose of taking up wear and preventing rattling of the parts. The same is secured to the main part of the tongue 4 by means of screws 10 11 at each end thereof, the said screws fitting recesses 12 13 in the edge of said tongue, which are formed without threads and threaded portions of the wedge 9. By this construction it will be seen that by loosening one of the screws 10 11 the other one may be tightened, and by reason of the engagement of the head of said screws with the outer edge of the tongue 4 said wedge may be shifted in one direction or the other and its inclined outer face may be brought into closer relation with the edge of the groove 2 or moved away therefrom.

The upper surface of the block 5 has formed in it a dovetailed groove 14, extending at right angles to the groove 2, within which moves a dovetailed tongue 15 of the tool-post proper, 16. The tongue 15 is provided with similar means for taking up the wear to that

described with reference to the tongue 4 and the groove 2. The tool-post proper, 16, is formed with an elongated slot 17 therein, in which fits an ordinary lathe-tool, the same being secured in place by screw 18, passing through the opening 19 in the upper end of said post. The slot 17 in the post 16 is so formed that a wedge may be inserted into it beneath the tool therein for the purpose of raising or lowering the cutting edge of said tool. The said post is itself shifted back and forth in the dovetailed groove 14 by means of a screw-bolt 20, which extends through the tongue 15 and through an opening in the plate 21, secured to the outer end of the block 5.

In using my device the base 1 is clamped or otherwise secured to a stationary part of the frame of the dynamo and the tool-post adjusted longitudinally by turning the screw-bolt 7, thereby shifting the block 5. The post proper is shifted in a direction at right angles thereto by turning the screw-bolt 20, which engages the tongue 15 and the plates 21 in the outer ends of the block 5. When in proper position relative to the commutator to be operated upon, an ordinary lathe-tool is inserted through the slot 17 in the post proper, 16, and the commutator caused to rotate in engagement with the cutting edge of said tool. The said commutator may thus be turned down and trued up without the necessity of removing it and taking it to a shop.

While my improved tool-post has been described as being especially adapted for use in connection with dynamo-electric machines for truing up the commutators thereof, it is obvious that it may be put to many other uses. For example, it may be used with advantage for turning off the lagging on pulleys or cutting the edge off same.

It should also be stated that I use in connection with my improved tool-post a bracket, which is secured to the frame of the dynamo, having a center at its upper end to engage the center of the armature-shaft to take the end play out of said shaft. Without this the armature would have a rocking motion. The center is formed with a screw-bolt having a lock-nut on it.

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

1. A portable tool-post, made up of a base-piece having a dovetailed groove in its upper surface, a plate separate from but secured to the outer end of said base-piece and inclosing the end of said groove, a block having a dovetailed groove in its upper surface at right angles to the groove in said base-piece, a tongue upon the under side of said block fitting the groove in said base-piece cut away in an angular direction and having a smooth recess in one edge thereof, a wedge fitting said cut-away portion and having a threaded recess therein, a pair of screws engaging the recesses in said tongue and wedge, a screw-bolt extending through said tongue and the plate upon the end of said base-piece, an operating-handle upon the outer end of said bolt, a tool-post proper having a tongue upon its under side fitting within the upper surface of said block, means for shifting said post in said block, and means for securing a lathe-tool therein.

2. The combination with a block having grooves in its upper surface, of a second block having a tongue upon its lower end fitting within said groove, cut away in an angular direction and having a smooth recess in one edge thereof, a wedge fitting said cut-away portion and having a threaded recess therein and a pair of screws engaging the recesses in said tongue and said wedge, whereby said wedge may be shifted longitudinally, substantially as and for the purpose described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

THOMAS DOWMAN.

Witnesses:
A. J. CAMPBELL,
WALLACE SNOOK.