(No Model.)

J. W. MALOY.

CENTERING DEVICE FOR STONE CUTTING MACHINES.

No. 329,325. Patented Oct. 27, 1885.

Fig. 1.

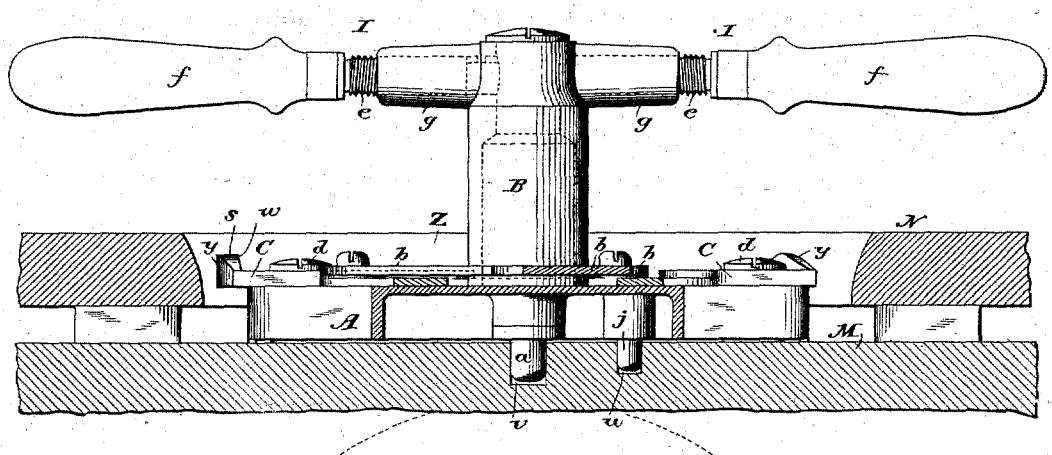


Fig. 2.

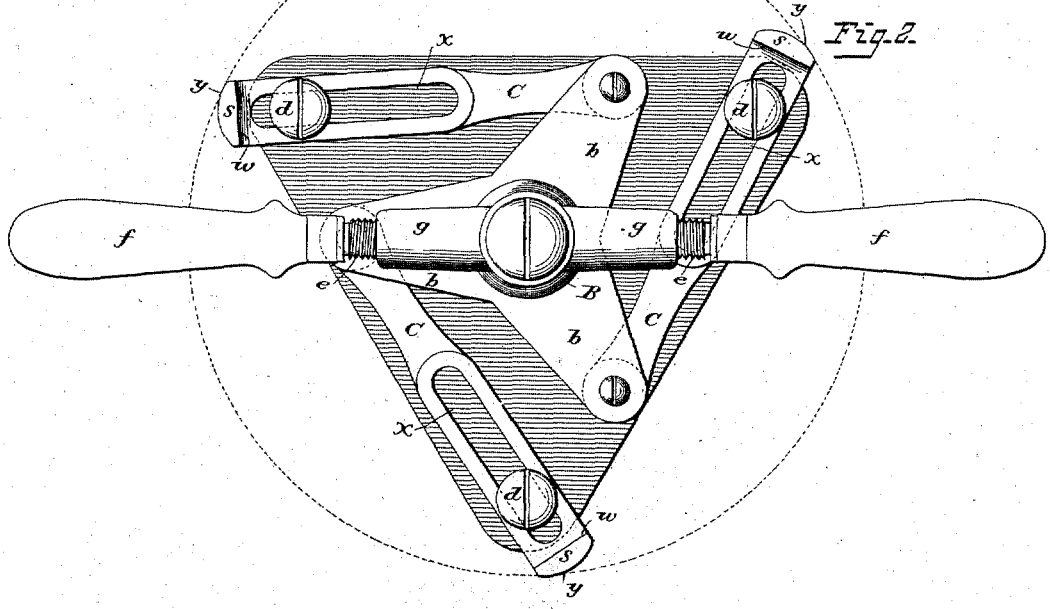
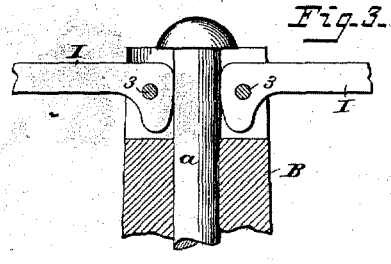


Fig. 3.



Attest:
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UNITED STATES PATENT OFFICE.

JAMES W. MALOY, OF BOSTON, MASS., ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE AMERICAN MARBLE CUTTING COMPANY, OF SAME PLACE.

CENTERING DEVICE FOR STONE-CUTTING MACHINES.

SPECIFICATION forming part of Letters Patent No. 329,325, dated October 27, 1885.

Application filed December 15, 1884. Serial No. 150,417. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. MALOY, a citizen of the United States, and a resident of Boston, (Somerville,) in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Centering Devices for Stone-Cutting Machines, &c., of which the following is a specification.

My invention relates to devices whereby plates, marble slabs, and other objects having openings therein may be centered upon the base-plates or face-plates of stone-cutting or other finishing machines; and my invention consists of a centering device adapted to be fixed to the supporting-plate, and provided with arms capable of simultaneous adjustment, and having bearing edges, which may be brought against the edges of the openings, as fully set forth hereinafter, and as illustrated in the accompanying drawings, in which—

Figure 1 is a sectional elevation showing the centering device as applied to centering a marble slab. Fig. 2 is a plan of the device shown in Fig. 1. Fig. 3 is a sectional view illustrating a modification.

A is the frame or base of the device, which may be of any suitable construction; and B is a standard extending vertically from the base and turning freely upon a central rod or bolt, *a*, and provided with three or more radiating arms, *b*, extending parallel to the base-plate a short distance above the latter. To the outer end of each arm *b* is pivoted the inner end of a bar or slide, C, each of which has a longitudinal slot, *x*, and through the latter passes a guiding pin or stud, *d*, extending from the base-plate. From the upper end of the standard B extend laterally arms I I, which may be cast with and form part of the standard, but are preferably made as illustrated in the drawings, each arm consisting of a handle, *f*, and screw-rod *e*, extending through a threaded boss, *g*, upon the standard, so that the inner end of the screw-rod may be brought to bear against the stationary bolt *a* to secure the parts in position after adjustment.

The above-described parts are so proportioned and the guiding-studs *d* are so arranged in respect to the central bolt, *a*, that whatever may be the position to which the bars or slides C are thrown by turning the standard B the outer or bearing end, *y*, of each slide will always be the same distance from the center of the bolt *a* as the ends of the other slides.

In using the above-described device the end of the bolt *a* is inserted in an opening upon the bed-plate of the boring-machine, planer, lathe, or other device upon which any object is to be centered, and the said object is then placed in such position that the device, or the standard B thereof, shall extend through an opening therein, the center of which opening is to be brought to coincide with that of the opening in the bed-plate. The standard B is then turned by means of the arms I, so as to throw outward the bars or slides C and bring them against the edges of the said opening in the object to be centered, and the latter is adjusted until the ends of all the slides bear upon the said edges, when the opening in the object will be central with that in the bed-plate. The parts may now be fixed in position by turning the handles *f* until the ends of the screw-rods *e* are jammed against the fixed bolts *a*. To prevent the base-plate A from turning when the standard is revolved, it is provided with a pin, *j*, adapted to engage with a bearing or opening in the bed-plate. Instead of this pin, a screw or other clamping device may be employed.

In those cases where the opening in the object to be centered is not large enough to receive all the parts of the device described the article may be centered by providing each bar or slide C with the lip *s*, having an inner bearing-shoulder, *w*, which may be brought to bear upon the outer periphery of the object. This arrangement is specially adapted for use in centering pulleys and gear-wheels, the shoulders *w* being brought against the peripheries thereof by drawing in the slides, and where the opening in the hub is very small the standard B should be made without the bosses *g*, and the screw-handles *f* are withdrawn prior to passing the standard through the hub, and afterward inserted.

The device, as illustrated, is specially intended for use in centering marble slabs in-

tended for the tops of wash-stands, &c., upon the base-plates of the stone-cutting machines used in finishing the surfaces of the slabs and the edges of the openings, the application of the device being illustrated in Fig. 1, in which M represents the base-plate of the cutter-machine, having a central opening, *v*, for the reception of the end of the bolt *a*, and a second opening, *u*, for the reception of the stud *j*; and N represents the marble slab, the opening *z* in which incloses the base-plate of the centering device, the bars or slides C of which are brought against the edge of the opening, as shown.

Although the bars or slides C are shown as being connected directly to the arms *b*, they may be guided so as to slide radially upon the base-plate A, and may be connected to the arms *b* by links, and the standard B, instead of turning upon a fixed bolt, *a*, may be provided with a projection at the lower end extending to and turning in an opening in the bed-plate *a*, where clamping-handles are employed for securing the standard after its adjustment. They may be constructed in various different ways so as to clamp the standard to the central bolt.

One modification is shown in Fig. 3, in which the stem of each handle is hung to a pin, 3, extending through a slot in the standard, and is provided with a cam-like end, which is jammed against the bolt *a* when the handle is turned downward.

Without limiting myself to the precise arrangement and construction of the parts shown, I claim—

1. The combination, with the base-plate A, provided with guide-studs *d*, of a standard pivoted centrally on said plate and provided with radial arms, and slides jointed to said arms and swinging and sliding on said studs, substantially as described.

2. The combination, with the base-plate A, provided with guide-studs *d*, of a standard pivoted centrally on said plate and provided with radial arms, and slides jointed to said arms, swinging and sliding on said studs, and a clamping arm or arms carried by the standard and adapted to engage with the pivot thereof to secure the standard in position after adjustment, substantially as described.

3. The combination of the base-plates, slides, standard connected with the slides, central bolt, *a*, and arms consisting of handles provided with screw-rods turning in the standard and adapted to be brought against the central bolt, as described.

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

JAMES W. MALOY.

Witnesses:
GEORGE R. EAGER,
CHAS. M. TILLINGHAST.