G. S. NICKUM.

SURFACING FILE HANDLE.

APPLICATION FILED DEC. 28, 1916.

1,233,598. Patented July 17, 1917.

Fig. 1.

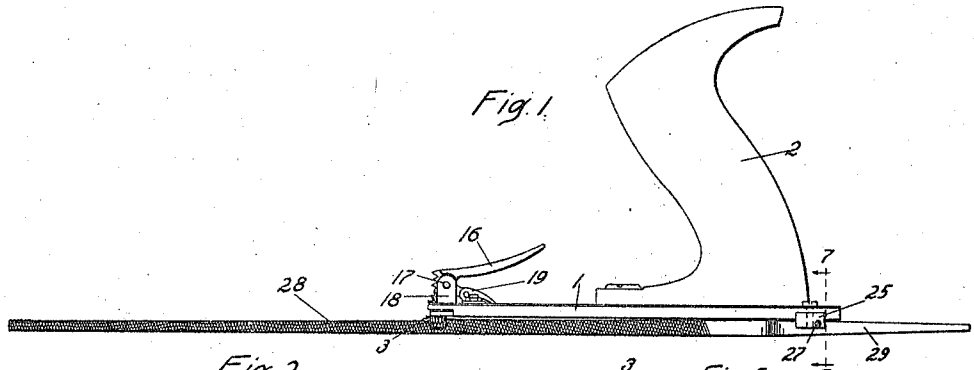


Fig. 2.

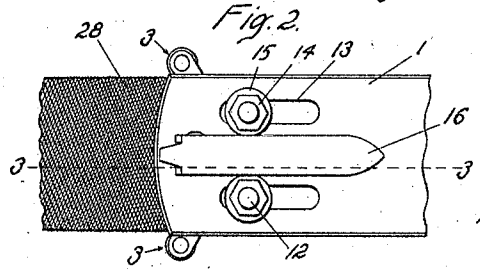


Fig. 5.

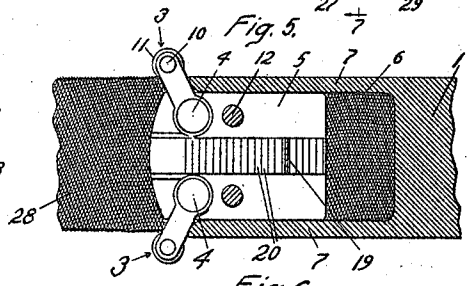


Fig. 3.

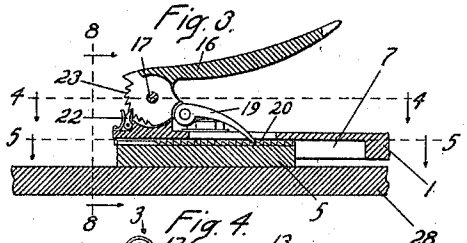


Fig. 6.

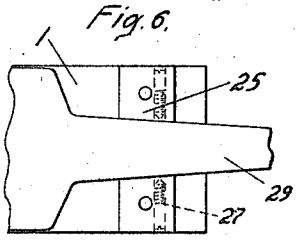


Fig. 4.

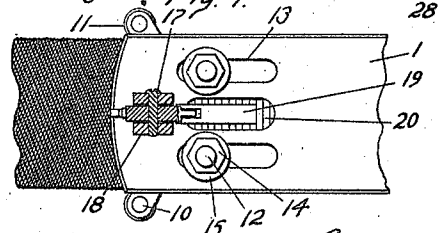


Fig. 7.

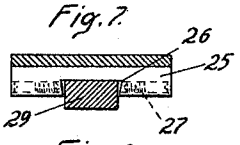


Fig. 8.

Fig. 9.

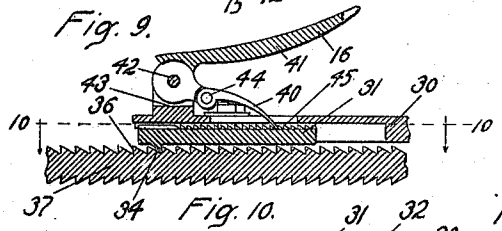
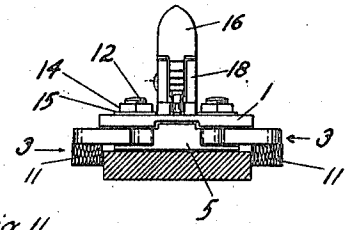


Fig. 10.



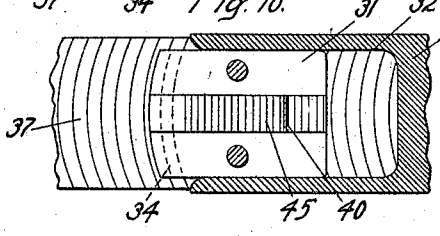
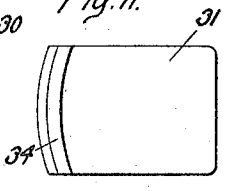


Fig. 11.



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UNITED STATES PATENT OFFICE.

GEORGE S. NICKUM, OF GLENDALE, CALIFORNIA.

SURFACING-FILE HANDLE.

1,233,598. Specification of Letters Patent. Patented July 17, 1917.

Application filed December 28, 1916. Serial No. 139,380.

To all whom it may concern:

Be it known that I, GEORGE S. NICKUM, a citizen of the United States, residing at Glendale, in the county of Los Angeles, State of California, have invented a new and useful Surfacing-File Handle, of which the following is a specification.

This invention relates to handle means for holding files in such manner as to enable convenient and effective use of the file, particularly in surfacing, and the main object of the invention is to provide handle means whereby more effective manipulation of the file may be secured than with the usual handle means attached to the shank of the file.

A further object of the invention is to provide handle means which will enable a more direct downward pressure to be brought on the file while in use and to enable the file to be held and guided more accurately and effectively over the surface of the work.

The accompanying drawings illustrate embodiments of my invention and referring thereto:

Figure 1 is a side elevation of the handle device in place on the file.

Fig. 2 is a plan view of the forward gripping means of the handle device.

Fig. 3 is a section on line 3—3 in Fig. 2.

Fig. 4 is a section on line 4—4 in Fig. 3.

Fig. 5 is a section on line 5—5 in Fig. 3.

Fig. 6 is an inverted plan of the rear end portion of the handle device showing the file shank engaged therein.

Fig. 7 is a section on line 7—7 in Fig. 1.

Fig. 8 is a section on line 8—8 in Fig. 3.

Fig. 9 is a vertical section of another form of the invention.

Fig. 10 is a section on line 10—10 in Fig. 9.

Fig. 11 is an inverted plan view of the gripping jaw shown in Figs. 9 and 10.

The form of my invention shown in Figs. 1 to 8 is adaptable for use with any file or rasp. Said device comprises a body member formed preferably as a plate 1 provided with a handle 2 and with forward and rear gripping means adapted to grip respectively on the body of the file and on the shank thereof.

The forward gripping means comprises two gripping members 3, pivoted at 4 to a slide 5 which is mounted to move longitudinally in a way or guide means 6 formed in the plate or member 1, the side walls 7 of said way being adapted to engage clamping or gripping means 3 so as to cause said clamping or gripping means to turn inwardly, as the slide 5 is drawn rearwardly in the way 6, the forward ends of said walls 6 being preferably beveled or rounded as shown, to enable the walls 7 to produce a wedging action on the members 3. Each member 3 is formed as an arm having a stud seated in a cylindrical recess in the slide 5 to form a pivot therefor and provided at its outer end with a downwardly extending stud 10 on which is mounted a roller 11 adapted to engage the side of the file. The slide member 5 is held in and guided on the member 1, for example by means of studs 12 extending upwardly from said slide through longitudinal slots 13 in member 1, and nuts 14 on said studs above the member 1, washers 15 being provided between the nuts and member 1. A tightening lever 16 is pivoted at 17 on standards 18 extending upwardly from member 1 and is provided with a pawl 19 adapted to engage the teeth of the ratchet rack 20 on the upper face of the slide 5 in such manner as to force said slide rearwardly when the lever 16 is depressed. Suitable means such as pawl 22 on member 1 engaging with ratchet teeth 23 on the hub portion of lever 16 may be provided for holding said lever in operated position.

The rear gripping means for the handle device preferably consists of a gripping block 25 secured on the bottom of the plate or member 1 and having a dovetailed or undercut groove 26 adapted to tightly engage the shank of the file when the latter is properly inserted therein. Screws 27 may be provided in block 25, to engage a narrow shank as hereinafter described.

My improved handle device above described, may be used as follows:

The lever 16 having been raised so as to allow the slide 5 to be moved forward and the gripping means 3 to be extended laterally as far as possible, the device is placed over the file with the rollers 11 of the said

gripping devices engaging the edges of the file body (indicated at 28) at either side, and with the walls of the groove 26 of the rear gripping device embracing the shank 29 of the file. The handle device is then pushed forward so as to cause the side walls of the dovetailed groove 26 to engage the shank of the file, said shank being tapered so that as the device is moved forward thereon it will eventually come into close contact with the shank. In order to provide for most effective contact, the groove 26 is preferably tapered rearwardly to correspond to the rearward taper of the file shank. In case the shank is too narrow to engage tightly in the groove 26, the screws 27 may be screwed in so as to engage the edges of the shank, said screws being preferably pointed so as to bite with said edges. The rear gripping means having been brought into effective contact with the shank, as stated, the tightening lever 16 for the forward gripping means is depressed so as to operate the pawl 19 and cause the latter, by its engagement with the ratchet rack 20, to force the slide 5 rearwardly, in such manner as to cause the arms or gripping members 3 to be drawn into the guideway 6 and to be engaged by the side walls 7 of said guideway so that the rollers 11 thereon are forced into tight engagement with the sides of the file body, the lever 16, being then held in position to hold the parts locked by engagement of the pawl 22 with ratchet means 23. In some cases it may be desirable to insert a shim of pasteboard or other material between one or both of the rollers 11 and the edge of the file to produce a tighter gripping action of said parts. When the device is to be released from the file, it is only necessary to pry the pawl 22 into releasing position by a suitable tool and to raise the lever 16, whereupon the parts will be sufficiently free to enable the handle device to be easily detached from the file.

It will be seen that when the handle device has been attached to the file in the manner above described, the handle comes directly over the rear portion of the body 28 of the file, so that the hand gripping the handle is in the most efficient position for bringing direct pressure on the file and holding the file steady and true to the work. If desired, the forward end of the file may be grasped by the other hand, but in any case the control and manipulation of the file is made much more accurate and easy than with the usual shank handle.

My invention is not limited to the special form of gripping means shown, for example—with other certain kinds of files the gripping means may be specially adapted to engage therewith. Thus in the case of the so-called "Vixen" file, in which the file teeth have a decided undercut, I may use the form of gripping device for the forward grip shown in Figs. 9 to 11. Said gripping device comprises a sliding jaw plate 31 mounted to slide longitudinally in a guideway 32 in the main member or body 30 of the handle device and held and guided therein by stud and slot connections as above described, said jaw plate being provided on its under face with a downward extending gripping flange 34, the edge of which is undercut so as to correspond to and engage lightly with the forward faces 36 of the file 37. The said file teeth 37 are generally cut in arc shape as indicated in Fig. 10 and the gripping flange 34 is correspondingly curved. This jaw plate 31 is operated by a pawl 40 pivoted to a lever 41 which is shown as pivotally mounted at 42 on standard means 43 on member 30 in such manner that when the lever 41 is depressed the pivot 44 for pawl 40 will pass dead center and automatically lock the gripping means. Any other locking means may, however, be used, for example, the ratchet means shown in Fig. 3. When the lever 41 is depressed in this manner, the pawl 40 thereon engages with the ratchet teeth 45 on jaw plate 31, so as to force the said jaw plate rearwardly and cause tight engagement of the gripping flange 34 thereon with one of the teeth of the file.

What I claim is:

1. A handle device for files comprising a body portion having a handle and provided with a rear gripping device adapted to embrace the shank of the file, and a forward gripping device longitudinally movable on said body and adapted to engage the body of the file in its longitudinal movement and means for effecting such longitudinal movement of said forward gripping means.

2. A handle device for files comprising a body portion having a handle and provided with a rear gripping device adapted to embrace the shank of the file, a sliding member longitudinally movable on said body, arms pivotally mounted on said sliding member and provided with means for engaging the edges of the file, said body being provided with means for engaging said arms to move them into engaging relation with the file on rearward movement of said sliding member and means for effecting such rearward movement of such sliding member on said body.

3. A handle device for files comprising a body portion having a handle and provided with a rear gripping device adapted to embrace the shank of the file and a forward gripping device longitudinally movable on said body and adapted to engage the body of the file in its longitudinal movement and lever means for effecting such longitudinal movement of said forward gripping means.

4. In the handle device for files, a body member adapted to rest on top of the file body and having a handle and a sliding member mounted to move longitudinally in said body and provided with means for gripping the file body in such longitudinal movement, lever means for controlling such longitudinal movement of said sliding member and provided with locking means for holding the parts in gripping position.

In testimony whereof I have hereunto set my hand, at Los Angeles, California, this 15th day of December 1916.

GEORGE S. NICKUM.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."