N. W. DINGWALL.

SCRAPING TOOL AND THE LIKE.

APPLICATION FILED APR. 24, 1919.

1,341,047. Patented May 25, 1920.

Fig. 1.

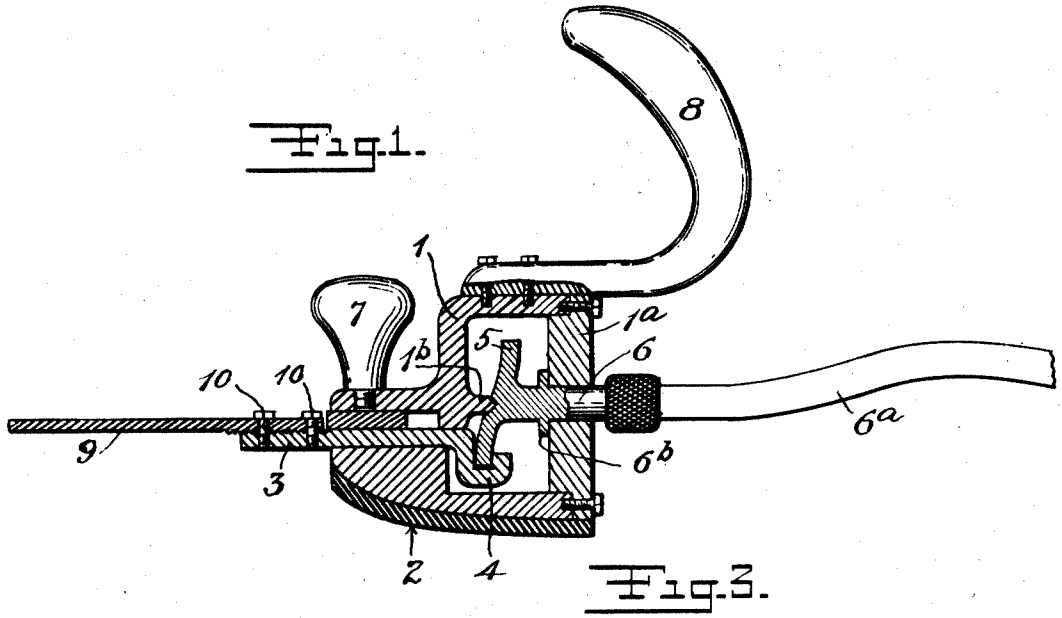


Fig. 3.

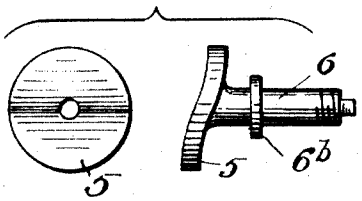


Fig. 2.

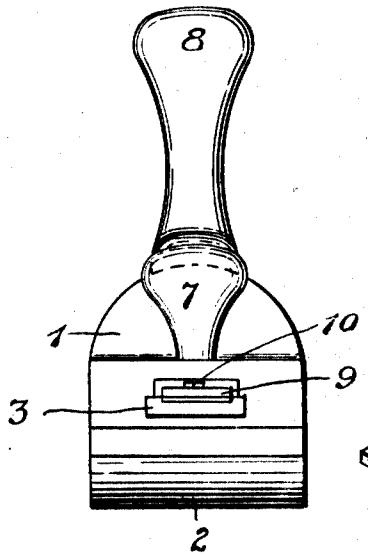
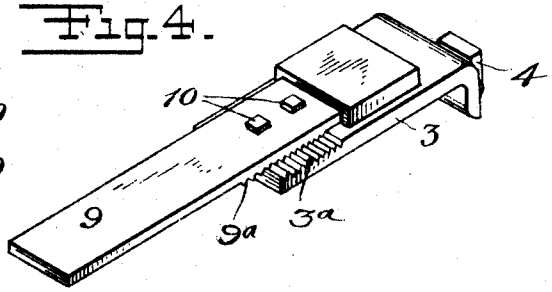


Fig. 4.



Nelson W. Dingwall. INVENTOR

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UNITED STATES PATENT OFFICE.

NELSON W. DINGWALL, OF MOUNT VERNON, NEW YORK.

SCRAPING-TOOL AND THE LIKE.

1,341,047. Specification of Letters Patent. Patented May 25, 1920.

Application filed April 24, 1919. Serial No. 292,431.

To all whom it may concern:

Be it known that I, NELSON W. DINGWALL, a citizen of the United States of America, residing at Mount Vernon, New York, have invented a new and useful Scraping-Tool and the like, of which the following is a specification.

My invention relates to scraping and polishing tools and is particularly useful in connection with a tool designed to scrape and finish surface plates and the ways of shapers, planers and machine tools in general. It can also be used for frosting surfaces. Also for scraping off "scale" on plates.

My invention is essentially an improvement upon a similar tool invented by J. S. Holland, and made the subject-matter of a United States application Serial No. 289,023, filed April 10, 1919, and has for its object simplifying the construction, increasing the efficiency and durability thereof, and so arranging the various parts that the tool may be very easily manipulated. These and other advantages thereover will be understood by a mechanic skilled in the art from an examination of the following specification and the accompanying drawing, in which:

Figure 1 is a longitudinal sectional view showing some of the parts in side elevation.

Fig. 2 is an end view.

Fig. 3 is a detail view.

Fig. 4 is a perspective view of other details.

1 represents the main body or housing which may be constructed in any suitable way and which is provided on its lower side with a smooth curved sole 2 which may be either integral with the body or may be in the form of a veneer as shown, and when in the form of a veneer may be made of any suitable material which will permit the tool to be supported upon a polished surface and slid and rocked to and fro without injury thereto. 3 is a tool carrier mounted in the front end of the housing 1 in suitable ways and arranged to be reciprocated to and fro. At the inner end of the carrier 3 is a suitable socketed portion 4 into which projects the edge of what I may term a wheel cam 5 mounted upon a shaft 6 which has suitable bearing in the housing 1 so that the axis of the shaft will be substantially in the longitudinal center line of the housing 1. The rear end of the shaft 6 may be connected with any suitable source of power as by a flexible shafting 6^a, or indeed, a suitable motor may be mounted directly thereon and carried at the rear of the housing so as to be part of the tool, in which event the part 6^a may be treated as conventionally representing such a source of driving power. 6^b is a thrust collar on the shaft 6. 1^b is an internal center bearing for supporting and taking the forward thrust of the cam 5. The rear plate 1^a of the case may be detachably secured in any suitable manner, and the space within the case is preferably grease-tight so that the interior may be filled with grease whereby the cam will constantly run therein. 7 is a handle on the top of the housing 1 preferably near the front end. 8 is a handle projecting rearwardly from the housing and preferably upturned substantially as shown to afford an easy grip. 9 represents a tool, in this particular instance having a scraping edge at its forward end. 3^a represents a transversely scored surface on the carrier, while 9^a represents a correspondingly scored surface at the rear part of the tool 9 whereby the tool 9 when secured to the carrier will be more effectively held, and the strain on the fastening bolts or screws 10—10 will be correspondingly lessened.

In operation: When the cam 5 revolves, it will impart a positive reciprocating motion both to and fro to the carrier 3 and hence to the tool 9, the action of the cam being in uniform and constant engagement with the inner end of the carrier 3, and by reason of the character of the cam will reduce very much the shock and wear on the parts. Furthermore, by arranging the shaft 6 of the cam substantially in line with the work to be done, that is to say, in line with the tool, it will be so positioned that in actual use there will be no danger of said shaft striking against any part or piece of machinery located at either side of the tool, the effect of which would be to deflect the point of the cutter or tool 9.

What I claim is:

In a tool of the character described, a housing having a curved sole portion to permit said housing to be canted to and fro

upon a supporting surface, a tool carrier mounted to reciprocate in the front end of said housing, the forward end of said tool carrier being arranged to receive a tool, the rear end of said tool carrier extending into the space within the housing, a shaft rotatably mounted in the rear of the housing, a cam on the inner end of said shaft and within the housing and in operative engagement with the inner end of said carrier and arranged to reciprocate the latter when the shaft is rotated.

NELSON W. DINGWALL.