

(No Model.)

L. BUSH, Jr.

TOOL FOR DRESSING EMERY WHEELS.

No. 318,952.

Patented June 2, 1885.

Fig. 1.

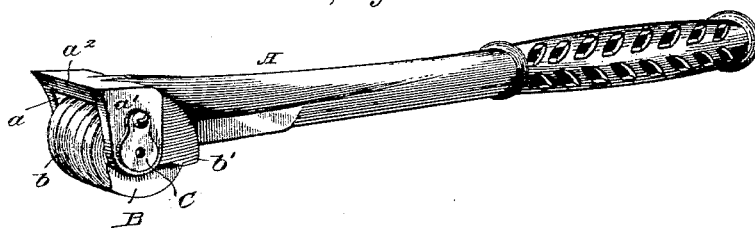


Fig. 2.

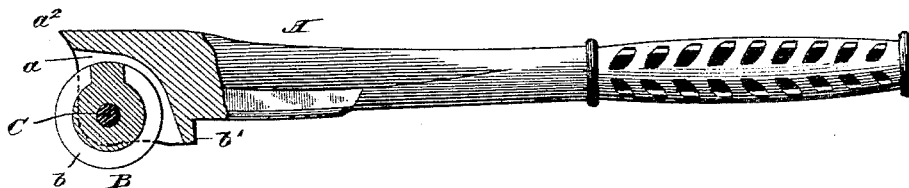


Fig. 3.

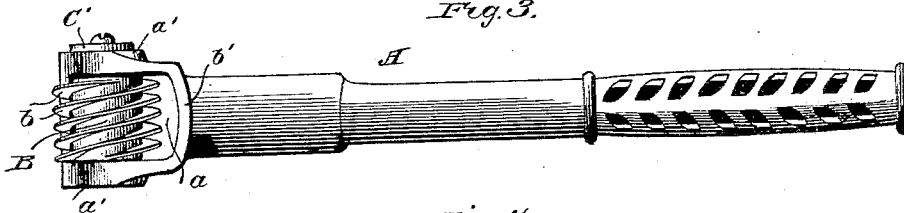
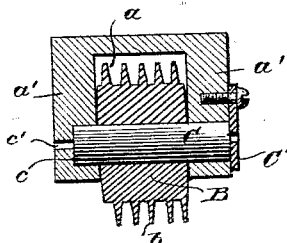


Fig. 4.



Witnesses:  
Geo. H. Grockett.  
C. C. Poole

Inventor  
Lewis Bush Jr.

by *W. D. Dayton*  
Attorney.

# UNITED STATES PATENT OFFICE.

LEWIS BUSH, JR., OF CHICAGO, ILLINOIS, ASSIGNOR TO THE AMERICAN MACHINERY COMPANY, OF SAME PLACE.

## TOOL FOR DRESSING EMERY-WHEELS.

SPECIFICATION forming part of Letters Patent No. 318,952, dated June 2, 1885.

Application filed June 30, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, LEWIS BUSH, Jr., of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful  
5 Improvements in Tools for Dressing Emery-Wheels; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference  
10 marked thereon, which form a part of this specification.

This invention relates to the class of devices for dressing emery-wheels which operate by means of a rotating part held in contact  
15 with the face of the wheel to be dressed while said wheel is in motion.

The object of the invention is to provide certain improvements calculated to increase the efficiency, durability, and cheapness of  
20 this class of devices; and the invention consists in the matters hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of my improved emery-wheel dresser. Fig. 2 is a side elevation showing a portion of the head broken away in a central vertical section through said head and the rotating cutter. Fig. 3 is an under  
25 side view of the tool. Fig. 4 is a transverse section in the axis of the rotating cutter.

A is the handle or body of the tool, provided with a head having a recess, *a*, adapted to admit the rotating cutter B, which latter is held removably in place by means of a pin, C,  
35 journaled in pin or pivot supports *a'*, formed by the side walls of the recess *a*. As here shown, and as preferably constructed, the pin C passes through one of the supports *a'*, through the cutter, and into the opposite pin or pivot support  
40 a short distance, but not entirely through the latter, and is held in place by a laterally-pivoted cap, C', adapted to swing out of the way to allow the pin C to be removed. The body A of the tool is provided with a projection, *a*<sup>2</sup>, on its upper side, which overhangs the  
45 cutter and is intended to intercept the particles thrown off from the emery-wheel in the operation of the cutter.

The principal improvement of my invention  
50 relates to the cutter B, which in this case is a section of a screw cut of proper length to enter

between the pivot-supports *a'* of the head or tool-body A, and which, after having the ribs or thread *b* cut thereon, may be hardened to any desired degree, and inserted and held in  
55 the head by means of the removable pin C.

In constructing cutters of the character herein shown a long rod of steel of proper diameter may have a continuous thread or series of threads, *b*, cut thereon by means of a lathe or  
60 other suitable device for the purpose, and after thus making the thread the rod may be cut into sections B of proper length, and the holes drilled therein for the pivot-pin C, after which said  
65 sections may be suitably hardened. This construction of the cutter has the advantage of working on a single axis parallel with the face of the wheel to be dressed, and of at the same time presenting a number of working-edges—  
70 namely, the edges of the series of spiral threads *b*—which have the desired obliquity with reference to the face of the emery-wheel.

As another improvement in the devices shown, the shoulder *b'*, located on the under side of the tool-body, and which forms a rest  
75 or support while the tool is in operation by being brought to bear against a stationary part of the machine containing the wheel to be dressed, has the transversely-curved form shown plainly in Fig. 3, adapting the tool to be  
80 swayed from side to side while bearing against said rest with greater ease on the part of the operator and regularity on the part of the work performed by the tool.

The projection *a*<sup>2</sup> overhanging the cutter, as  
85 shown, is also an improvement upon which I make claim, said projection serving to intercept the particles of emery thrown from the wheel in the operation of the cutter and preventing their striking the operator. The small  
90 hole *c'* continued from the bottom of the recess *c*, which admits the inner end of the pin C, is to permit a wire or other similar article to be thrust against the pin C for the purpose of forcing the latter out of the head and cutter  
95 when it is desired to remove the said pin. The hole also affords means for admitting oil to the pin, as does the smaller hole in the cap C', by means of which latter the said cap may be firmly screwed up to its place and retained in  
100 position without being disturbed in applying the oil to the adjacent end of the pin.

I am aware that it is not new to form the cutter-shaft aperture entirely through the tool-body and to place caps over the ends of said aperture in order to retain the shaft in place, wherefore this invention does not include such construction.

I claim as my invention—

1. The combination, with a rotating cutter and a removable shaft or pivot-pin therefor, of a cutter holder or body provided with pivot-pin supports, one of which is apertured to admit the full size of the pin and provided with a retaining-cap, and the opposite one of which is recessed at *c* on its inner surface to admit the end of the pin and is provided with a

small hole, *c'*, extending from the recess through the support, substantially as described.

2. The combination, with a rotating cutter, of a tool-body provided with a transversely-arranged convexly-curved shoulder, *b'*, upon its under side, adapted for engagement with a lathe-rest or other support, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

LEWIS BUSH, JR.

Witnesses:

C. CLARENCE POOLE,  
OLIVER E. PAGIN.