

W. H. VAN SICKEL.
POLISHER OR ABRADER.
APPLICATION FILED JUNE 30, 1911.

1,017,237.

Patented Feb. 13, 1912.

4 SHEETS—SHEET 1.

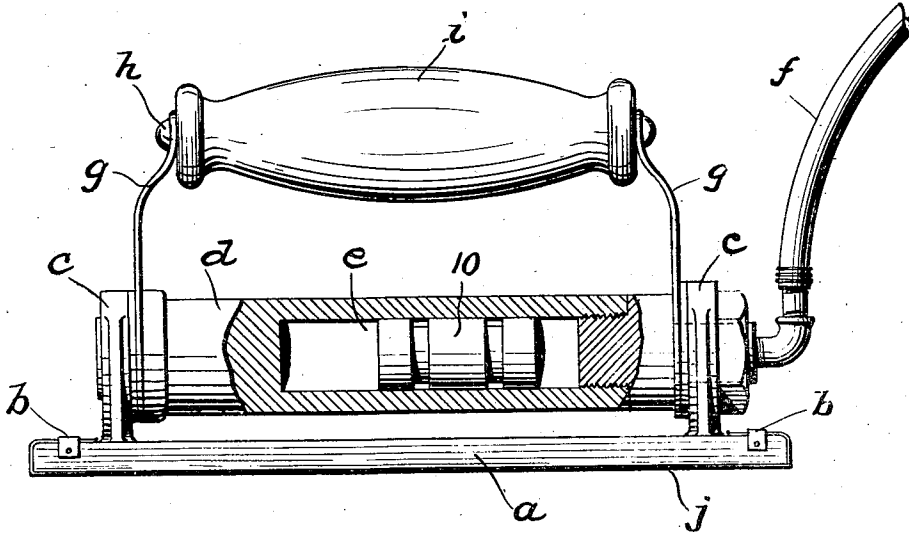


FIG. 1.

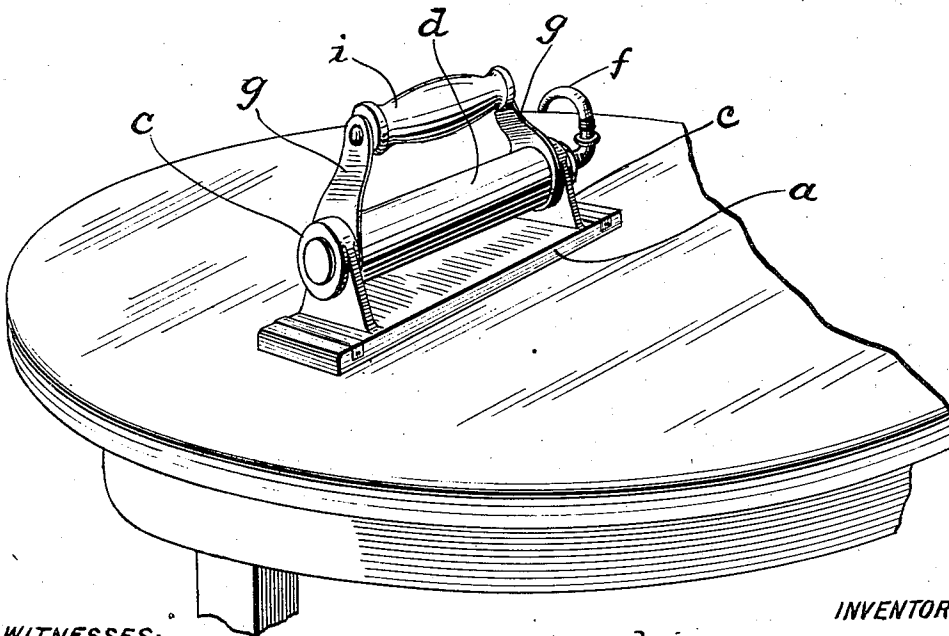


FIG. 4.

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E. E. Hall

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4 SHEETS—SHEET 2.

FIG. 2.

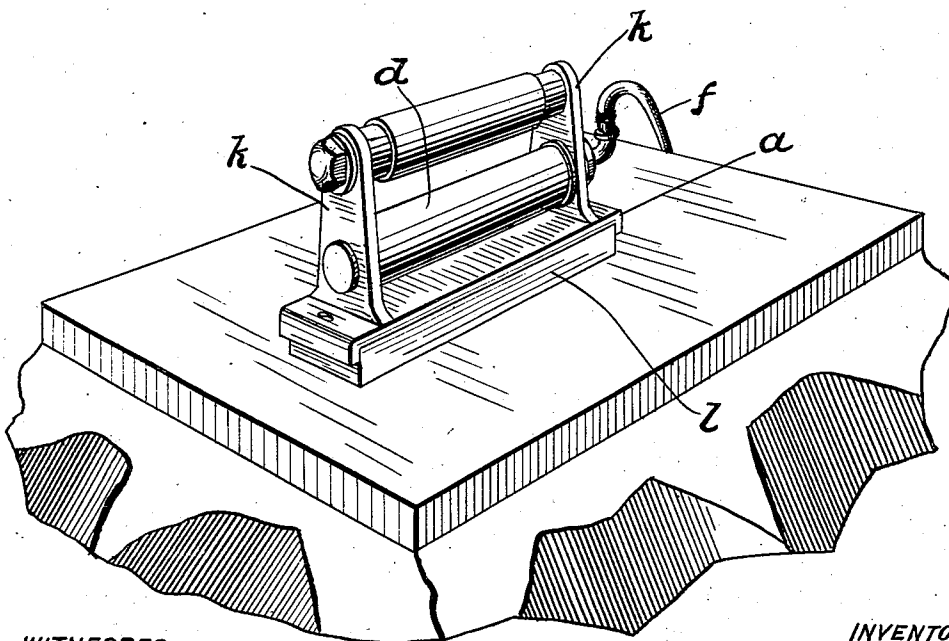
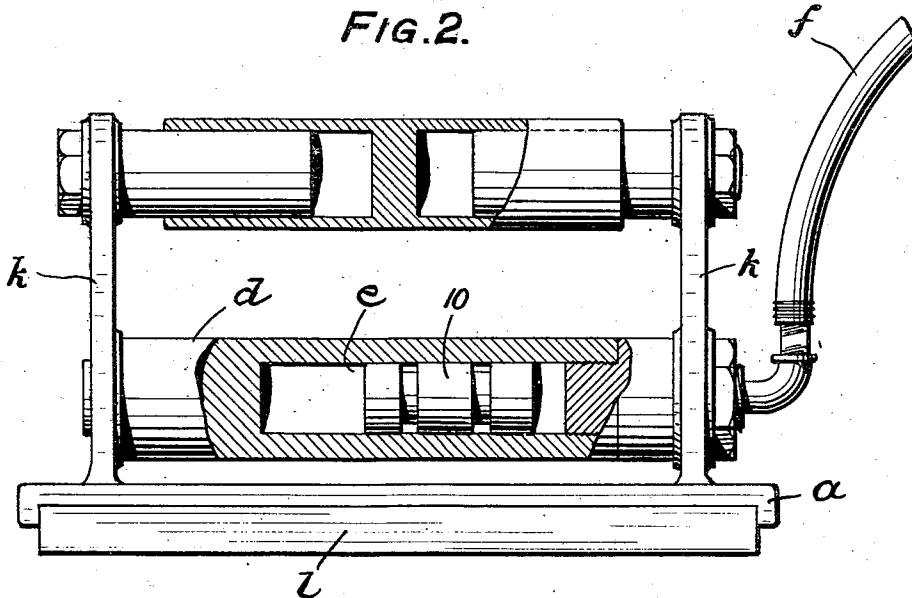


FIG. 5.

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4 SHEETS—SHEET 3.

FIG. 3.

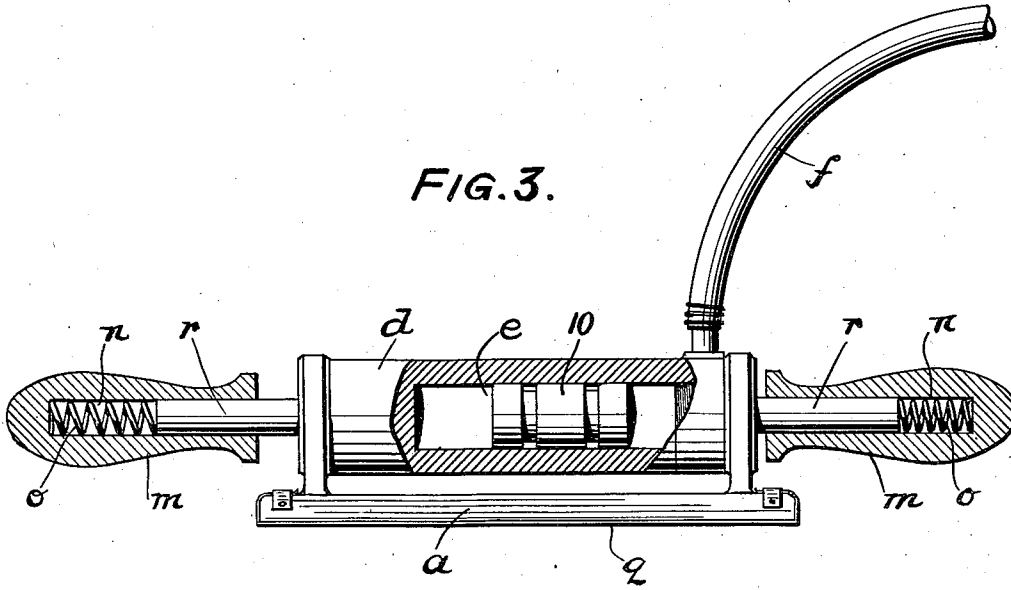
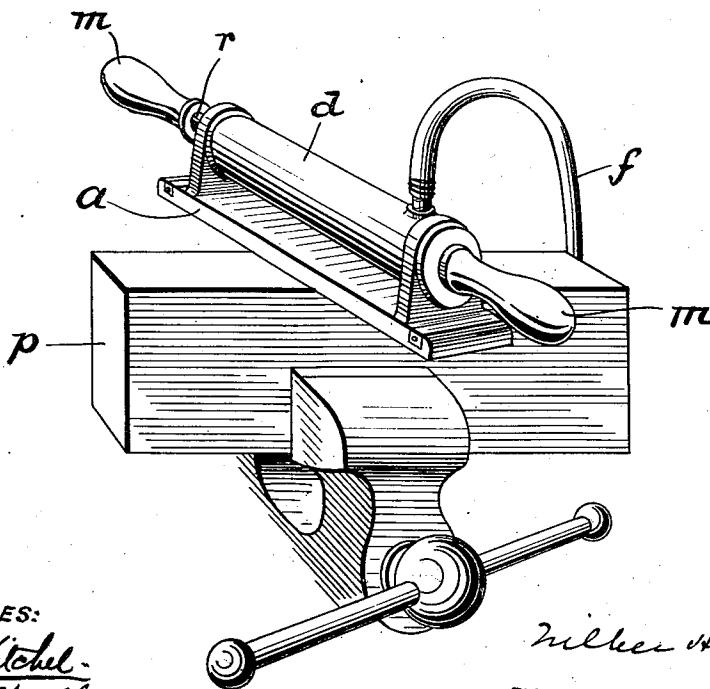


FIG. 6.



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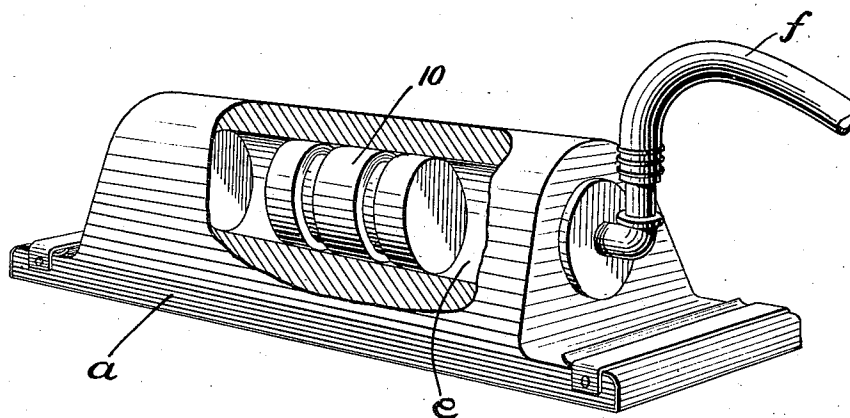
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4 SHEETS—SHEET 4.

FIG. 7.



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UNITED STATES PATENT OFFICE.

WILBER H. VAN SICKEL, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THOS. H. DALLETT CO., A CORPORATION OF NEW JERSEY.

POLISHER OR ABRADER.

1,017,237.

Specification of Letters Patent,

Patented Feb. 13, 1912.

Application filed June 30, 1911. Serial No. 636,154.

To all whom it may concern:

Be it known that I, WILBER H. VAN SICKEL, a citizen of the United States, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Polishers or Abraders, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention has for its object to produce a polisher or abrader, which may be used for the purpose of polishing or abrading surfaces.

The purpose is to give to such polisher, in addition to the regular movement by hand or power, a vibratory movement which will produce a better and more rapid action. In general, I accomplish this result by using a base, the surface of which may act as the polisher or abrader, or to which a polishing or abrading surface may be secured. I connect or form on this base a vibrator which, preferably, is a pneumatic vibrator. The connection between the vibrator and base is such that the base partakes of, or has transmitted to it, the vibration of the vibrator. The lower surface of this base may act as the polisher or abrader, or a polishing or abrading surface may be secured thereto.

I will first describe the embodiment of my invention illustrated in the accompanying drawings and then point out the invention in the claims.

In the drawings: Figure 1 is a front elevation, partially in section, of an embodiment of my invention. Fig. 2 is a view similar to Fig. 1 of another embodiment of my invention. Fig. 3 is a view similar to Figs. 1 and 2 of another embodiment of my invention. Fig. 4 is a perspective view of the apparatus of Fig. 1, acting to polish the surface of a table. Fig. 5 is a perspective view of the apparatus of Fig. 2 acting to polish the surface of stone. Fig. 6 is a perspective view of the apparatus of Fig. 3, acting as an abrader. Fig. 7 is a sectional perspective view of another embodiment of my invention.

a is the carrier for a polisher or abrader, having the clips or securing devices *b* for securing a polishing or abrading surface to the carrier.

c, c are uprights between which is the

frame *d* bored to form a cylinder *e* for the vibrator, which, as shown, is a piston 10 of a pneumatic tool, which receives its air by the pipe or hose *f* from a source of pressure supply.

g, g, are flexible metallic uprights connected to the uprights *c, c*. A rod *h*, surrounded by the handle *i*, extends between the upper ends of these rods.

In Fig. 4, this apparatus is shown acting on the surface of a table. In this figure, *j* represents the polisher, connected to the carrier by the clips *b*.

In Fig. 5, I have shown the apparatus of Fig. 2 polishing stone, the polisher *l* being connected to the carrier, as shown.

In the construction shown in Fig. 2, the uprights *k, k*, corresponding to the uprights *g, g*, of Fig. 1, are not flexible. In this construction, each upright *k* is connected to a piston, which works in a chamber formed in the handle. This forms air cushions, which relieves the operator from the transmission of the vibration of the vibrator.

In Fig. 3, the uprights *g, g* and *k* are dispensed with and a rod *r* extends outwardly from each upright *c*, surrounding which is a handle *m*, having a socket *n*, in which and abutting against the end of the rod *r* and the end of handle *m*, is a spring *o*.

In Fig. 6, I have shown the apparatus of Fig. 3, acting to abrade the surface of a block *p*. In this figure the abrading surface, for instance, sand paper *q*, is connected to the carrier *a*.

In Fig. 7 I have shown an apparatus in which the cylinder is formed integral with the base.

By the use of my improved apparatus, due to the combined action of the movement of the device over the surface to be polished or abraded, and its simultaneous vibration, a better and more rapid result is produced.

I have not illustrated or fully described the operation of the pneumatic piston here shown, as this is unnecessary, its specific construction and operative parts and connections being well known.

Having now fully described my invention, what I claim and desire to protect by Letters Patent is:

1. In combination, a polisher or abrader, a vibrator, and means to transmit the vibrations, but not the movement of, the vibrator to the polisher or abrader.

2. The combination with a polisher or abrader, of a pneumatic vibrator and a rigid connection between the cylinder of the vibrator and the polisher or abrader.
- 5 3. In combination, a polisher or abrader, a reciprocating vibrator and members rigid with the polisher or abrader adapted to transmit the vibrations in the reciprocation of the vibrator.
- 10 4. In combination, a polisher or abrader, a vibrator, means to transmit the vibrations, but not the movement of, the vibrator to the polisher or abrader, and a cushioning handle for the polisher or abrader.
- 15 5. The combination with a polisher or abrader, of a pneumatic vibrator and a rigid connection between the cylinder of the vibrator and the polisher or abrader, and a cushioning handle for the polisher or abrader.
6. In combination, a polisher or abrader, a reciprocating vibrator and members rigid with the polisher or abrader adapted to transmit the vibrations in the reciprocation of the vibrator, and a cushioning handle for the polisher or abrader.
- 20 25
- In testimony of which invention, I have hereunto set my hand, at Philadelphia, on this 29th day of June, 1911.
- WILBER H. VAN SICKEL.
- Witnesses:
M. M. HAMILTON,
E. E. WALL.