WILLIAM M. REYNOLDS.

Improvement in Dental-Drills.

No. 127,269. Patented May 28, 1872.

Fig 1

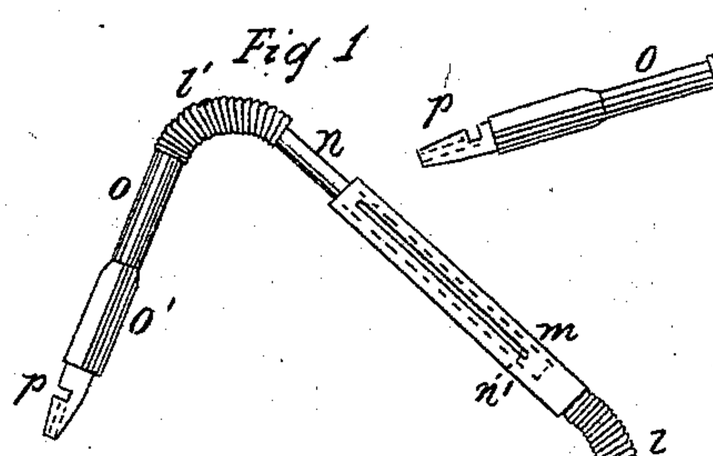


Fig 2

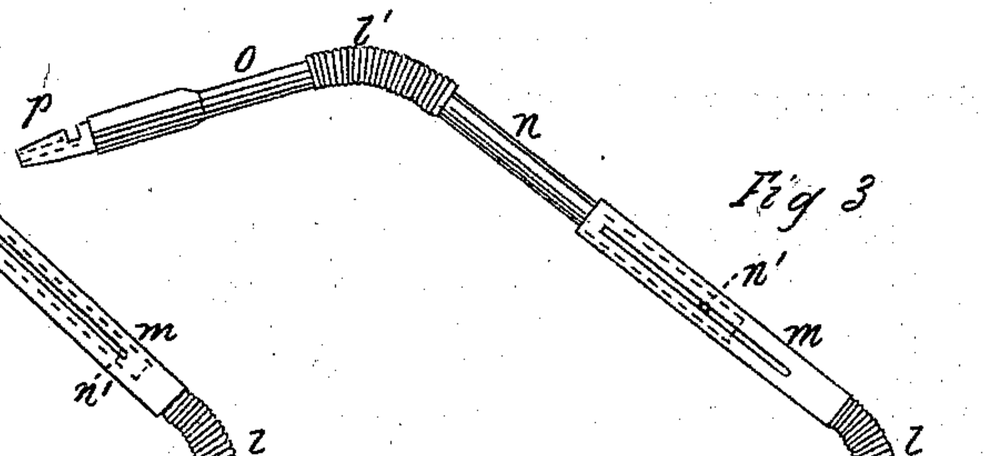
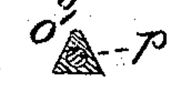
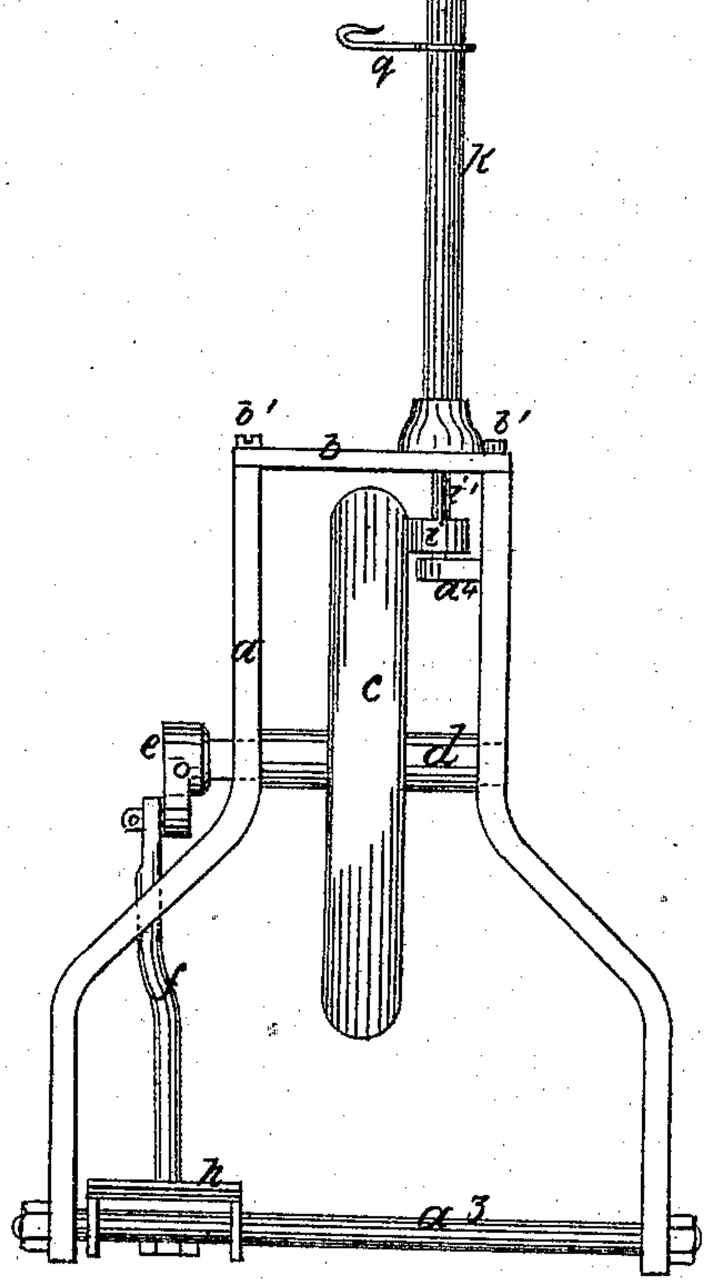
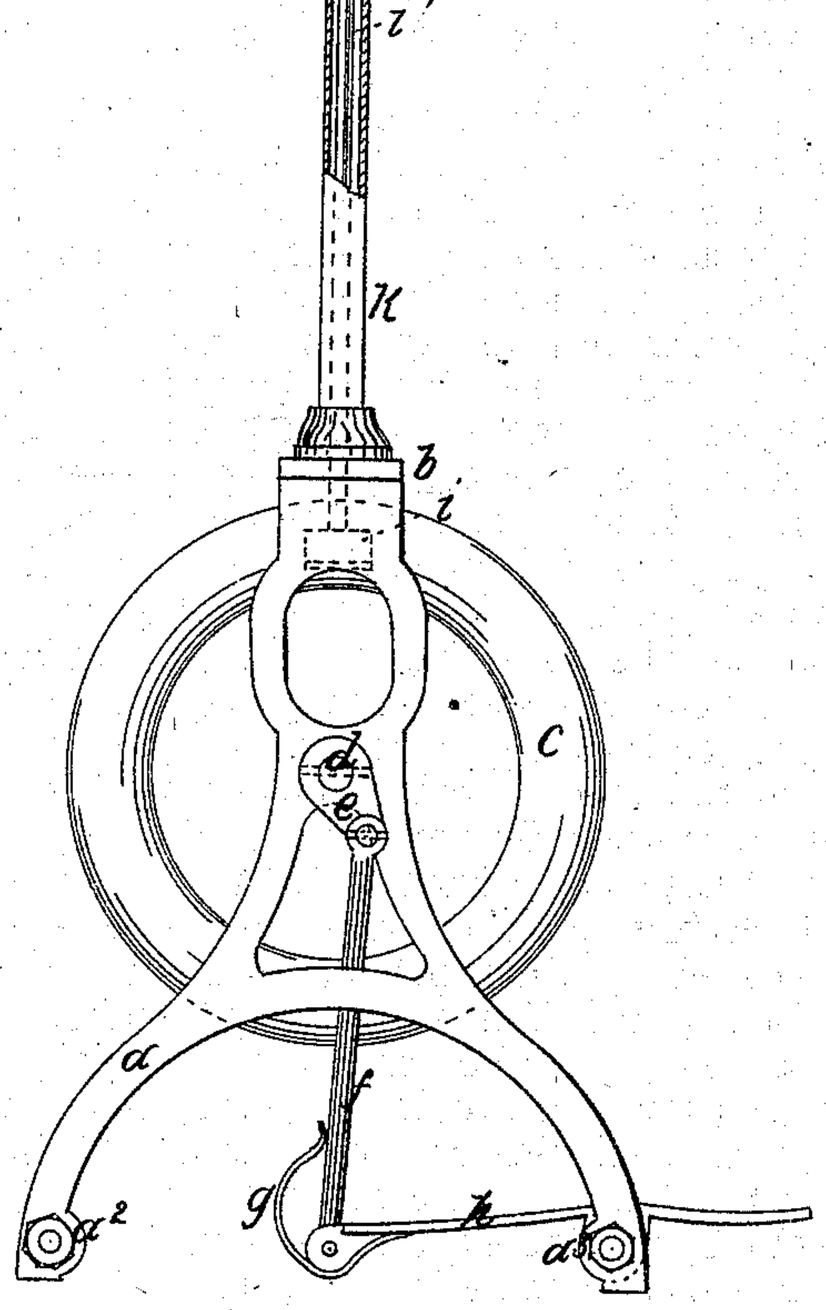


Fig 3.







Witnesses.

Alfred Shedlock
Curtis Reynolds.

Inventor.

William M. Reynolds

AM. PHOTO-LITHOGRAPHIC CO. N. Y. (OSBORNE'S PROCESS.)

127,269

UNITED STATES PATENT OFFICE.

WILLIAM M. REYNOLDS, OF NEW YORK, N. Y.

IMPROVEMENT IN DENTAL DRILLS.

Specification forming part of Letters Patent No. 127,269, dated May 28, 1872.

Specification describing an Improved Dental Excavator and Polisher, invented by WILLIAM M. REYNOLDS, of the city of New York, in the county and State of New York.

The object of my invention is to facilitate excavating or cleaning out the cavities of teeth preparatory to filling them with gold or other metals, and also for polishing the surface of the gold or other metals when the filling is completed.

In the accompanying drawing forming part of this specification, which is drawn to a scale of two inches to the foot—

Figure 1 is a front elevation; Fig. 2 is a side elevation; and Fig. 3 is a section of the handle or tool-carrier.

The two side frames *a* and a^1 are held together by the stay-bolts a^2 and a^3, securing the lower parts or feet of the frames, and by the cap *b*, secured to the tops of them by the screws *b'*. The fly-wheel *c* is fastened to the shaft *d*, which works in bearings in the frames *a* and a^1. It is made to revolve by the action of the foot upon the treadle *h*, it being connected to the shaft *d* by the connecting-pitman *f* and crank *e*, which is pinned on the end of the shaft projecting beyond the frame *a*. The treadle *h* rocks on the stay-bolt a^3 by means of lugs on the under side of it, through which the stay-bolt a^3 passes. The spring *g* is for the purpose of throwing or moving the crank-pin *e* off of the dead center. One end of it is secured to the treadle *h* and the other end bears against the connecting-rod *f*. On the cap *b* is a socket, in which the hollow rod *k* is screwed or secured by other means. On the top of the hollow rod *k* is a piece, *k'*, forming the upper bearing of the vertical shaft *i'*, which has its lower bearing in the lug a^4, standing out from the inside of the frame a^1. Motion is communicated to the shaft *i'* from the fly-wheel *c* by the pulley *i*, made of India rubber or other elastic material, bearing against the side of the wheel *c*. Upon the upper end of the vertical shaft *i'* is fastened the universal-joint *l*, which is also secured to an adjustable rod, said rod consisting of a hollow part, *m*, in which the small rod *n* is free to slide in and out, but is prevented from turning therein by means of the pin *n'*, fixed in the rod *n*, working in a slot cut through the hollow part *m*. The instrument-holder or socket *p* passes through the handle *o*, and is connected to the rod *n* by a universal-joint, *l'*. The universal-joints *l* and *l'* are shown as made of wire. They may be made of stiff rubber tubing, or the ordinary universal-joint may be used. The handle *o* is made at the part *o'* as shown at Fig. 3—that is, a section of it is an equilateral triangle. The object of making it this form is that it is held firmer in the hand than a round one would be, and it does not turn round in or tire the hand so much, as the thumb and two first fingers lie along the faces of the triangular part *o'* in a perfectly natural and free position. The hook *q* on the upright hollow rod *k*, shown at Fig. 1, is for the purpose of keeping the handle *o* out of the way when the machine is not in use by pressing the rod *n* in the hook.

I claim—

1. The handle *o*, with the part *o'* made three-sided, a section of which is an equilateral triangle, through which the socket *p* turns, as set forth, when used in a dental drill, substantially as and for the purposes set forth.

2. The treadle *h* and fly-wheel *c*, in combination with the friction-pulley *i* and upright shaft *i'* revolving in the step a^4, constructed and operated for a dental drill, substantially as set forth.

3. The combination of the handle *o*, upright shaft *i'*, adjustable rods M N, and flexible joints *l* and *l'*, constructed and operated substantially as set forth.

WM. M. REYNOLDS.

Witnesses:

ALFRED SHEDLOCK,

ROBERT REYNOLDS.