

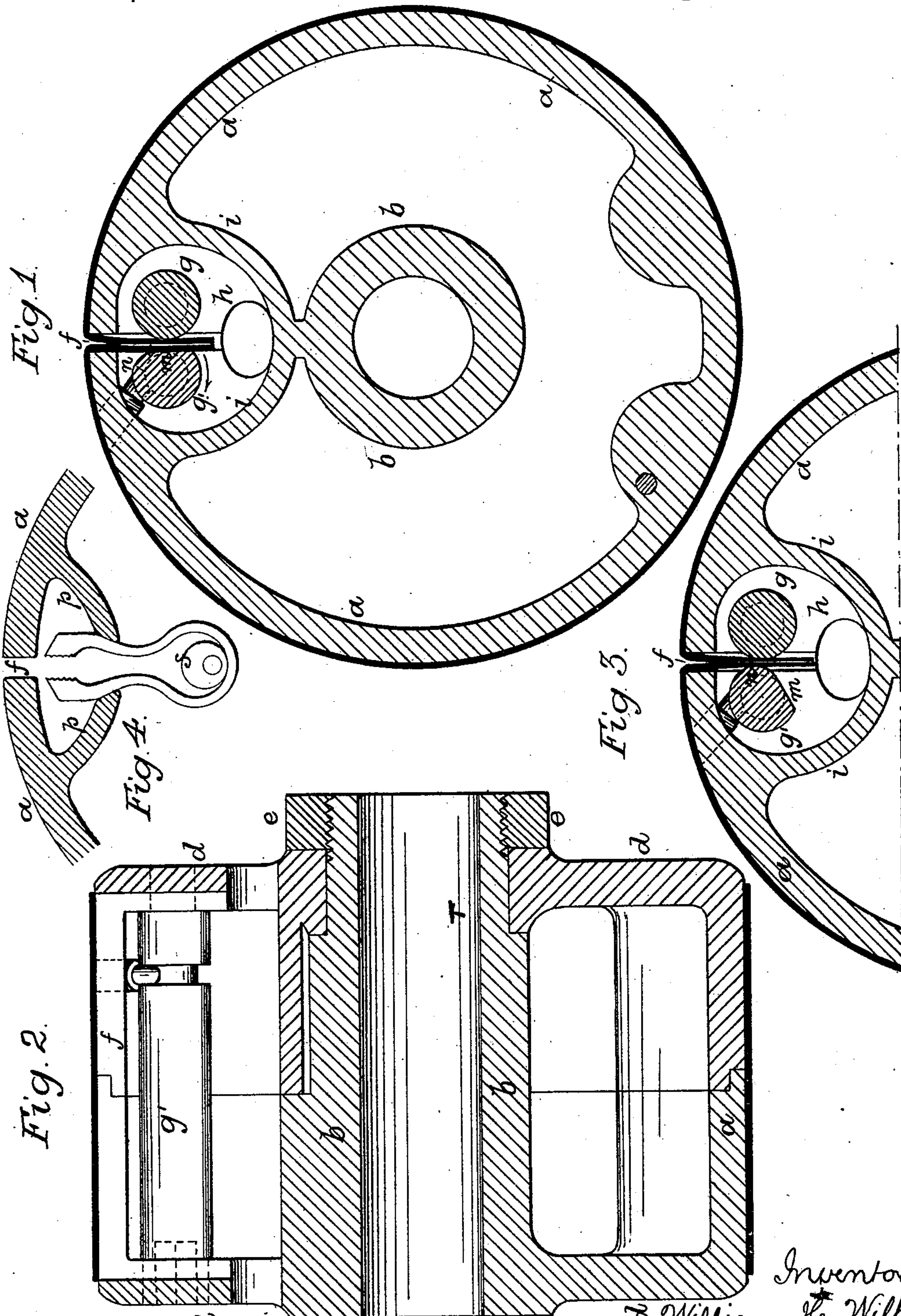
(No Model.)

W. H. WILHELM.

POUNCING WHEEL FOR HATS, &c.

No. 247,140.

Patented Sept. 13, 1881.



Witnesses }
H. L. Fulemwooder.
Harry Smith.

Inventor
W. H. Wilhelm
by his Attorneys
Hewson & Sons

UNITED STATES PATENT OFFICE.

WILLIAM H. WILHELM, OF READING, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO HENRY C. HECKENDORN, OF SAME PLACE.

POUNCING-WHEEL FOR HATS, &c.

SPECIFICATION forming part of Letters Patent No. 247,140, dated September 13, 1881.

Application filed July 29, 1881. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. WILHELM, a citizen of the United States, residing in Reading, Berks county, Pennsylvania, have invented certain Improvements in Pouncing-Wheels for Hats, &c., of which the following is a specification.

My invention relates to certain improvements in what are known as "pouncing-wheels"—that is to say, wheels covered with sheets of sand-paper or other abrading material—which are used for treating hats and other fabrics, the object of my invention being to provide means for firmly securing the ends of the strip or strips of sand-paper and for drawing the latter tight upon the surface of the wheel.

In the accompanying drawings, Figure 1 is a transverse section of my improved pouncing-wheel; Fig. 2, a longitudinal section of the same; Fig. 3, a sectional view of a portion of the wheel, showing some of the parts in a different position from that shown in Fig. 1; and Fig. 4, a view of a modification.

The wheel consists of a cylindrical shell, *a*, a hub, *b*, and ends *d*, the wheel in the present instance being made in two parts, one part comprising the hub *b*, one end *d*, and half of the shell *a*, and the other part comprising the remaining half of the shell and the opposite end *d*, the latter being slipped onto the hub and held thereon by a nut, *c*. This construction is not essential, however, as the entire structure, comprising the hub, shell, and ends, can be cast in one piece.

In the shell *a* is formed a transverse slot, *f*, extending throughout almost the entire width of the shell, and within the wheel are arranged a pair of transverse rolls, *g g'*, the journals of which are adapted to suitable bearings in the ends *d* of the wheel, the rolls being, in the present instance, contained within a chamber, *h*, which, however, is not necessary in all cases, the web *i*, inclosing said chamber, being employed in the present instance to support the shell *a* adjacent to the slot *f*. The roll *g* is a plain cylindrical roll, but the roll *g'* is reduced at one side, so as to form a flat portion, *m*, and cam *n*, as shown in Figs. 1 and 3.

The strip or strips of sand-paper are applied

to the wheel, and the ends of the same are thrust through the slot *f* in the shell *a*, and between the rolls *g g'*, the latter being in the position shown in Fig. 1—that is to say, with its flat face *m* adjacent to the roll *g*. The roll *g'* is then turned in the direction of the arrow by means of a suitable instrument introduced into a recess in the end of the roll, (see dotted lines, Fig. 2,) the effect of this movement being to bring the cam portion *n* of the roll *g'* into action, thus causing the gripping of the ends of the strip or strips of sand-paper between the rolls, and at the same time drawing said ends inward, so as to tighten the sand-paper on the surface of the roll. (See Fig. 3.)

Suitable pawl-and-ratchet devices may, if desired, be used in connection with one or both of the rolls *g g'*, to prevent the same from turning backward after the tightening operation is concluded.

It will be seen that the tightening operation in my improved wheel is effected by a direct inward pull upon the ends of the strip or strips of sand-paper, the ends being firmly secured between a pair of clamping devices and the stretching of the strip or strips being effected over a rigid shell—that is to say, a shell without objectionable hinge-joints therein—the clamping and tightening of the strips being much more effective than when a single drum having a slot for the reception of the ends of the strips is employed—a plan heretofore practiced.

Rolls are not indispensable in carrying out my invention. For instance, in Fig. 4 I have shown a modification, in which a pair of jaws are adapted to clamp the ends of the strip of sand-paper, these jaws having inclined portions at the rear, and being drawn through a slot in a web, *p*, by the action of a cam, *s*, so that as the cam is turned the jaws serve first to firmly gripe the ends of the strip and then to draw said ends inward.

Segments of rolls may also be used in place of the rolls shown, if desired, and in some cases the cam shape of the roll *g'* may be dispensed with, the rolls or segments of rolls in such case being preferably roughened, so as to take a firm hold on the ends of the strip or strips.

I claim as my invention—

1. A pouncing-wheel in which a shell, *a*, having a transverse slot, is combined with a pair of internal gripping devices adapted to clamp
5 the ends of a strip or strips of sand-paper thrust through the slot, and to draw said ends directly inward, as set forth.

2. The combination of the shell *a*, having a slot, *f*, with an internal clamping device, consisting of a pair of gripping-rolls or roll-segments located adjacent to said slot and capable of rotation, as set forth.

3. The combination of the shell *a*, having a slot, *f*, with an internal clamping device, comprising a roll or roll-segment, *g*, and a roll or
15 roll-segment, *g'*, a portion of which is made in the form of a cam, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM H. WILHELM.

Witnesses:

J. S. RITTENHOUSE,

JNO. G. L. BROWNWELL.