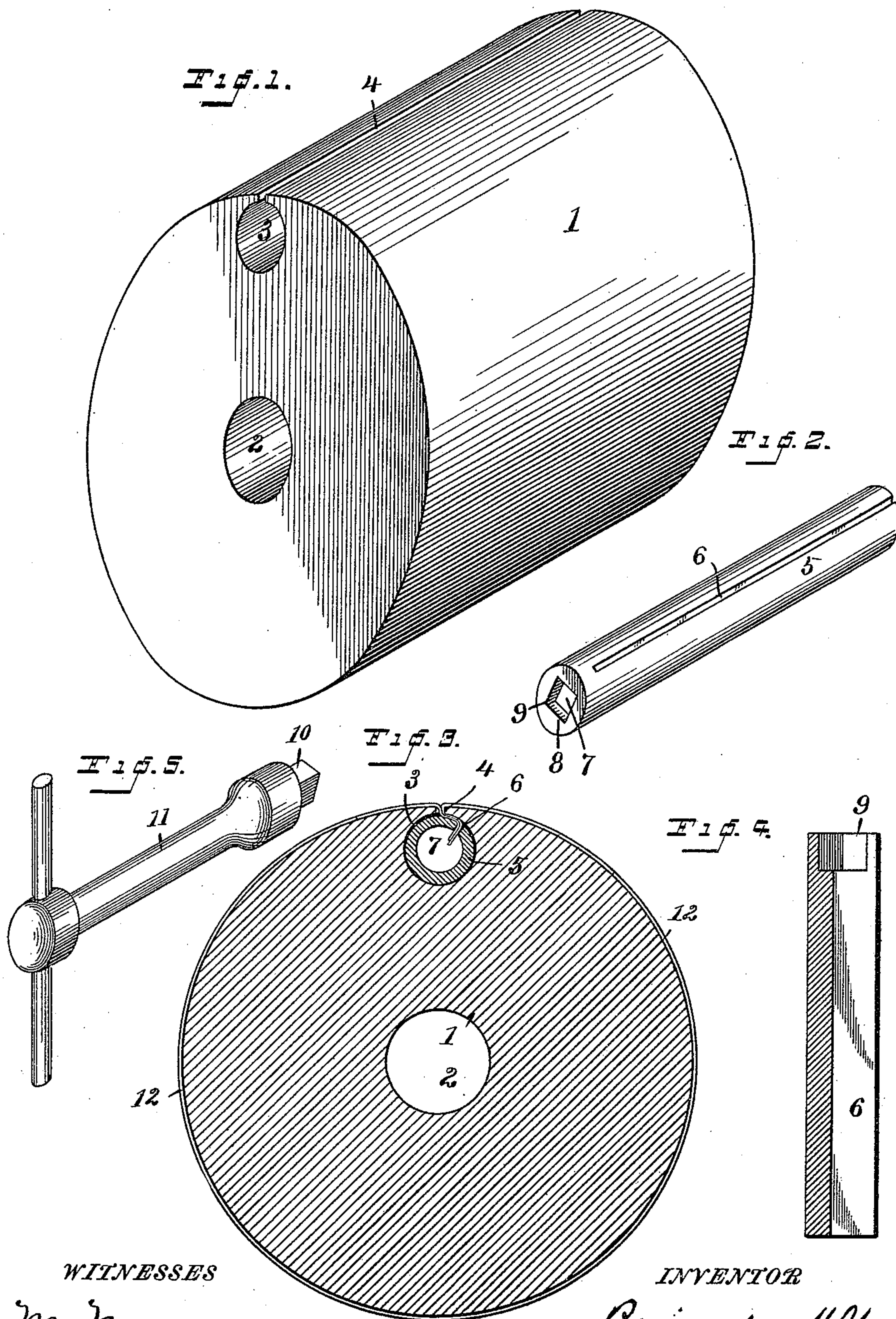


(No Model.)

B. M. WALSH.
POUNCING ROLLER.

No. 438,786.

Patented Oct. 21, 1890.



WITNESSES

C. M. Newman,
A. J. Munson.

INVENTOR

Benjamin M. Walsh
By A. M. Wooster
att'y.

UNITED STATES PATENT OFFICE.

BENJAMIN M. WALSH, OF BRIDGEPORT, CONNECTICUT.

POUNCING-ROLLER.

SPECIFICATION forming part of Letters Patent No. 438,786, dated October 21, 1890.

Application filed January 17, 1890. Serial No. 337,220. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN M. WALSH, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Pouncing - Rollers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention is applicable to all classes of machines in which sand-paper or other material is used to pounce, smooth, or finish articles in process of manufacture, and is especially adapted to retaining the strips of sand-paper upon pouncing-rollers used in the manufacture of hats. It is of course well understood that sand-paper when used upon rollers rotating at a high rate of speed quickly becomes worn and has to be renewed, and that considerable time is lost in removing the strips of sand-paper from the rollers and fitting and securing new ones thereon. In order to avoid this difficulty and make the operation of removing a strip of sand-paper and placing a new one in position a perfectly simple one and capable of being performed with but an instant's loss of time, I have devised the simple and novel means of securing strips of sand-paper upon rollers, of which the following description, in connection with the accompanying drawings, is a specification, numbers being used to denote the several parts.

Figure 1 is a perspective of my novel pouncing-roller with the shell removed; Fig. 2, a perspective of the shell detached; Fig. 3, a cross-section of the roller with a strip of sand-paper thereon and engaged by the shell and locked in position for use; Fig. 4, a longitudinal section of a shell having simply a slot in one side instead of the circular opening, as in the other form; and Fig. 5 is a perspective of a key for turning the shell to lock the strip of sand-paper in position for use.

1 denotes the roller, which, so far as my invention is concerned, may be of any suitable shape or size, and of any preferred material—for example, wood, metal, or vulcanite fiber.

2 denotes a hole through the center to receive a shaft, (not shown,) to which the roller is secured in any suitable manner; 3, a longitudinal hole through the roller near the periphery thereof, and 4 a slot leading from said hole outward radially to the periphery of the roller.

5 denotes a cylindrical shell, which just closely fits in hole 3 and is provided with a longitudinal slot 6, leading from the periphery into the interior thereof. The slot may simply lead straight into the shell, as shown in Fig. 4; but I preferably make a cylindrical opening 7, extending from one end almost to the other, one end of the shell in this form being partially closed by a web 8. This web is used to give strength and rigidity to the shell, and also in order that an angular opening 9 may be made therein to receive a corresponding projection 10 on a key 11. In the other form—that is, the one shown in Fig. 4—slot 6 in the shell extends from end to end. The web at one end is dispensed with, and the angular opening to receive the key is formed in the end of the shell itself. The shell is preferably made of metal, and may be either cast and then finished or, if preferred, the central opening or slot, or both, may be formed in a solid piece of metal.

12 denotes a strip of sand-paper or other material suitable for the special purpose required upon the periphery of the roller.

The operation is as follows: The strip is cut slightly longer than the periphery of the roller, but does not require to be accurately fitted. The shell is turned by the key so that the slot in the shell will register with the slot in the roller. The two ends of the sand-paper are then passed through the slot in the roller into the slot in the shell, and the latter is rotated in either direction, as clearly shown in Fig. 3, sufficiently to draw the sand-paper tightly about the roller.

Suitable means may be provided to lock the shell in position, although in practice I have found it wholly unnecessary, and for that reason have shown no means of locking the shell. I make the shell to fit closely in the hole in the roller, and find the friction sufficient to hold it just where it is placed, no matter at how

high a rate of speed the roller may be rotated, and that it will stay in position until the paper is worn out.

Having thus described my invention, I
5 claim—

The combination, with a roller having a longitudinal circular opening near its periphery and a slot leading therefrom, of a shell adapted to fit in the opening in the roller and having a circular opening closed at one end by a

web, a slot leading from the opening in the shell to the periphery thereof, and an angular opening in the web, adapted to receive a key, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in
15 presence of two witnesses.

BENJAMIN M. WALSH.

Witnesses:

A. M. WOOSTER,
ARLEY I. MUNSON.