

J. GREAVES.  
Rolls for Carding-Machines.

No. 152,628.

Patented June 30, 1874.

FIG. 1.

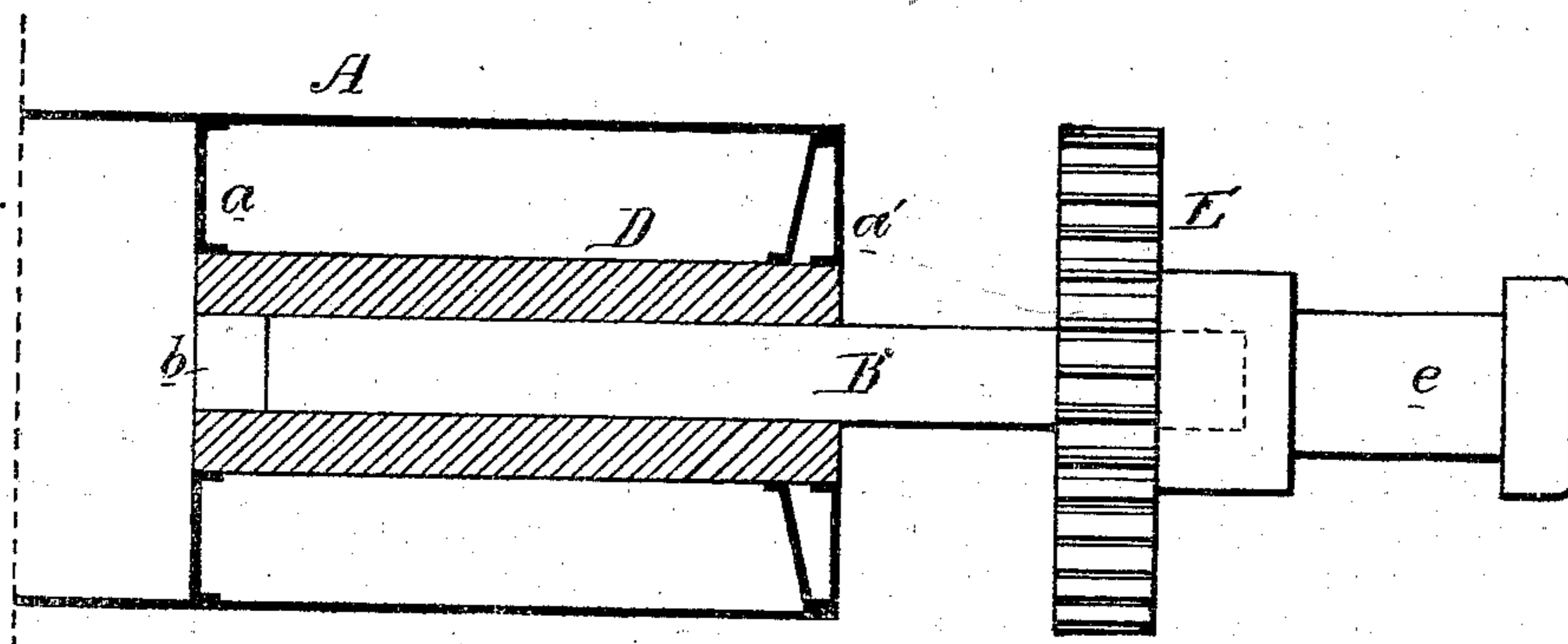
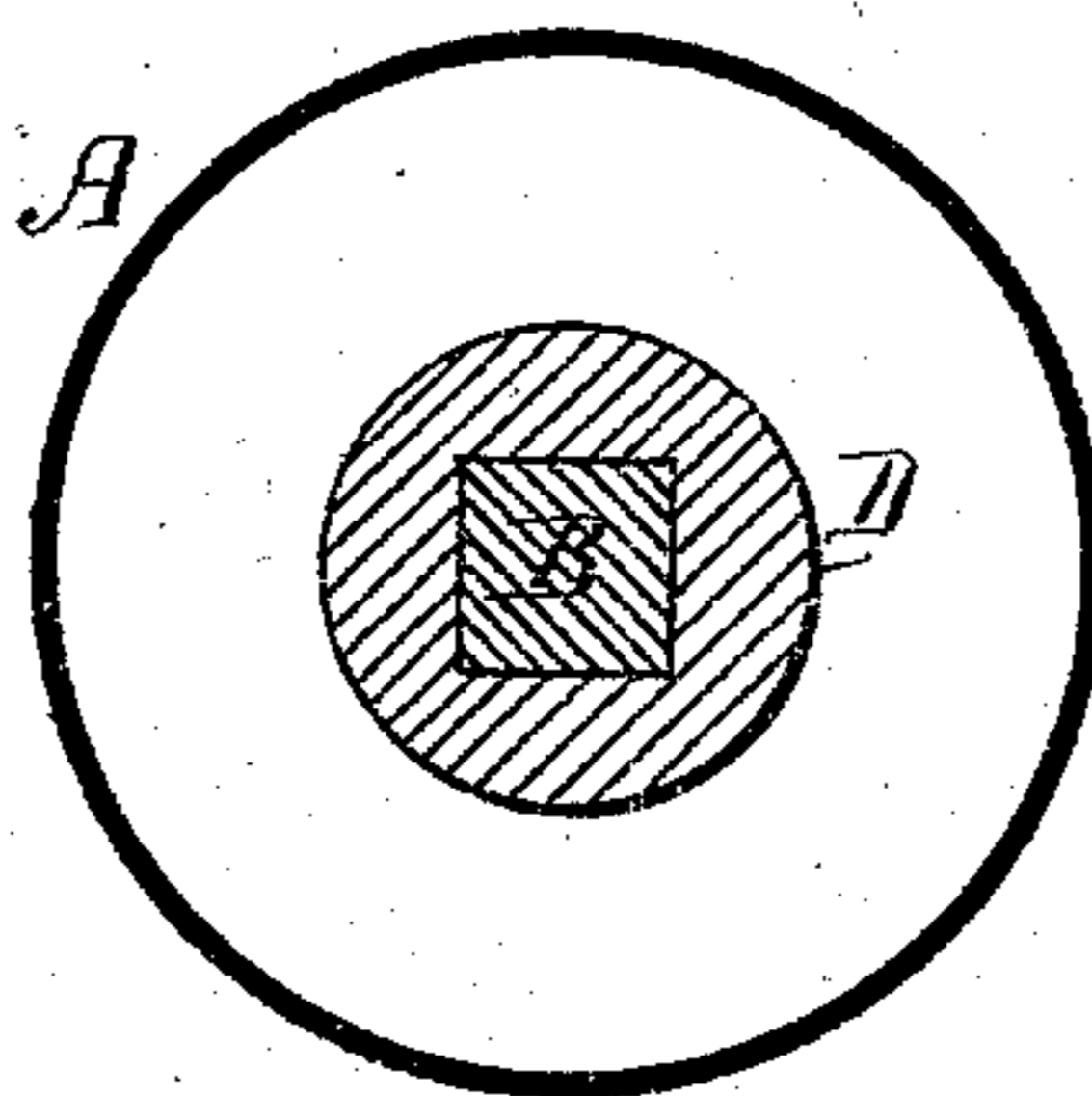


FIG. 2.



Witnesses, Harry Smith.  
Thomas M. Hoan

James Greaves  
by his Atty.  
Howe and Son.

# UNITED STATES PATENT OFFICE.

JAMES GREAVES, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT IN ROLLS FOR CARDING-MACHINES.

Specification forming part of Letters Patent No. **152,628**, dated June 30, 1874; application filed April 13, 1874.

*To all whom it may concern:*

Be it known that I, JAMES GREAVES, of the city of Philadelphia, Pennsylvania, have invented an Improvement in Card Rollers and Spindles, of which the following is a specification:

The object of my invention is to prevent the rapid wearing away of the spindles of card-rollers, by causing the roller A to reciprocate on, and rotate with, a spindle, B, arranged to revolve with the driving-wheel in fixed bearings, as shown in the longitudinal section, Figure 1, and transverse section, Fig. 2, of the accompanying drawing.

It has been the usual practice to secure the spindle of a card-roller directly to the latter, and to cause it to reciprocate in, and rotate with, a driving-wheel arranged to revolve in fixed bearings, the spindle being round, and furnished with a key or feather, adapted to a groove in the eye of the wheel. These reciprocating and rotating spindles wear away rapidly, and the necessity of renewing them from time to time is a source of delay and expense, which my invention is intended to obviate.

The card-roller A, one end only of which is shown in the drawing, is, as usual, made of tinned plate, and has a center-piece, D, which is secured to the roller through the medium of annular plates *a* and *a'*, or in any other suitable manner, a square central opening, *b*, extending entirely through the center-piece, for the reception of the square spindle B, which is secured to, or forms a part of, the driving-wheel, the journal *c* of the latter being arranged to revolve in the usual fixed bearings on the frame of the engine. A horizontal reciprocating motion is imparted to the card-roller A in the usual manner; and the desired rotary motion is transmitted to it through the wheel E and its spindle B.

By this arrangement an opportunity is afforded for making such a long bearing for the

spindle that the wearing away of the same must be a very slow process, for the center-piece D, which forms this bearing, can be extended within the roller to any desired distance. The length of bearing shown in the drawing will, however, suffice.

The bearing for the square spindle may be effectually lubricated by introducing oil through a suitable opening in the end of the roller, and permitting the oil to pass through holes in the center-piece.

The said center-piece may, if desired, be made of steel or brass; but I have found that it may be made to advantage of ordinary cast-iron.

Whenever it becomes necessary to renew the center-piece, it can be readily detached from the roller to make way for a new one. In like manner the square spindle B may be so connected to the wheel that it can be readily detached therefrom; but such renewals will only be required at very long intervals.

Although I have alluded to the spindle B as being square, and adapted to a square hole in the center-piece, the spindle may be of a triangular or other shape, which will insure the turning of the roller with the spindle, the opening in the center-piece being of a form to correspond with that of the spindle.

I claim as my invention—

The tin roller A and its removable center-piece or bearing D, combined with the spindle B and wheel E, the roller reciprocating on the shaft, and all being constructed and combined as set forth.

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

JAMES GREAVES.

Witnesses:

WM. A. STEEL,  
HUBERT HOWSON.