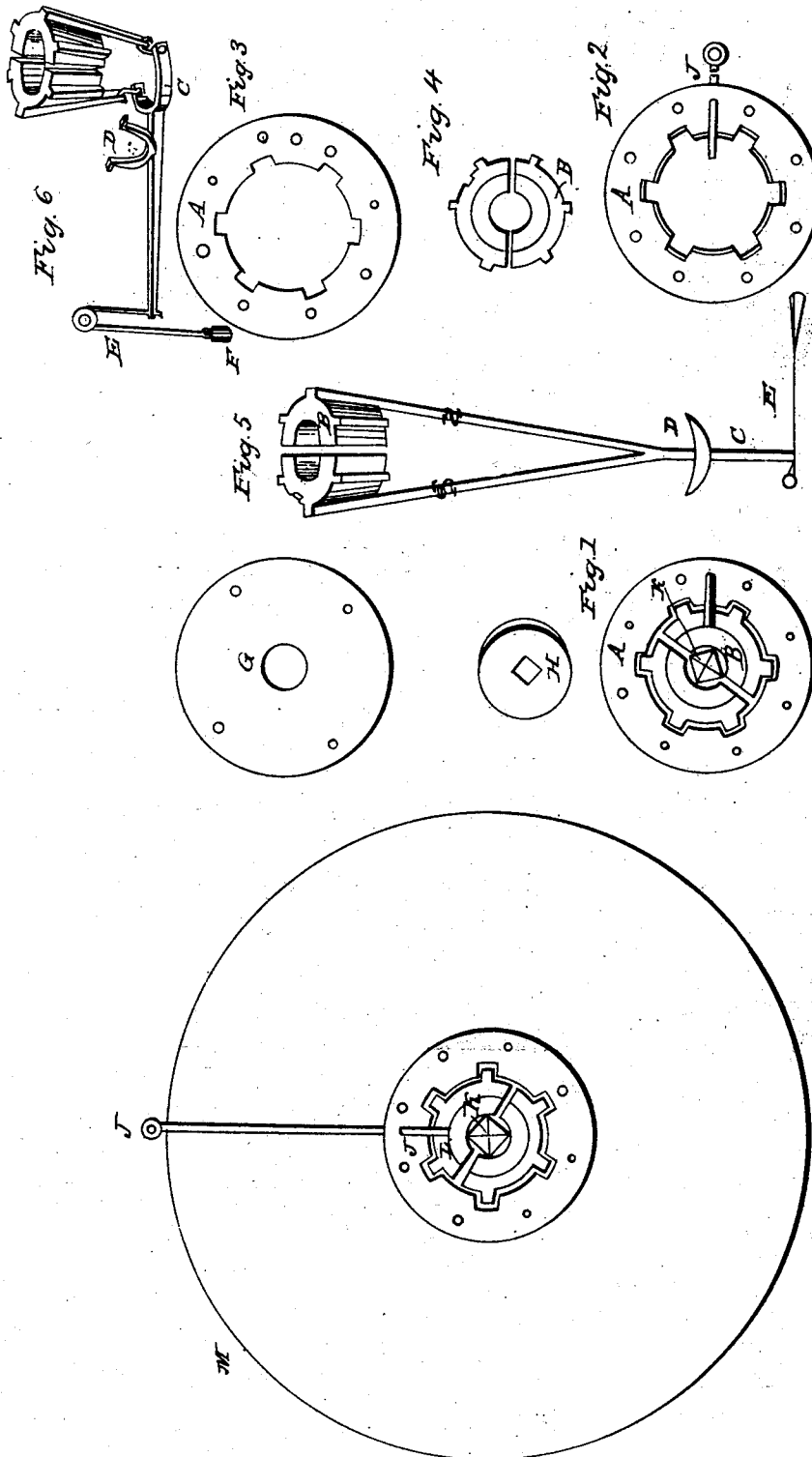


H. FLINCHBAUGH.  
Tightening Bush for Mills.

No. 984.

Patented Oct. 19, 1838.



# UNITED STATES PATENT OFFICE.

HENRY FLINCHBAUGH, OF LAMPETER TOWNSHIP, PENNSYLVANIA.

## SELF-TIGHTENING BUSH FOR MILL-SPINDLES.

Specification of Letters Patent No. 984, dated October 19, 1838.

*To all whom it may concern:*

Be it known that I, HENRY FLINCHBAUGH, of Lampeter township, in the county of Lancaster and State of Pennsylvania, miller, have invented a new and useful Improvement in Grist or Flour Mills, called a "Self-Tightening Bush for Mill-Spindles;" and I do hereby declare that the following is a full and exact description.

10 I make the bush (A) of cast metal, leaving a hole in the center about six inches in diameter. In this hole, at equal distances, are six grooves, gradually tapering so as to be one half inch deeper at the top than at the bottom. I have then two pieces of cast metal called followers (B), which when put together form a circle around the spindle. On the outside of these are projections suited to the grooves mentioned in the bush. When 20 these followers are put in their place around the spindle (K) and the customary piece of stout leather is inserted between the followers and spindle the top of the followers and bush will be in the same plane and form a nearly even surface. There is still, however, an opening between the two followers which 25 suffer them to tighten on the spindle as they sink downward. On the lower end of each of these followers is a projection extending some distance below the followers. In these are two iron links which connect with a forked lever (C) (Fig. 6). This lever has near its middle, two projections, or props, (D) which rest upon the bottom of 30 the bed stone; and at its extremity is a cord (E), passing through a pulley. To the end of this cord a weight or power (F) is at-

tached; by this means the followers are always kept down to the spindle; and by means of the tapering grooves they are tightened to the spindle. In this bush are 10 four holes, at equal distances, through which bolts are let which screw it fast to a plate beneath the bed stone. There are four other holes in the bush into which wooden plugs 15 are driven for the purpose of nailing upon the bush a sheet iron covering, (G) which prevents all manner of dirt from entering between the spindle and followers. A sheet iron plate (H) of lesser diameter with a 20 square hole in the center to fit on the square end of the spindle, serves further to exclude all dirt. And for the purpose of keeping the spindle sufficiently oiled, at all times, a small tube (I) is made of tin or copper 25 which, after passing down through the husk and under the bed stone, comes up through the bush, through an opening made for that purpose and communicates with the spindle and followers, as at (L). The mouth of 30 this tube extends a short distance above the husk, so as to give sufficient head to force the oil from the mouth to the spindle.

What I claim as my invention and desire to secure by Letters Patent is— 35

The combination of the bush and followers constructed and acting as herein described, and also the within described method of conveying the oil to the spindle.

HENRY FLINCHBAUGH.

Witnesses:

SAML. DALE,  
JAMES J. DALE,