

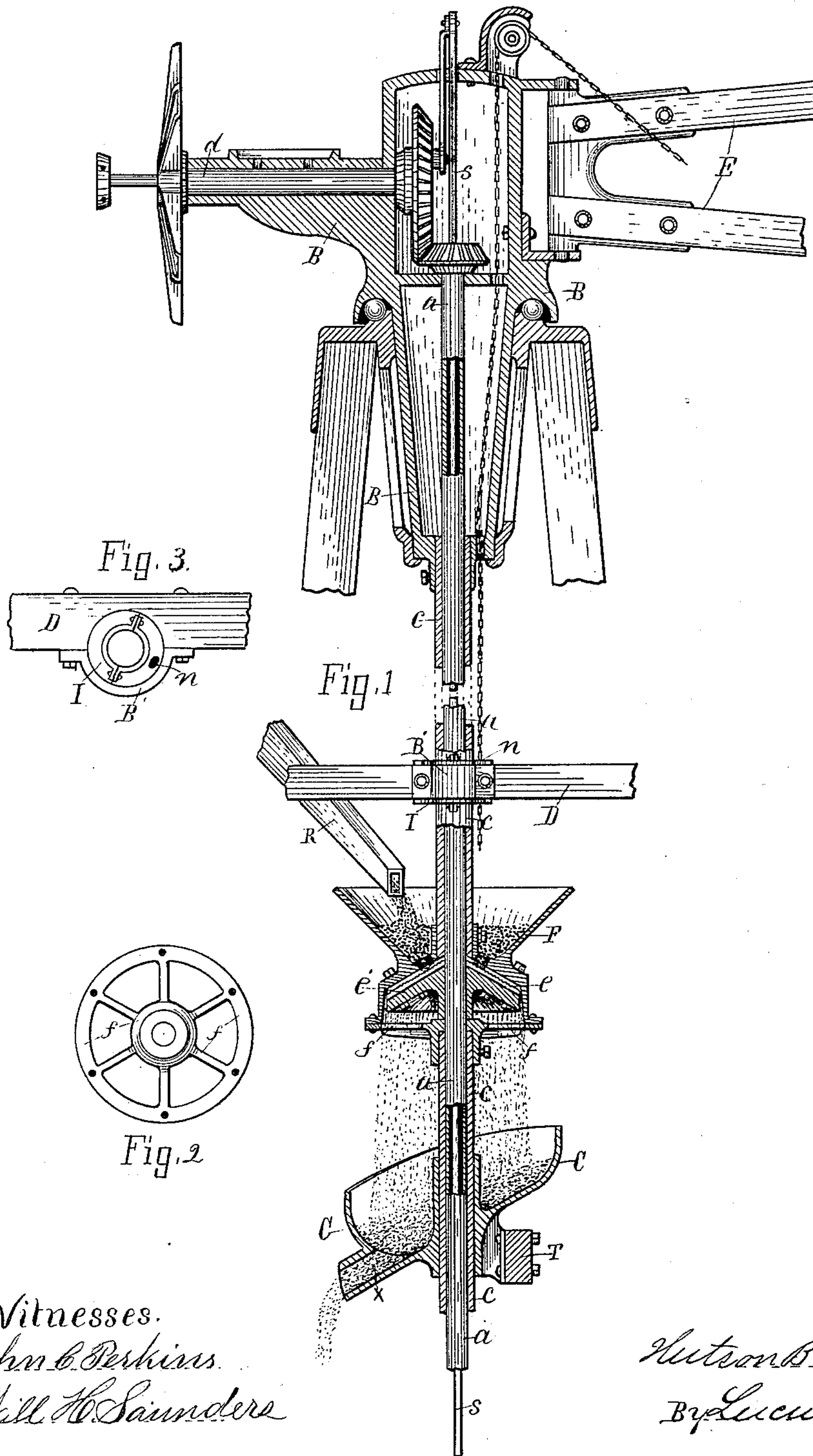
(No Model.)

H. B. COLMAN.

POWER WINDMILL.

No. 318,453.

Patented May 26, 1885.



Witnesses.  
John C. Perkins.  
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# UNITED STATES PATENT OFFICE.

HUTSON B. COLMAN, OF KALAMAZOO, MICHIGAN.

## POWER-WINDMILL.

SPECIFICATION forming part of Letters Patent No. 318,453, dated May 26, 1885.

Application filed February 17, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, HUTSON B. COLMAN, a citizen of the United States, residing at Kalamazoo, county of Kalamazoo, State of Michigan, have invented a new and useful Wind Grinding-Mill, of which the following is a specification.

This invention relates to grinding-mills connecting with and deriving their power from a wind-engine; and it has for its object certain improvements hereinafter described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a vertical section, parts being left full and parts broken away; Fig. 2, a plan of a detail in Fig. 1, hereinafter described; and Fig. 3 is a top view of the beam D in Fig. 1 and parts thereon.

The upper part of Fig. 1 shows a common style of wind-engine, in which *d* is the wind-wheel shaft; B, the bearing-support therefor, swiveled in the usual manner to turn in the cap or top of the derrick; and *c*, the pendent tubular extension of the bearing-support B, having guide-bearings B' in the beam D, Figs. 1 and 3.

*n* is a hole through which the chain which is used to swing the vane E is passed.

The tubular extension *c* rotates with the bearing-support B when the wheel shifts from one point of the compass to another. The power-shaft *a* is concentric with the extension *c*, and forms operative engagement with the wheel-shaft *d*.

In Fig. 1 are shown the two grinding-burrs of a grinding-mill, which constitute active and passive machine parts of a complete operative mill. These burrs surround the tube *c* and power-shaft *a*, and rotate with them, the passive burr *e* being connected with the tube *c*, and the active burr *e'* being connected with the power-shaft in operative relation with the upper and passive burr, *e*. Thus in the operation the lower active burr rotates with the power-shaft to do the grinding when the wind-wheel is propelled by the wind, and the upper passive burr remains stationary, except when the wheel shifts from one point of the compass to another. Then it rotates with the tubular shaft *c*.

The bowl F of the hoppers surrounds the shafts *a*, and may be secured to the shaft *c*, as in Fig. 1, (or it may have a fixed support,) in

which case a common fixed feed-spout, R, may be employed to feed the grain in the bowl, as the circular top of the bowl is never thrown out of the plane shown in the drawings by the rotation of the shaft *c*.

At *f* is shown a casting, Fig. 2, having a central collar, with which a further extension of the tube or shaft *c* is connected when desired. This casting is secured to the base of the bowl F.

C is a fixed tray surrounding the vertical shafts and having a delivery at *x*. It will be understood, of course, that the grain in the bowl F runs through perforations in the upper burr, and after being reduced between the two burrs falls into the tray C or any other suitable receptacle.

The object of extending the shafts *c* *a* below the grinding-mill, if so extended, would be for the connection of other machinery; hence this feature in Fig. 1 simply shows such an extension of the shafts, but without any connected machinery to said extension.

*s* shows how a pump-rod may be passed down through a tubular shaft, *a*, passing through all connecting machinery to the ground below.

If preferred, the upper burr, *e*, may be connected with a power-shaft, and thus become the active machine part, instead of the lower burr, *e'*, as also may the order of the concentric shafts be reversed, thus showing a reverse of the order of parts here shown, which is governed by mechanical judgment.

Having thus described my invention, what I claim as new is—

In a wind grinding-mill, the combination of a wind-wheel shaft, a swiveled bearing-support for said shaft, a vertical shaft-extension of the bearing-support, a power-shaft concentric with the shaft-extension and forming operative engagement with the wheel-shaft, and a grinder having an active and a passive grinding-burr centrally connecting with and surrounding said concentric shafts in operative relation, substantially as set forth.

In testimony of the foregoing I have hereunto subscribed my name in presence of two witnesses.

HUTSON B. COLMAN.

Witnesses:

GEO. O. B. HALL,  
SAM FALZ.