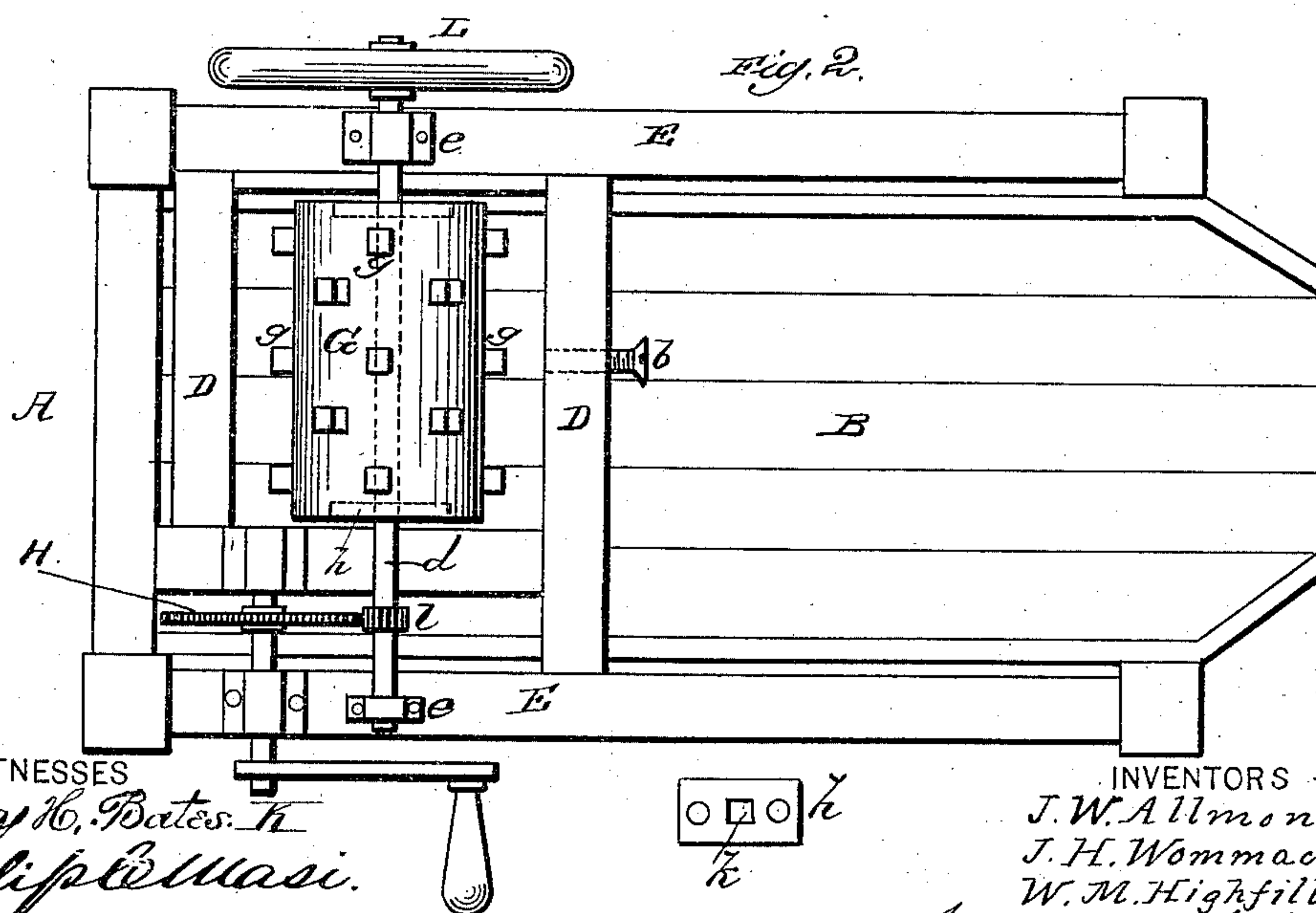
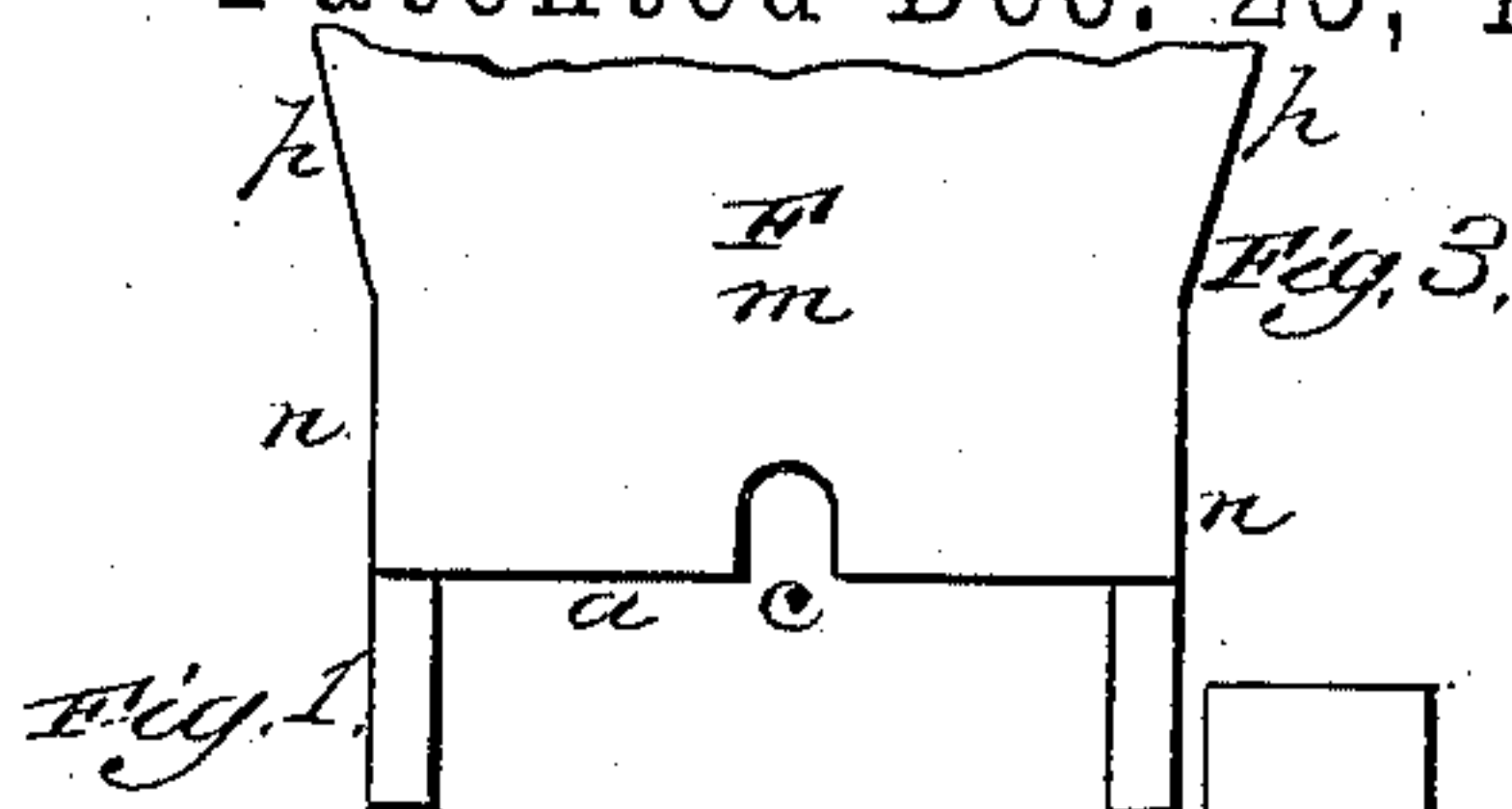


J. W. ALLMON, J. H. WOMMACK & W. M. HIGHFILL.
CIDER MILL.

Patented Dec. 25, 1883.



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UNITED STATES PATENT OFFICE.

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CIDER-MILL.

SPECIFICATION forming part of Letters Patent No. 290,657; dated December 25, 1883.

Application filed January 4, 1883. (No model.)

To all whom it may concern:

Be it known that we, J. W. ALLMON and J. H. WOMMACK, of Marshfield, in the county of Webster, and WILLIAM M. HIGHFILL, (all
5 citizens of the United States,) residing at Fair Grove, in the county of Greene, all in the State of Missouri, have invented certain new and useful Improvements in Cider-Mills; and we do declare the following to be a full, clear,
10 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, reference being had to the accompanying drawings, and to letters or figures of reference marked
15 thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of a vertical sectional view of our mill. Fig. 2 is a plan view of the same with hopper removed; and Fig. 3 is a side view of the hopper, upper portion broken away.

This invention has relation to cider-mills; and it consists in the construction and novel arrangement of devices, as hereinafter set forth, and particularly pointed out in the claims appended.

In the accompanying drawings, the letter A designates the frame of the mill, consisting of strong uprights and horizontal beams.

30 B indicates the inclined floor extending under the press-follower, the press being of any ordinary construction, and not shown in the drawings.

In the upper part of the frame is formed, by
35 means of cross-bars D and longitudinal bars E, a seat for the hopper F, which is shouldered at *a*, so that its rabbeted lower end fits into said seat, and is secured therein by a screw, *b*. Notches *c* are made in the lower edges of the
40 lateral walls to admit the square shaft *d* of the cylinder, said shaft extending across the frame, and having its journals seated in bearings *e* on the upper horizontal bars of the frame.

The cylinder G is of wood, studded with
45 teeth *g*, having angular ends, which project sufficiently from its surface to have the requisite grinding or scraping action upon the apples. The cylinder is provided with metallic plates *h* at its ends, having square apertures

k, through which the shaft passes, and which
50 serve to secure the shaft and cylinder together, preventing the latter from rotating on the former.

On the shaft *d* is secured a pinion, *l*, which is turned by the large toothed wheel H on the
55 driving-shaft K, and on the outer end of the cylinder-shaft is keyed a fly-wheel, L.

The hopper-box F is formed with vertical parallel side walls, *m*, and with end walls, which are partially vertical and parallel, as
60 shown at *n*, and partially inclined or flaring, as indicated at *p*. The inclines *p* are above the vertical walls *n*, as shown in the drawings.

N designates a transverse ledge inside the hopper, overhanging the front of the cylinder
65 partially, and being located quite close to its studded surface, so that it acts as a clearer. Above the rear portion of this cylinder is attached, to the rear incline of the hopper, the adjustable concave S, which consists of a wedge-
70 shaped piece or block, *r*, having a concave face, *s*, extending upward and over the cylinder, and downward between the cylinder and the rear wall of the hopper. The concave face *s* is
75 made of metal, (preferably galvanized iron,) and is formed with a number of small projections, *t*, over its surface, which are designed to catch and hold the apples until they are en-
80 tirely scraped away by the grinding-cylinder G. By adjusting the concave upward, the distance between its face and the cylinder is increased, and the grinding will be coarse. When the concave is lowered, its face is brought
85 closer to the cylinder, and the grinding will be finer.

This grinding-mill is of simple construction, and its parts are easily separated for cleaning. When the single screw *b* is withdrawn, the hopper can be removed, and the concave can be readily taken out or adjusted when its fast-
90 ening-screw is turned outward.

The concave face can be removed when worn out at small expense.

The cylinder, being of wood, will not color the cider.

The gearing is arranged to give great speed
95 to the cylinder, so that a machine of ordinary size will grind a bushel of apples per minute.

Having described this invention, what we claim, and desire to secure by Letters Patent, is—

1. The wedge-shaped adjustable concave S,
5 having the removable metallic face s, provided with the holding-projections t, in combination with the hopper of a cider-mill.
2. The combination, with the studded cylinder G and the hopper F, of the clearing-ledge
10 N in the front of said hopper, and the adjustable wedge-shaped metal facer holding con-

cave S, overhanging the cylinder in rear, and extending downward between the cylinder and the hopper-wall, substantially as specified.

In testimony whereof we affix our signatures 15
in presence of two witnesses.

JOHN W. ALLMON.

J. H. WOMMACK.

WILLIAM M. HIGHFILL.

Witnesses:

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