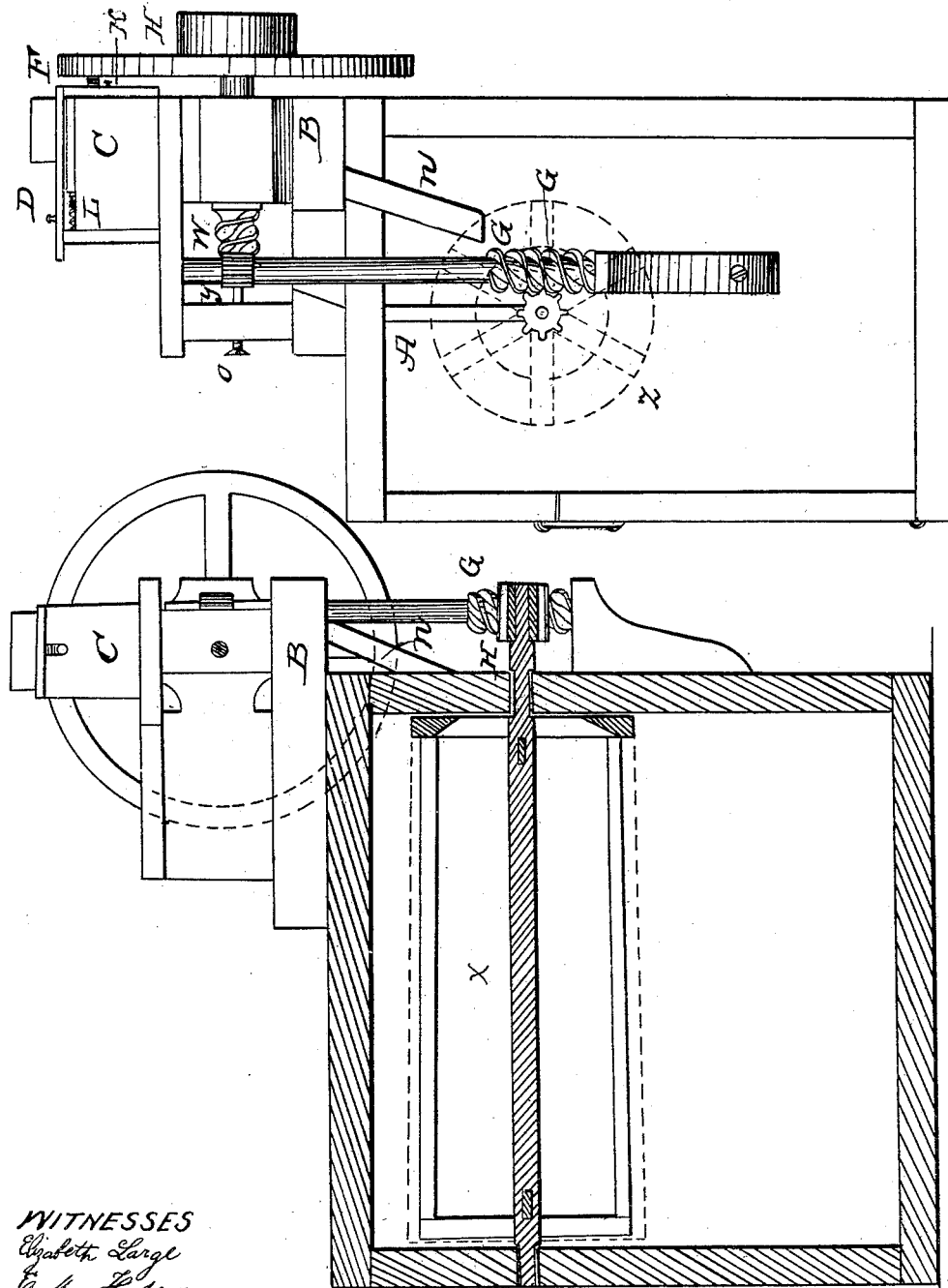


C. A. HARPER.
Grinding Mill.

No. 44,950.

Patented Nov. 8, 1864.



WITNESSES
Elizabeth Large
C. A. Harper.

INVENTOR
C. A. Harper

UNITED STATES PATENT OFFICE.

C. A. HARPER, OF CANTERBURY, NEW HAMPSHIRE.

IMPROVEMENT IN GRINDING-MILLS.

Specification forming part of Letters Patent No. 44,950, dated November 8, 1864.

To all whom it may concern:

Be it known that I, C. A. HARPER, of Canterbury, in the county of Merrimac and State of New Hampshire, have invented an improvement in the use of the steel hand-mill, so as to adapt the same to the manufacture of flour and bolted meal, by which the mill can be turned easily by hand or by any other power, which is new and improved; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing, presenting a side and end view, and to the letters of reference marked thereon.

Disclaiming the hand-mill itself, the nature of my invention consists in a bolting-chest, so constructed as to answer the purpose of a frame or stand for the mill, and so as to contain within itself, when packed up for transportation, the mill, bolting-reel, and all the fixtures necessary for the complete operation of the same when put together for use; of a bolting-reel turned by gearing on a small shaft from an endless screw on main shaft of the mill; of a temper-screw to regulate the fineness of the grinding by pressing on the center of the shaft of the grinding-cylinder, and of a feed-regulator and a detachable pulley on the fly-wheel for the application of power other than the hand.

To enable others to make and use my invention, I proceed to describe its construction and operation.

I construct a bolting-chest, *z*, about twenty-six or thirty inches square, (or it may be no more than about eighteen inches wide,) and from the top, in grooves, let down a bolting-reel, *x*, (at letter A,) about twelve inches in diameter at the one end and fifteen inches at the other, so that the shaft may run horizon-

tally, and allow slope for the bran to escape at the larger end. On the top of this chest (covered) I attach the mill by bolts or screws through the bottom of the frame B, to which the mill is permanently attached, so placed that the ground wheat or corn may be received into the smaller end of the bolting-reel through the spout N. On the top of the frame B, I attach a feed regulator, with place for hopper, being a frame and shoe, (letter C,) the shoe having a knocker projecting through the frame, so as to be struck by the arms of the fly-wheel, as at letter F, and to play backward and forward, producing a jostling motion on a spiral spring on a spindle at the mouth of the shoe L. The mouth of the shoe is elevated or depressed by a cord attached to the spindle and wound on a key, as shown at letter D. A screw, *k*, is also placed under the knocker, penetrating through the frame B, so as to press against the heel of the shoe, regulating the position of the knocker to the arms of the fly-wheel. The bolting-reel is turned by an endless screw, *w*, on main shaft *y* of the mill and gearing on small shaft G. A pulley for the application of power other than by hand (detachable) is placed on the side of the fly-wheel (letter H) and temper screw on mill-shaft at letter O.

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

The arrangement of the bolting-chest *z*, reel *x*, temper-screw O, main shaft *y*, and feed-regulator C, when constructed and operating substantially as described.

C. A. HARPER.

Witnesses:

N. W. LEIGHTON,
E. M. HARPER.