

I. E. OVERPECK.

Corn Sheller.

No. 60,046.

Patented Nov. 27, 1866.

Fig. 2

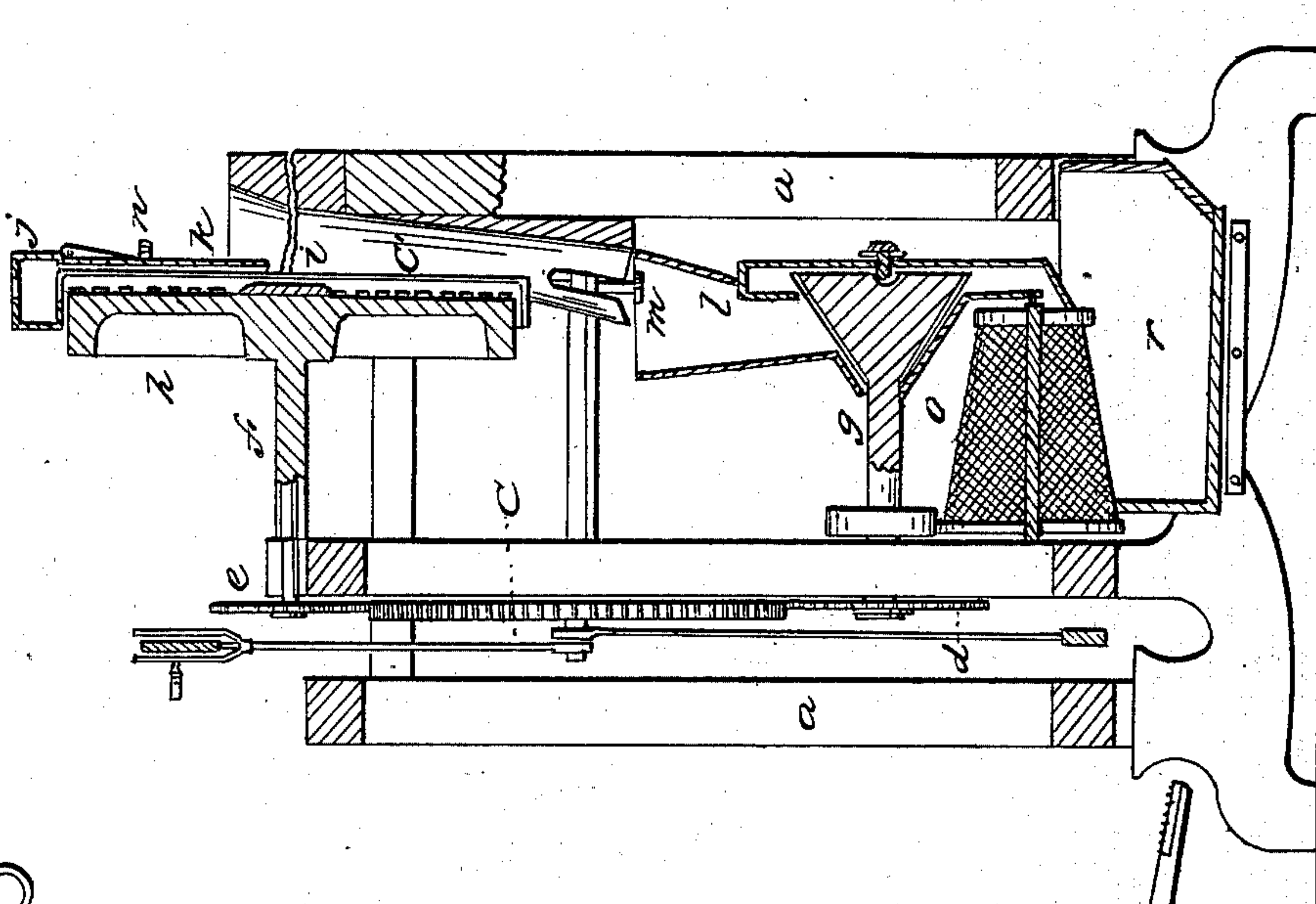
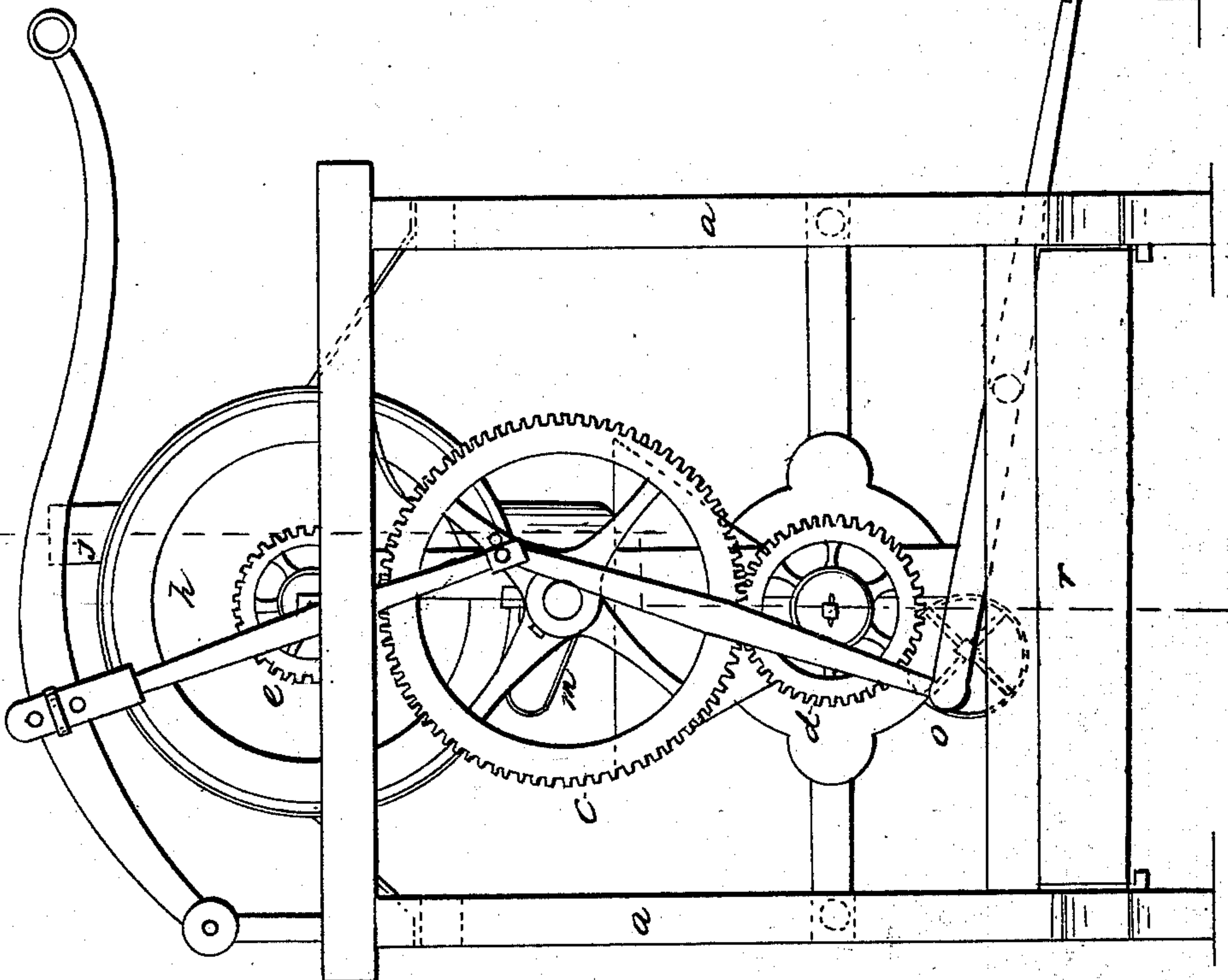


Fig. 1



Witnesses
John Mumford
Arthur D. Peck

Inventor
Isaac E. Overpeck
By his atty
H. P. V. Peck

United States Patent Office.

IMPROVEMENT IN CORN-SHELLERS.

ISAAC E. OVERPECK, OF OVERPECK'S STATION, OHIO.

Letters Patent No. 60,046, dated November 27, 1866.

SPECIFICATION.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, ISAAC E. OVERPECK, of Overpeck's Station, in Butler county, in the State of Ohio, have invented a new and useful Improvement in Corn-Shellers for Mills; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

Figure 1 represents driving mechanism for operating my improved corn-sheller in connection with a grinding and bolting mill.

Figure 2 represents my corn-sheller arranged above the hopper of a grinding mill, and operated by the same mechanism which propels the grinding and bolting mill.

For a full description of the double levers, and pitmen, and crank-wheel, as shown in fig. 1 of the drawings, reference may be had to my patent of April 25, 1865.

The mill is supported in a suitable frame, *a a*; and the sheller, grinder, and bolt stand within the frame *a a*, in rear of the driving mechanism, in a vertical line. The main wheel, *c*, the shaft of which is journalled in suitable boxes upon the sides of the two central posts of the frame, *a a*, communicates motion to the pinions, *e* and *d*. The pinion *e* is connected with the sheller shaft, *f*, and pinioned with the grinder shaft, *g*. These shafts are in the same vertical plane with the main wheel shaft, *c*, as represented in the drawings, with suitable boxes on the main frame, except the grinder shaft, which is supported at one end, and revolves in the grinder shell or curb, as represented. At the rear or back side of the machine, upon the shaft, *f*, the sheller disk, *h*, is fastened, and revolves with the shaft in the casing, *i*, the latter being provided with a vertical mouth, *J*, for feeding in the ears of corn to be shelled, and with a spout, *k*, through which the corn is conducted into the hopper, *l*, of the grinder. Connected with the periphery of the casing or shell, *i*, near the bottom thereof, there is a spring, *m*, which serves to discharge the cob from the sheller, as will be presently described. The sheller case, *i*, is provided with a hinged guide and holder for the corn while it is being shelled from the cob; and this guide is pressed against the ear of corn by a suitable spring, *n*, connected with the case, *i*. Between the sheller case, *i*, and the central post of frame *a*, at the back of the machine, and in line with the exit spout of the sheller, there is a conical tube, *c'*, connecting with the exit spout, and forming a part of it, into which the cobs drop, after passing the sheller disk, *h*. At the lower end of this tube, *c'*, and exit spout, there is a vertical slot or opening through which the curved spring, *m*, projects, and stops the falling cobs, which would otherwise drop into the hopper, *l*. On the main shaft, which is between spring *m* and the sheller case *i*, there is a projecting pin, which at each revolution of the shaft comes in contact with a lip extending from the side of spring *m*, and it causes the spring to be depressed; and as the pin passes over the lip the spring retracts and thereby throws the cob upward and out of the tube, *c'*, when it falls to the ground. This manner of discharging the cobs does not interfere with the continuous operation of the sheller and its guide, which holds the ear of corn while it is being shelled. The conical grinder is secured to the horizontal shaft driven by pinion *d*, and this shaft also carries a friction pulley, which runs in contact with the base of the conical bolt or screen, *o*, to communicate the necessary revolving movement thereto. The meal when sufficiently ground is conducted from the curb or casing of the grinder into the smaller end of conical screen, *o*. Screen *o* is arranged horizontally at the bottom of the mill with a central shaft, with suitable arms to support the bolt, and the two revolve together. The bolt or screen shaft is suitably journalled, as seen in the drawings, and, as above indicated, is driven by a friction pulley, which runs in contact with a band around the periphery of the screen at its base. The end of the discharging spring, *m*, within the exit tube, *c'*, is of annular form, and sufficiently large to prevent the cobs from passing below it into the hopper, *l*, of the grinder. As the cobs must fall endwise from the guide and holder they will necessarily be conducted upon the spring *m*, one end falling within the opening at the end of discharging spring *m*, while the top of the cob will have passed below the holder or guide which serves to hold the ear of corn in contact with the sheller disk, *h*. It will be observed that the sheller disk, *h*, serves the functions of a balance-wheel to regulate the operations of the machine.

If at any time it is desired to use the sheller independently of the other parts of the mill, the spur-pinion, *d*, will be detached, and also one-half of the tube, *c'*, may be removed, (as this tube is made in halves, and may be opened in the centre by removing the hooks which hold the removable half to the fixed half or section.) The object of removing a part of this tube or exit pipe is to give easy access to the shelled corn, and conduct it into sacks instead of letting it fall into the hopper, *l*.

In using my machine the corn will be fed into the mouth, *J*, and when shelled by the revolving disk, *h*, the cob will be thrown out by spring *m*, the corn pass into the hopper, *l*, and thence through the grinding mill, by which it is reduced to meal. The meal is conducted by its own gravity into the conical bolt or screen, *o*, and by its revolutions the meal is separated from the bran and falls into the box, *r*, and the bran is discharged upon the ground from the open base of the screen.

Having fully described my improvement in corn-shellors for mills, and the manner of using the same, what I claim, and desire to secure by Letters Patent, is—

The shelling disk, *h*, and bisected conical tube, *c'*, in combination with discharging spring *m*, arranged and operating in the manner and for the purpose specified.

In testimony whereof I have hereunto set my hand this 16th day of February, 1866.

I. E. OVERPECK.

Witnesses:

H. P. K. PECK,
GREENUP WARWICK.