J. WEIGLE.

Grinding Mill.

No. 12,356. Patented Feb. 6, 1855.

Fig. 1

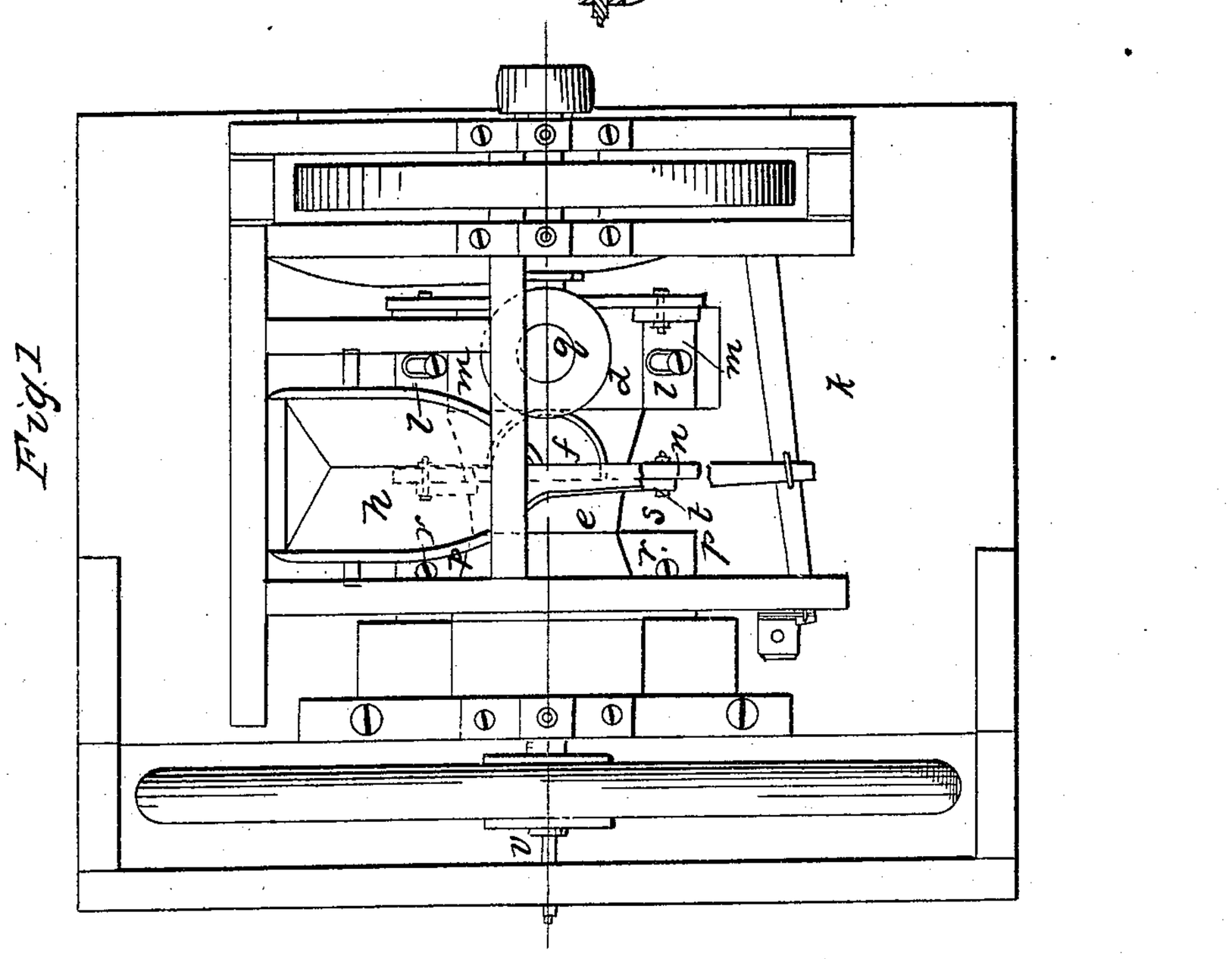


Fig. 2

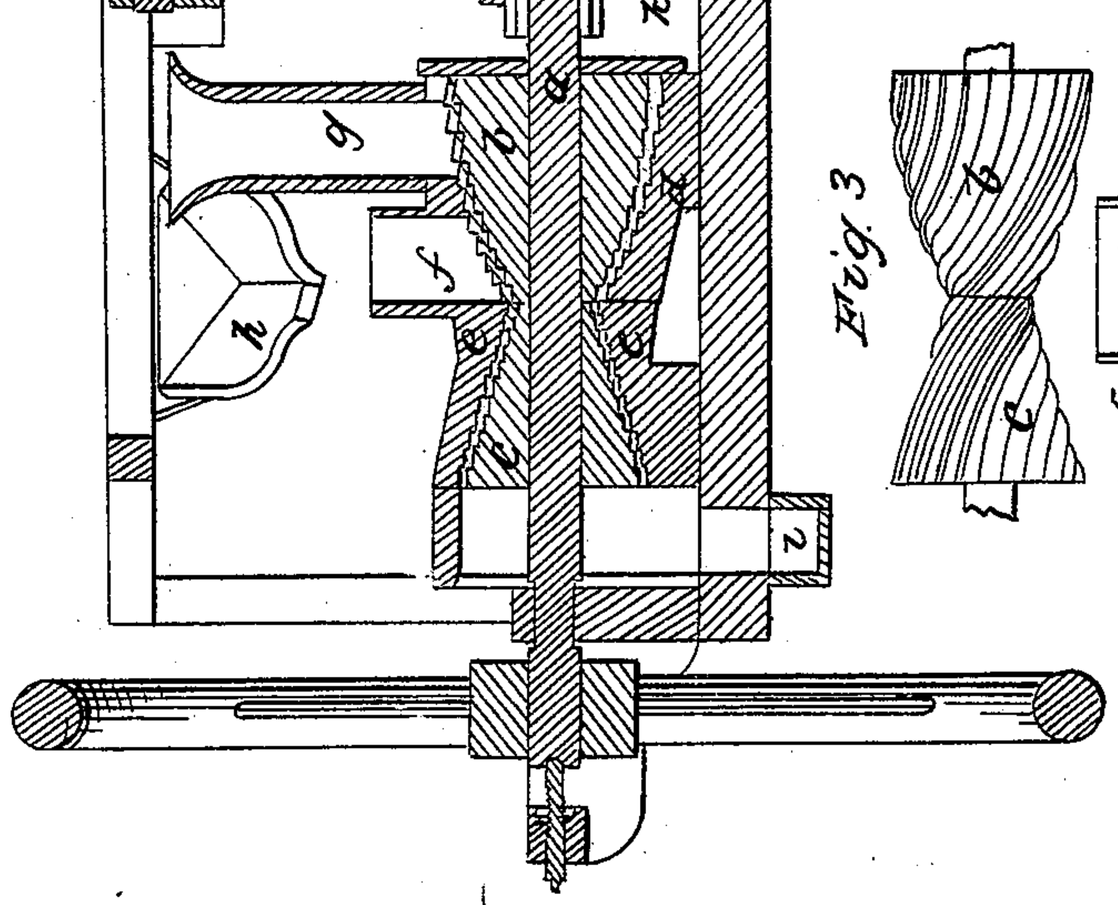
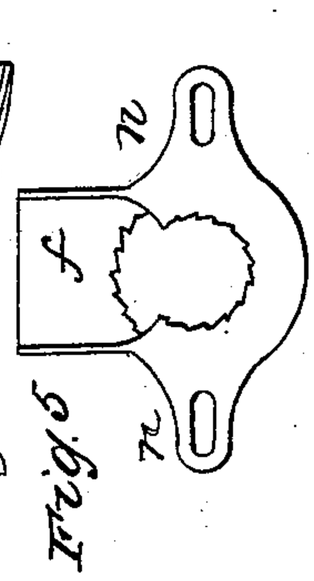


Fig. 3

Fig. 4



UNITED STATES PATENT OFFICE.

JOEL WEIGLE, OF SWAN STATION, PENNSYLVANIA.

CRUSHING AND GRINDING MILL.

Specification of Letters Patent No. 12,356, dated February 6, 1855.

To all whom it may concern:

Be it known that I, JOEL WEIGLE, of Swan Station, in the county of Erie and State of Pennsylvania, have invented a new and useful Machine for Crushing and Grinding Corn and Cobs and for Grinding Shelled Corn; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, Figure 1 being a top view; Fig. 2, a longitudinal section in the line *x x* of Fig. 1; and Figs. 3, 4, and 5 represent parts of the machine detached.

Similar letters indicate like parts in all the figures.

The nature of my invention consists in forming a crushing and grinding apparatus by uniting with each other upon the same shaft, the smaller ends of two corrugated segments of cones, and combining with them corrugated inclosing casings supplied with two feeding apertures and arranged in such a manner that corn and cobs can be fed into one opening and be ground into provender, and shelled corn be fed into the other aperture and be converted into meal.

In the accompanying drawings Fig. 3, represents the united corrugated conical grinders attached to their shaft and detached from the machine. The grinder *b*, it will be perceived, is larger and has coarser corrugations than the grinder *c*. The portion *d*, of the casing, which incloses the grinder *b*, is secured to the platform *k*, of the frame of the machine in such a manner that it can be moved laterally. This is accomplished by forming slots in the supporting ears *l*, *l*, which project from the base of the said casing, for the reception of the screws *m*, *m*, which confine the said casing to the platform *k*. The casing *e*, which incloses the grinder *c*, is secured to the platform *k*, by means of the ears *p*, *p*, and the set screws *r*, *r*, as shown in Fig. 1. The casings *d*, and *e*, are combined with each other by means of the lateral ears *n*, *n*, projecting from the inner end of the former and the ears *t*, *t*, projecting from the latter, united to each other by screw bolts *s*. The ears *n*, *n*, have slots in them (as shown in Fig. 5) for the bolts *s*, to work in, and which allows the said casing *d*, to be moved laterally upon the platform *k*, for the purpose of producing a wider space between the descending side of the grinder *b*, and its casing, than there is between the opposite side of the grinder and its casing, and to vary the same as circumstances may require.

Corn and cobs are fed into the machine through the vertical tube *g*, which rises from the casing *d*, opposite the largest end of the grinder *b*. They are first operated upon between the corrugated surfaces of the grinder *b*, and its casing—the corrugations of which are of such a shape as to carry forward the stuff operated upon to the small end of the casing *d*, and discharge it into the space between the grinder *c*, and its casing *e*, which carry it forward and discharge the same into the delivery trough *i*.

When shelled corn is to be ground in my improved mill, it is fed from the hopper *h*, into the receiving aperture *f*, which opens into the casing *d*, above the smaller end of the grinder *b*. When it is desired to grind the meal finer or coarser, the set screw *v*, is turned to vary the distance between the grinder *c*, and its casing *e*. And when it is desired to vary the fineness or coarseness of the provender formed of cobs and corn, in my said mill, the casing *d*, is moved laterally, so as to increase or diminish the space between the ascending side of the grinder *b*, and its casing.

Both the corn and cobs and the shelled corn, are first crushed by the action of the grinder *b*, and its casing, and are then ground finer by the action of the grinder *c*, and its casing *e*. The corn and cobs passing from the largest to the smallest end of the grinder *b*, and then from the smallest to the largest end of the grinder *c*, get thoroughly ground and incorporated with each other, more so it is believed than in any other mill that has ever been devised.

When it is desired to grind provender coarsely and rapidly, the casing *d*, is so adjusted as to leave equal space on all sides of the grinder *b*, at the same time that ample space is given (by means of the set screw *v*,) between the grinder *c*, and its casing *e*.

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

Combining with the crusher *b*, and the grinder *c*, the casings *d*, *e*, in such a manner

that the said crusher and grinder can be adjusted in a longitudinal direction, and the casing *d*, of the crusher, be adjusted in a lateral direction, substantially in the manner and for the purpose herein set forth.

The above specification of my improved machine for crushing and grinding corn and cobs and for grinding shelled corn, signed and witnessed this 24 day of October A. D. 1854.

JOEL WEIGLE.

Witnesses:

WILSON LAIRD,

SOLOMON ZREELL.