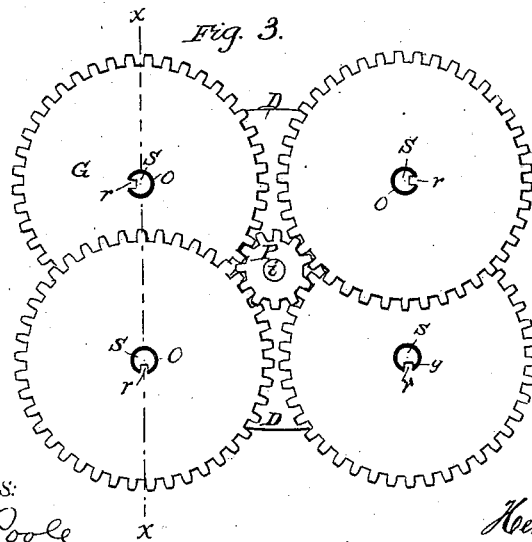
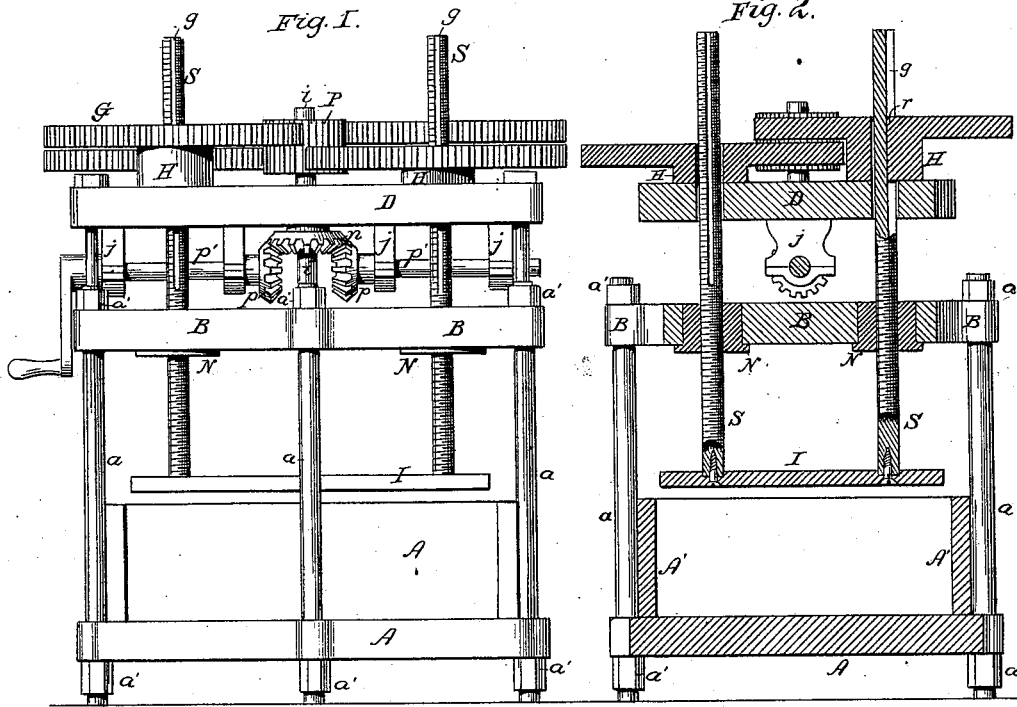


H. FROESE.

Press.

No. 206,554.

Patented July 30, 1878.



WITNESSES:
Clarence Poole
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INVENTOR:
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UNITED STATES PATENT OFFICE.

HENRY FROESE, OF BUFFALO, NEW YORK.

IMPROVEMENT IN PRESSES.

Specification forming part of Letters Patent No. 206,554, dated July 30, 1878; application filed June 26, 1878.

To all whom it may concern:

Be it known that I, HENRY FROESE, of the city of Buffalo, in the county of Erie and State of New York, have invented a new and Improved Press for the Manufacture of Compressed Yeast; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation. Fig. 2 is a vertical section on line *x x* of Fig. 3. Fig. 3 is a plan view.

The object of my invention is to produce a strong and durable press to be used for heavy pressures, when the action has to stop suddenly, to prevent breakage. The use of hydraulic presses in many instances—as pressing yeast—leads to much breakage and great damage, owing to the press not being sufficiently sensitive to arrest the pressure at exactly the maximum.

My invention consists in a frame having a bed-plate and nut-plate, both remaining stationary, in combination with a platen attached near its corners to four screws passing through the nut-plate, and operated by means of gears meshing in a central pinion, the central openings in the gears being provided with feathers, which slide in grooves in the screws, so that the screws travel up and down through the gears, while the gears rest on an upper or sustaining shelf on hubs to keep each in its proper plane.

In order that those skilled in the art may make and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A is a bed-plate, having secured above it a nut-plate, B, by means of the upright bars *a a a* and nuts *a' a' a'*. In proper places in plate B are inserted four hard-metal nuts, N, provided on their lower sides with flanges projecting on the lower surface of plate B, to aid or strengthen them in sustaining the back-pressure.

A traveling platen, of a size to fit within the rim or raised edge A' on bed-plate A, has at-

tached near its four corners four long screw-shafts, S, by means of collars or any other well-known device which would allow the screws to turn and at the same time hold to the platen. The screws S agree in pitch with the screw-nuts N, and a screw passes through each nut and then through an upper or sustaining plate or shelf, D, supported by projections of some of the rods *a*. On the upper end of each screw-shaft is a gear-wheel, G, all of the same diameter and centrally meshing in a pinion, P, on the end of a shaft, *i*, which is stepped in plate B and projects above plate D. Below plate D the shaft *i* has fixed to it a beveled gear, *n*, which meshes into beveled gears *p p* on transverse shafts *p' p'* in hangers *j j*. The gears G are provided with hubs H, of different sizes, so as to bring two of them on the same plane and prevent them interfering, besides preserving a steady strain on pinion P.

The upper portions of screws S, for a length about equal to the length of their travel, are provided with longitudinal grooves *g*, and the central opening *o* in gears G is provided with a corresponding feather, *r*, which enters groove *g* when the gears are passed over the screws. This arrangement turns the screws when the gears are turned, and at the same time allows the screws to feed back and forth through the hubs of the gears without disturbing their position on plate D, the entire strain coming upon the heavy nuts N.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The bed-plate A, stationary plate B, bearing fixed nuts N, and plate D, in combination with platen I, slotted screws S, gears G, having their central openings provided with feathers *r*, and operating mechanism P *n p p'*, substantially as set forth.

HENRY FROESE.

Witnesses:

GUS. FLEISCHMAN,
CHAS. H. FROST.