(No Model.) 2 Sheets—Sheet 1.

J. H. EATON & G. B. SEAMAN.

MEAT CUTTING MACHINE.

No. 429,850. Patented June 10, 1890.

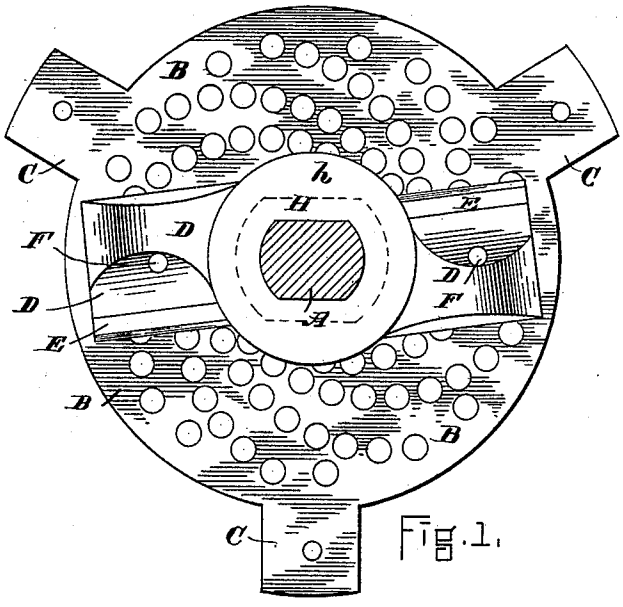


Fig. 1.

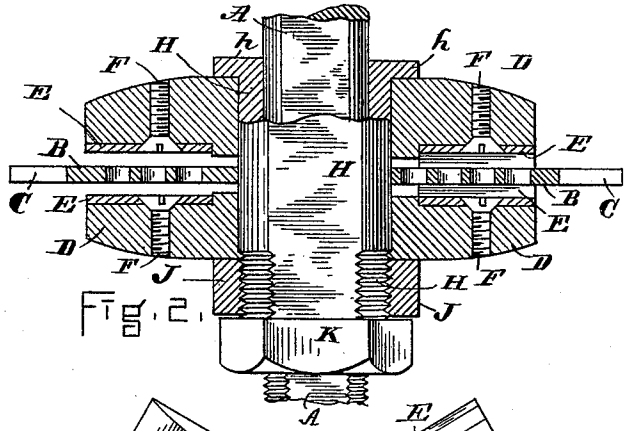


Fig. 2.

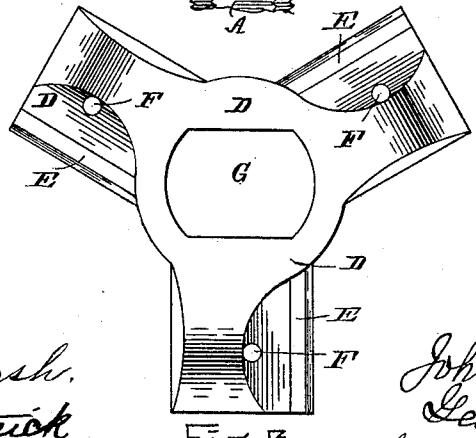


Fig. 3.

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Sarah L. Patrick

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

J. H. EATON & G. B. SEAMAN.

MEAT CUTTING MACHINE.

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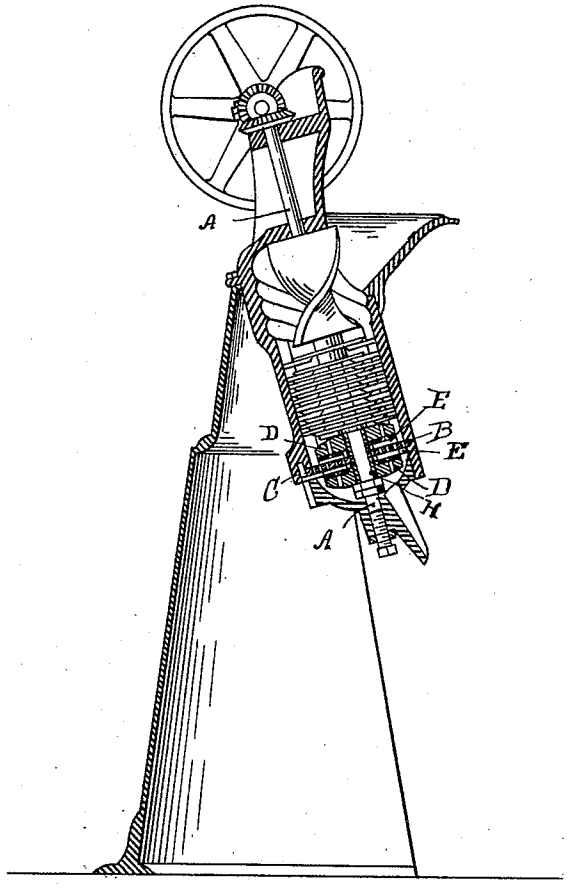


Fig. 4.

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UNITED STATES PATENT OFFICE.

JOHN H. EATON, OF WOBURN, AND GEORGE B. SEAMAN, OF BOSTON, ASSIGNORS TO WILLIAM G. BELL, OF NEWTON, MASSACHUSETTS.

MEAT-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 429,850, dated June 10, 1890.

Application filed July 18, 1889. Serial No. 317,867. (No model.)

To all whom it may concern:

Be it known that we, JOHN H. EATON, of Woburn, in the county of Middlesex and State of Massachusetts, and GEORGE B. SEAMAN, of Boston, in the county of Suffolk and State of Massachusetts, have jointly invented certain new and useful Improvements in Meat-Cutting Apparatus, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention is in the nature of an improvement upon the apparatus set forth in the various meat-cutter patents granted to William G. Bell, October 23, 1883, August 19, 1884, and March 22, 1887. These several patents show a cylindrical receptacle for the meat to be cut, a central shaft therein with a spiral propeller or feed-screw at its upper end, and a succession of rotary cutters along its lower portion, and three distinct series of stationary knives arranged in longitudinal grooves within the cylinder to engage with the rotary cutters. Such patented apparatus also embraced a perforated plate or strainer revolving with the cutter-shaft and a stationary clearing-knife bearing on the face of said revolving-plate.

With our present improvement we employ the general construction above indicated; but we find it advantageous for some purposes to make the strainer-plate stationary, and to give to the clearing-knives a rotary movement, one above and one below such stationary plate. This new arrangement is illustrated in the drawings, and the means by which we connect and adjust the parts in their new relation are hereinafter described, and especially referred to in the appended claims.

A prominent feature of our improvement is a flanged flattened sleeve externally threaded at one end and provided with a nut, such sleeve surrounding the flattened lower end of the spindle and passing through the perforated plate and its clearing knife or knives, the pressure of which upon the surfaces of the plate is regulated by said nut and flange independent of the other cutters. The central aperture in the stationary plate is circular, so that said sleeve, actuated by the flattened shaft, may rotate therein, while the aperture in the center of the clearing knife or knives is elongated to fit the exterior of the flattened sleeve and to be driven thereby.

In the drawings, Figure 1 is a plan of the perforated plate, showing also in plan a two-bladed rotary cutter and the cutter-shaft in section. Fig. 2 is a vertical section on the line *x x*, Fig. 1, through the plate, the cutters, and the annular nut, with the sleeve which carries said cutters shown in elevation. Fig. 3 is a plan of a rotary three-bladed knife. Fig. 4 is a vertical section through the cylinder of the machine, &c.

A is the cutter shaft or spindle, revolving in the usual manner at the axis of the meat-receiving cylinder. (See Fig. 4.) Such shaft has at its upper end a spiral flange or feed-screw, and along its body a series of horizontal cutters co-operating with two or more ranges of stationary knives arranged in grooves or recesses in the cylinder about as shown in said former patents, to which reference may be made.

B is a perforated strainer-plate placed transversely across the lower end of the cylinder and formed with radial ears or lugs C, adapted to fit into corresponding recesses in the lower end of the cylinder, so as to be held stationary. The plate has a central circular opening, through which the shaft and a sleeve carried upon it may revolve.

D is a forging or casting forming the body of the clearing-knife, to which the cutting-blades E are firmly secured by heavy screws F, or otherwise. The body D has an oblong or angular opening G through it corresponding in shape to the flattened spindle A and in size to the exterior of the flattened sleeve H, which surrounds the spindle near its lower end, as shown, and revolves with it carrying the clearing-knives D E, to move with a shearing action over either face of the perforated plate C. The sleeve H is flattened at its sides to fit the shaft A, and has at its upper end a collar or flange *h*, while its lower end is screw-threaded on its circular portion to receive an annular nut J, by which the pressure of the cutting-blades E of the clearing-knife against the smooth surface of the perforated plate is adjusted without affecting the other cutting

apparatus. With this construction the plate and knife may be united and adjusted before being placed in the machine.

Below the perforated plate and the two clearing-knives is a nut K, screwing upon the threaded lower end of the cutter-shaft A just below the sleeve. This nut bears against the lower end of the sleeve, the upper end of which is thereby pressed to the extent desired against the lowermost of the series of rotary cutters, which work in conjunction with the stationary knives. Said nut also carries the clearing-knives and perforated plate somewhat up or down. It will be observed that the sleeve is shaped internally to fit the flattened shaft and externally to fit within the central opening in the body D of the clearing-knives, while the rounded portion of its periphery turns freely within the non-rotary perforated plate. One end being flanged and the other one externally threaded and furnished with the adjusting-nut J, it is clear that the knives D E will rotate with the shaft, and their blades may be pressed lightly or heavily against the faces of the plate, the central part of the bodies D being somewhat removed from the plate, as seen in Fig. 2. The arrangement is the same with the three-ply knife of Fig. 3.

We claim as our joint invention—

1. In a meat-cutting machine, the cylinder, with two or more series of stationery cutters and the rotating shaft with corresponding revolving cutters, in combination with a stationary perforated plate provided with radial lugs to engage with the receptacle, a revolving clearing knife or knives bearing on the face of such plate and having an elongated central opening, and with the flattened sleeve fitting upon the flattened lower portion of the revolving shaft and within the elongated opening in the clearing-knives to actuate them, substantially as set forth.

2. In a meat-cutting machine, the perforated strainer-plate B C, held stationary near the foot of the cutter-shaft, and the clearing-knives adapted to revolve above and below the same, in combination with the flanged threaded sleeve H *h* and the annular nuts J and K, substantially as and for the purpose set forth.

In testimony whereof we have signed our names to this specification, in the presence of two subscribing witnesses, on this 2d day of July, A. D. 1889.

JOHN H. EATON.
GEORGE B. SEAMAN.

Witnesses:
A. H. SPENCER,
J. P. PRINCE.