J. KNOPP.

Sausage-Cutters.

No. 146,007. Patented Dec. 30, 1873.

Fig. 1.

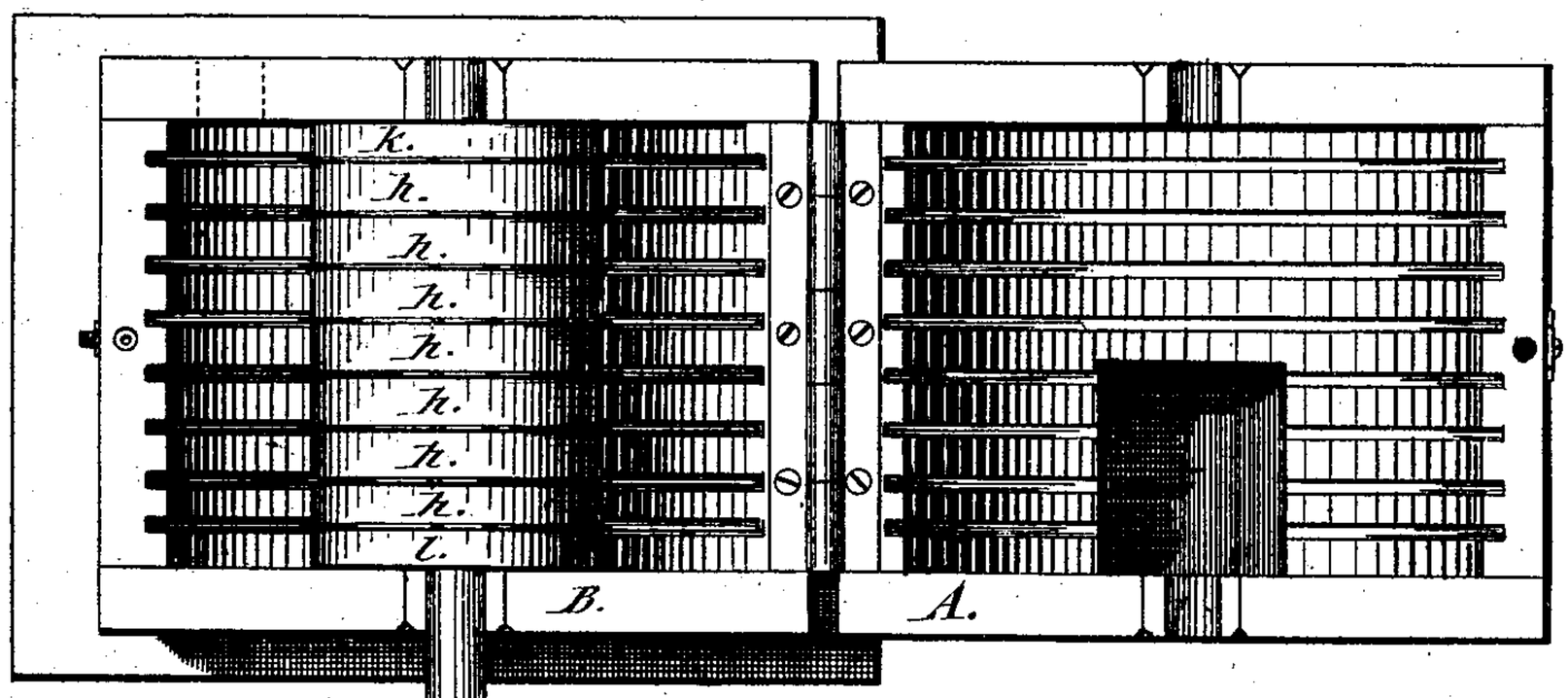


Fig. 2.

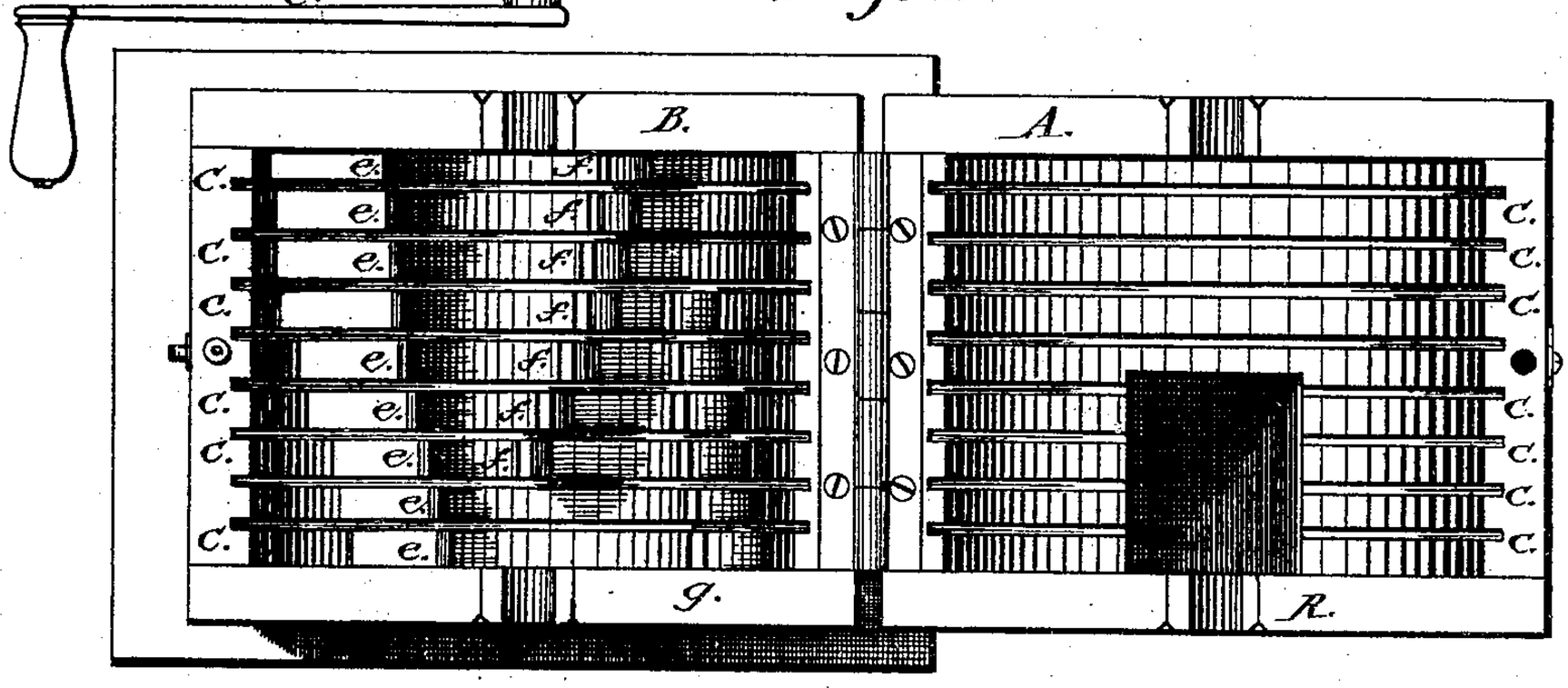


Fig. 5.

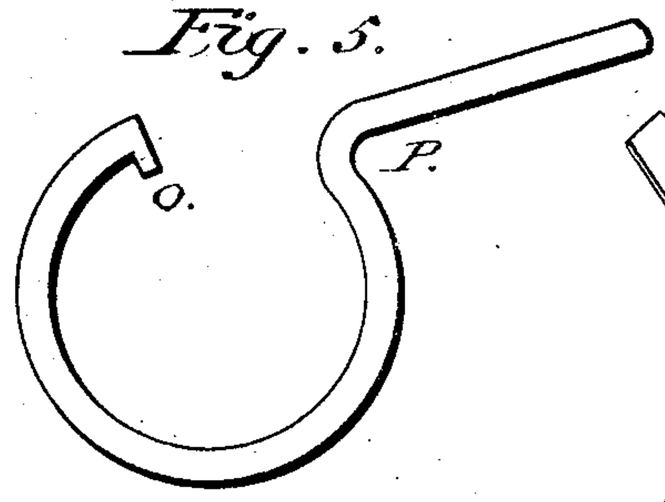


Fig. 3.

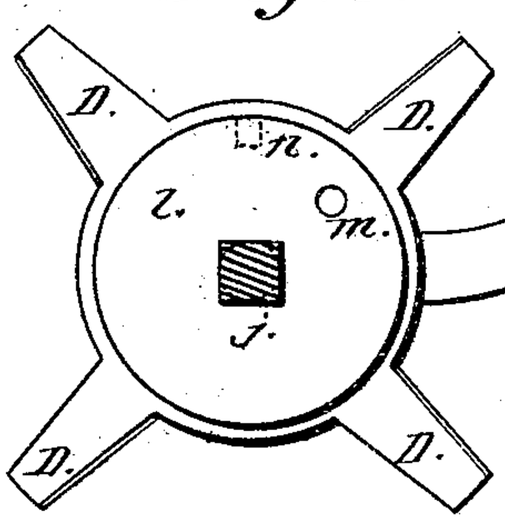
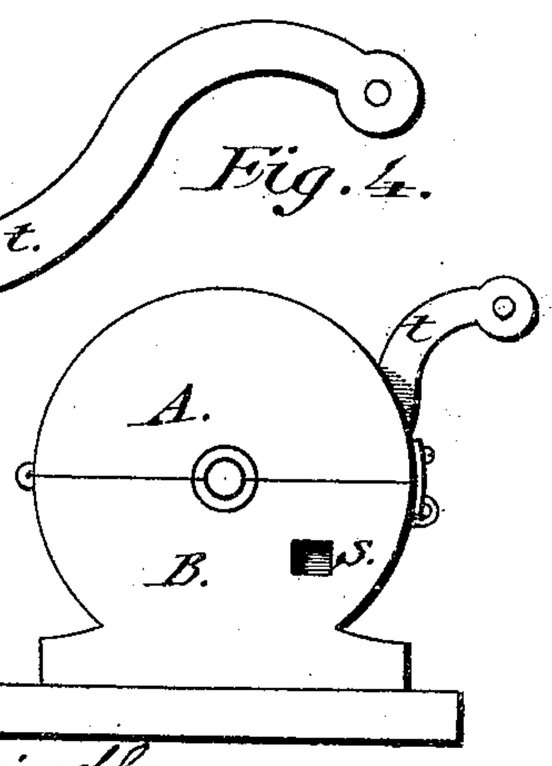


Fig. 4.



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UNITED STATES PATENT OFFICE.

JACOB KNOPP, OF COLUMBIANA, OHIO.

IMPROVEMENT IN SAUSAGE-CUTTERS.

Specification forming part of Letters Patent No. **146,007**, dated December 30, 1873; application filed August 2, 1873.

To all whom it may concern:

Be it known that I, JACOB KNOPP, of Columbiana, Columbiana county, in the State of Ohio, have invented a certain new and useful Improvement in Sausage-Cutter; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in a series of thin cutters, the outer ends of which travel in grooves in the cutter-case, in combination with a series of abutments arranged on the inner walls of the lower half of the cutter-case, so that the cutters will pass between them, said abutments being arranged at an acute angle to the axis of the cutters, and forming a zigzag channel, through which the meat has to travel, whereby it is frequently brought into contact with the cutters in its passage through the machine.

To enable others skilled in the art to make and use my invention, I will proceed to describe more fully its construction and operation.

In the accompanying drawings, which form part of my specification, Figure 1 is a top view or plan of my improvement in sausage-cutter, representing the upper part of the cutter-case turned back so as to expose the cutters. Fig. 2 is a similar view of the machine, representing the cutters and their shaft removed from the case so as to show the arrangement of the abutments in the lower part of the cutter-case. Fig. 3 is a face view of the cutters and a transverse section of their shaft. Fig. 4 is a side view of the machine. Fig. 5 is a side view of the wrench used for screwing and unscrewing the clamping disk or nut upon the shaft of the cutters.

A and B represent the cutter-case, which may be constructed of wood or metal. The inner walls of this case are provided with a series of grooves, C, into which the outer ends of the cutters D enter and travel. Between the grooves C, in the lower half B of the cutter-case, are arranged three series of abutments, *e*, *f*, and *g*. These abutments project out from the inner wall of the part B of the case, so as to nearly touch the disks *h* placed between the knives. The abutments *e f g* are arranged in the part B of the case, on lines which are at an acute angle to the axis of the shaft of the cutters D, whereby a zigzag channel is formed, through which the meat has to travel in its passage through the machine, thereby subjecting it frequently to the action of the cutters D. The cutters are constructed of thin plates of steel, four cutters radiating from the center of each piece, and each cutter provided with a double cutting-edge. The cutters D are held in position on their shaft *j*, through the medium of the disks *k* and *l* and the disks *h*, the disk *k* being permanently secured to the shaft *j* and the disk *l* secured on the shaft by means of screw-threads corresponding to screw-threads in the disk. The center or disk part of the plate from which the cutters D project is provided with an opening into which enters a pin, which is on each side of the disks *h*, as indicated at *m* in Fig. 3.

By this arrangement of the openings in the center plate of the cutters and the pins on the disks *h*, the cutting-edges of the cutters are held in parallel lines, which is an important feature in the machine. I do not confine myself, however, to this arrangement of the cutters, for a good result can be obtained when they are otherwise arranged.

The disk *l* is provided with a notch, *n*, for receiving the projection *o* on the end of the wrench P.

The operation of the wrench with relation to the disk *l* will be readily understood without further description of its relation to and operation upon the said disk.

The part A of the cutter-case is provided with an opening, R, through which the meat is fed to the machine, and the part B of the case is provided with a discharge-opening, *s*, from which the cut sausage-meat is discharged from the machine. *t* represents the operating-crank of the machine.

The operation of the hereinbefore-described machine for cutting sausage-meat is as follows: The meat is cut into strips, after which it is fed into the machine at the opening R and is carried down, by the action of the cutters, to abutments *e*, and laterally over them to the abutments *f*, and laterally over them to the abut-

ments *g*, and, passing over them, is forced out of the machine through the opening *s*. The meat, in passing through the machine in the manner described, will be subjected frequently to the action of the cutters, so that it will be cut up into very fine particles and perfectly minced, making a very desirable sausage-meat. The ends of the cutters, traveling in the grooves C, will perfectly brace them, and they will not be so liable to break by the wedging of the meat between the cutters.

Having thus described my improvement, what I claim as of my invention is—

The cutters D traveling in grooves C, in combination with the abutments *e*, *f*, and *g*, arranged and operating, with relation to the cutters, substantially as herein described, and for the purpose set forth.

JACOB KNOPP.

Witnesses:

J. D. JONES,

JOHN VOGLESENG.