No. 859,535. PATENTED JULY 9, 1907.

G. ZIMMERS.

SAUSAGE STUFFING MACHINE.

APPLICATION FILED AUG. 28, 1905.

Fig. 1

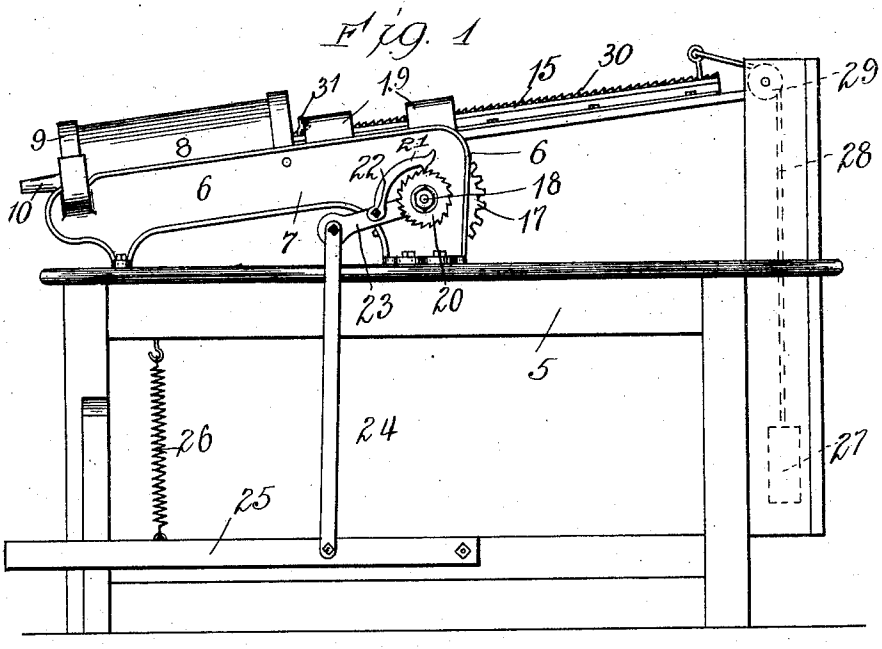


Fig. 2

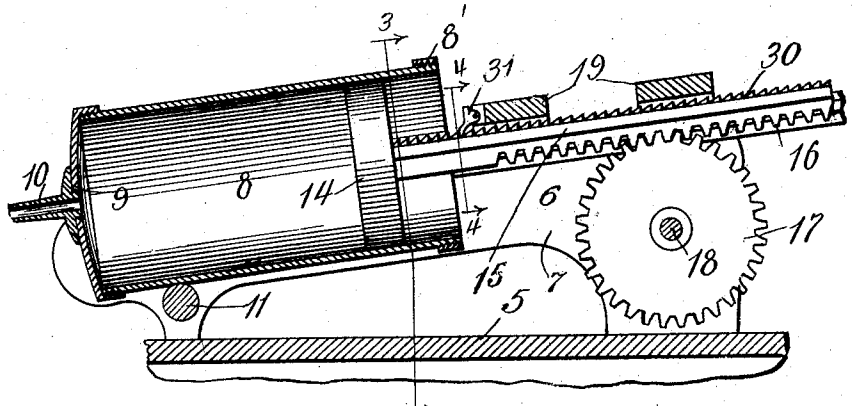


Fig. 3

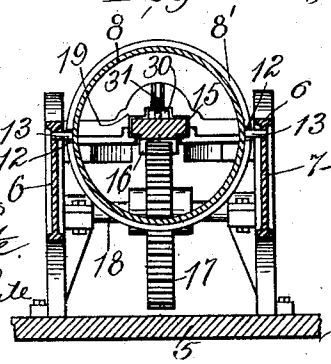
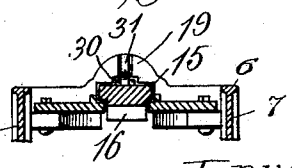


Fig. 4



Witnesses
Ray White.
Harry R. Lubcke

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UNITED STATES PATENT OFFICE.

GEORGE ZIMMERS, OF CHICAGO, ILLINOIS.

SAUSAGE-STUFFING MACHINE.

No. 859,535. Specification of Letters Patent. Patented July 9, 1907.

Application filed August 28, 1905. Serial No. 275,983.

To all whom it may concern:

Be it known that I, GEORGE ZIMMERS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Sausage-Stuffing Machines, of which the following is a specification.

My invention relates to improvements in sausage stuffing machines, and has for its objects to provide a machine of the kind stated which is simple in construction, efficient in operation and easy to manipulate.

With a view to attaining these and other objects which will become apparent to those skilled in the art from the following description my invention consists in the features hereinafter set forth and specified in the claims.

In the drawings: Figure 1 is a side elevation of the complete machine. Fig. 2 is a central section through the upper part thereof. Fig. 3 is a section on line 3—3 of Fig. 2. Fig. 4 is a fragmentary section on line 4—4 of Fig. 2.

Throughout the drawings like numerals of reference refer always to like parts.

In the drawings 5 indicates a suitable frame or bed wherein is mounted a secondary frame 6, comprising metallic side pieces 7—7.

8 indicates a cylinder, headed at one end, as at 9 and provided with a nipple 10 screwed into the head, said nipple being hollow throughout and projecting from said head. The cylinder 8 is detachably supported in the secondary frame 6, preferably in inclined position, its lower end resting upon a rod 11 traversing the secondary frame and its upper end being sustained and positioned by the engagement of notches 12 in a rim or flange 8′ of the cylinder with studs 13 carried by the side pieces 7 of the secondary frame. Arranged for co-action with the cylinder is a reciprocable piston or plunger 14 carried by a rack-bar 15, toothed as at 16 preferably on its under side, for engagement with a driving gear 17, whose shaft 18 is journaled in the frame pieces 7—7 and preferably projects beyond one of said side pieces.

19 indicates suitable guides for the rack-bar 15.

20 indicates a ratchet wheel secured to the shaft 18, and 21 indicates the dog therefor pivoted as at 22 to an oscillating arm 23 pivoting on the shaft 18 and at its outer end connected by a link 24 to a pivoted treadle 25, normally maintained in raised position by a spring 26. It will be apparent now that as the lever 25 is depressed and the arm 23 drawn downward, the pawl 22 engages with ratchet 20 and advances the same, so rotating the gear wheel 17 to feed forward the rack-bar 15.

The rack-bar 15 is preferably made automatically returnable to rear-most position and means are provided for normally preventing its return. To these ends I provide a weight 27, connected with the rack-bar 15 by a cord 28 running over a pulley 29, as a means for automatically returning the rack-bar, and I provide also a dog coacting with a suitable moving part of the mechanism for normally preventing the return of the rack-bar under the influence of its weight 27. Specifically 30 indicates a saw-toothed rack provided on the upper face of the bar 15, and 31 indicates a gravity pawl carried by a guide 19 and normally engaging the rack 30 to permit its forward movement but to prevent its return.

In general the operation of my machine is as follows: The rack-bar being in rear-most position, a cylinder 8, filled with sausage meat or the like is placed in position in the frame and the end of a sausage casing slipped over the nipple 10. Now the foot lever or treadle 25 is operated to dog the ratchet 20 around, so rotating the gear 17 and advancing the rack-bar 15 so that the piston 14 presses the meat out at the nipple 10 into the sausage casing. After such operation the dogs 31 and 21 are lifted from engagement with rack 30 and ratchet 20 and the rack-bar, freed from restraint, automatically returns to rear-most position under the influence of its weight 27. Now the empty cylinder 8 may readily be removed and a full cylinder substituted therefor.

From the foregoing it will be seen that the support consists of the main frame 5, which may be an ordinary wooden or other suitable frame, and the secondary frame comprising two integral metallic side members 6, joined at one end by the transverse bar or support 11, the transverse shaft 18 being journaled at the opposite end of said side pieces, from which shaft the piston 14 is operated. It will also be observed that the cylinder 8 is supported by the pins 13 carried by the side members 6. By this arrangement the strain of the work is thrown upon the metallic side members of the secondary frame, and the main frame, therefore, has but the additional function of furnishing bearings for the weight 27 and the operating treadle 25.

While I have herein described specifically an embodiment of my invention, which I have found to be practical, it will be apparent that changes might be made therein without departure from the spirit or scope of my invention.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. In a machine of the class described, the combination with a main frame, of a secondary frame mounted thereon and adapted to take the strain of the work, said secondary frame including integral metallic side members, a transverse support connecting said side members at one of their ends, a shaft journaled in said side members at the other end, inwardly-extending pins carried by said side members intermediate the transverse support and said shaft, a cylinder arranged in said secondary frame and resting upon the transverse support of the latter, said cylinder provided with an encircling rim having notches in its sides for receiving the inwardly-extending pins of the secondary frame whereby the cylinder is de-

tachably held in said secondary frame, a piston arranged for insertion in said cylinder, a rack bar for operating said piston, a gear wheel carried by the shaft of the secondary frame and coacting with said rack bar for moving the piston in one direction in the cylinder, means for moving the piston in the opposite direction, and means carried by the main frame and connected to the shaft of the secondary frame for actuating said shaft.

2. In a machine of the class described, the combination with a main frame, of a secondary frame mounted thereon and adapted to take the strain of the work, said secondary frame including integral metallic side members, a transverse support connecting said side members at one of their ends, a shaft journaled in said side members at the other end, inwardly extending pins carried by said side members intermediate the transverse support and said shaft, a cylinder arranged in said secondary frame and resting upon the transverse support of the latter, said cylinder provided with an encircling rim having notches in its sides for receiving the inwardly extending pins of the secondary frame, whereby the cylinder is detachably held in said secondary frame, a piston arranged for insertion in said cylinder, a rack bar for operating said piston, a gear wheel carried by the shaft of the secondary frame and coacting with said rack bar for moving the piston in one direction in the cylinder, a weight supported by the main frame and suitably connected to said piston for moving the latter in the opposite direction, and means also carried by the main frame and connected to the shaft of the secondary frame for actuating said shaft.

In testimony whereof I hereunto set my hand in the presence of two witnesses.

GEORGE ZIMMERS.

In the presence of—
GEO. T. MAY, JR.,
L. L. MILLER.