

1,235,660.

J. C. CROCKETT.
 APPARATUS FOR MAKING SAUSAGE.
 APPLICATION FILED NOV. 13, 1916,

Patented Aug. 7, 1917.
 3 SHEETS—SHEET 1.

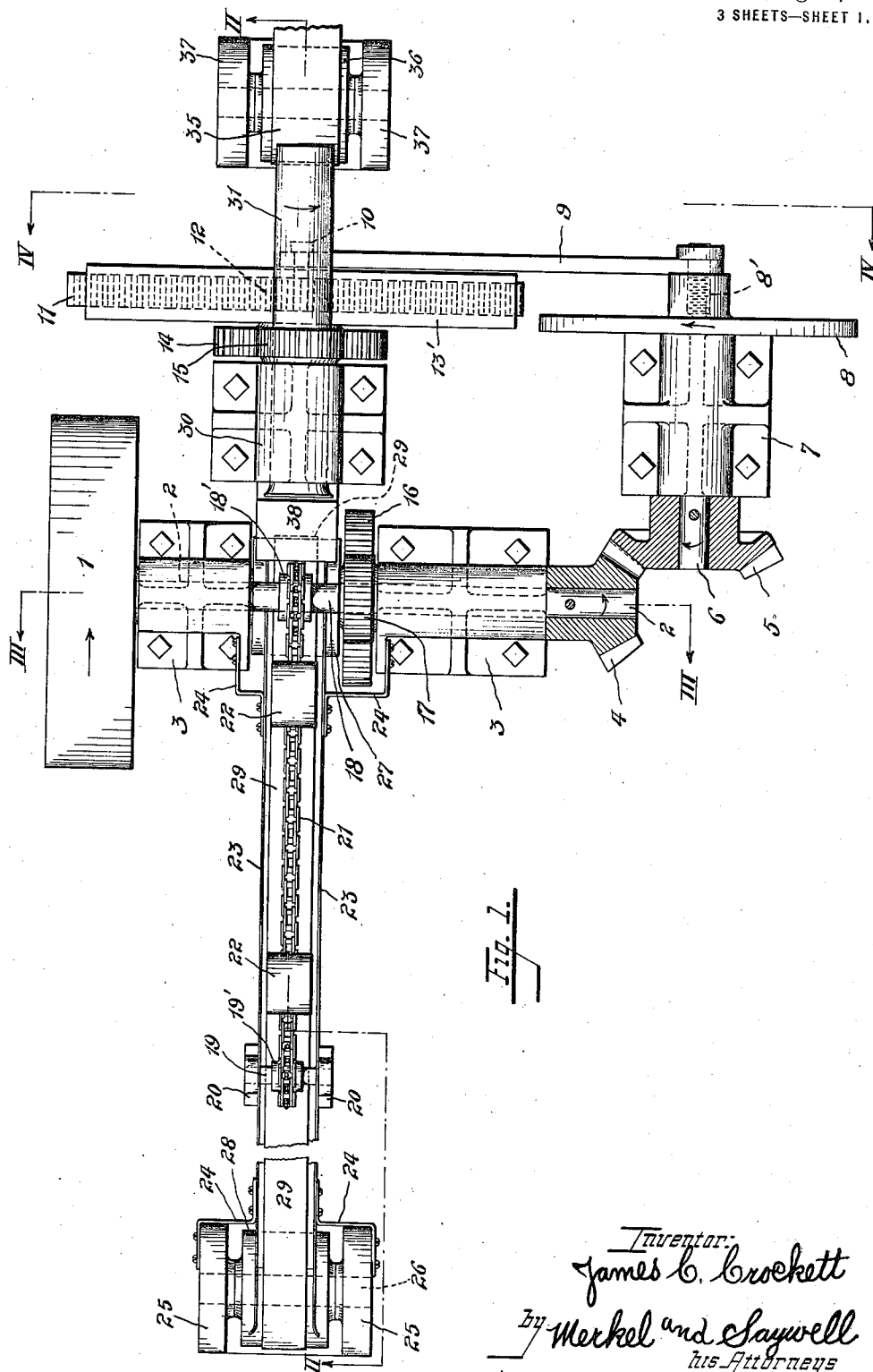


Fig. 1.

Inventor:
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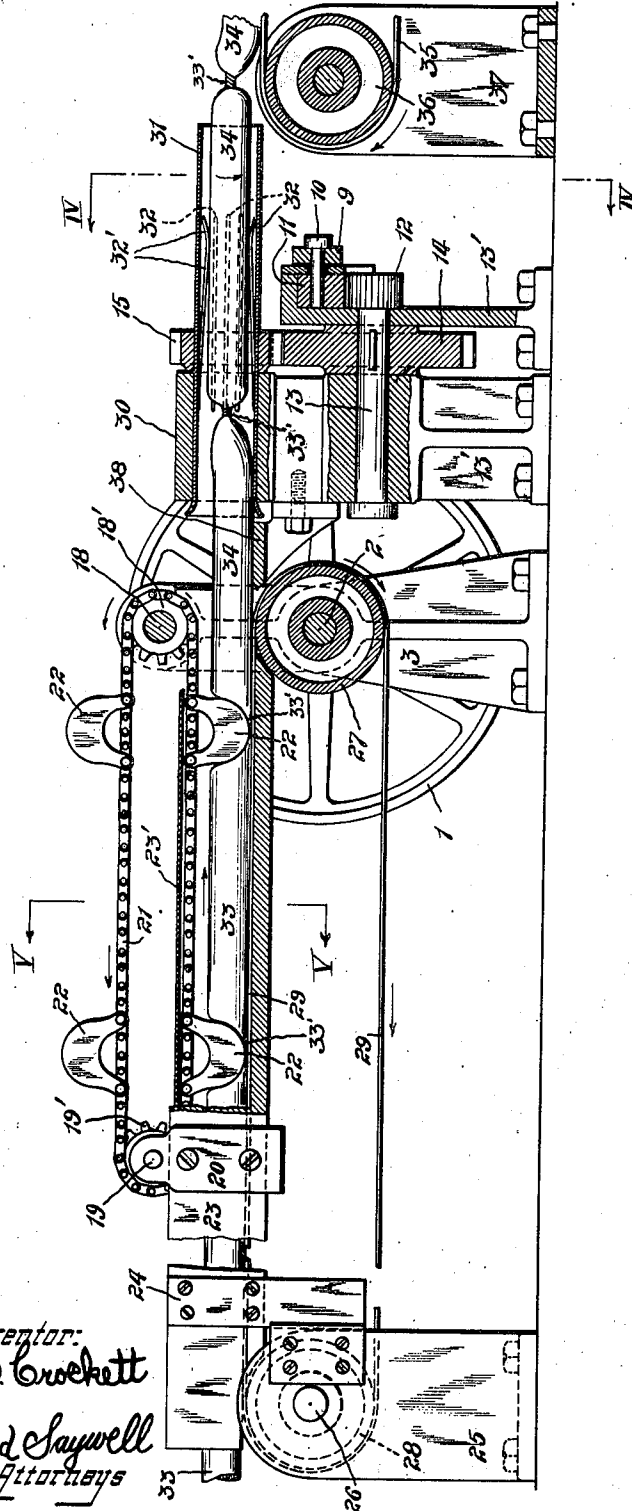
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Fig. 2.



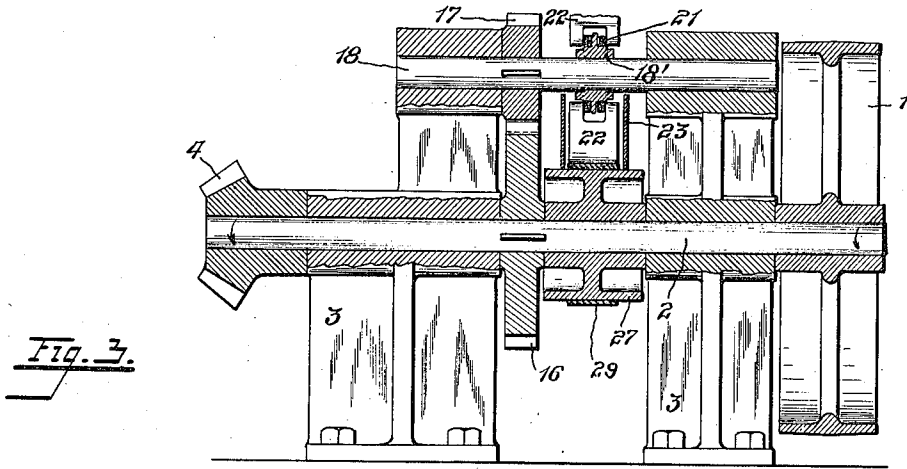
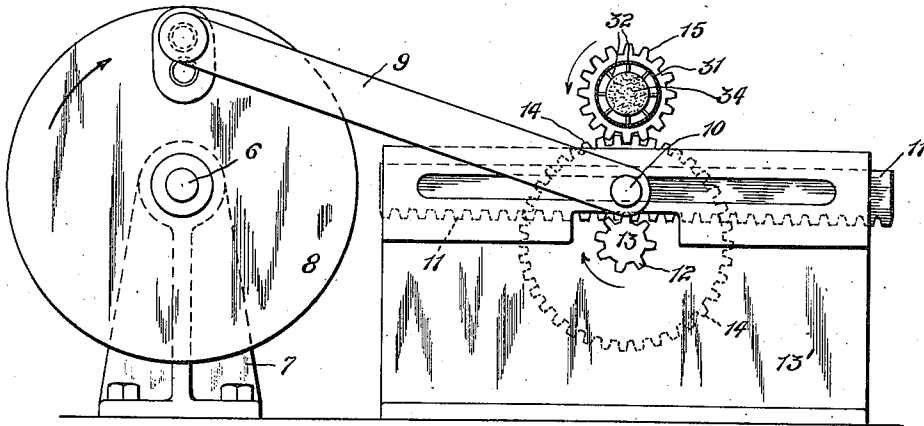
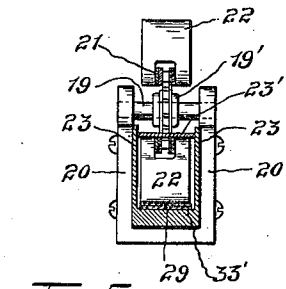
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

JAMES C. CROCKETT, OF CLEVELAND, OHIO.

APPARATUS FOR MAKING SAUSAGE.

1,235,660.

Specification of Letters Patent.

Patented Aug. 7, 1917.

Application filed November 13, 1916. Serial No. 131,008.

To all whom it may concern:

Be it known that I, JAMES C. CROCKETT, a citizen of the United States, resident of Cleveland, county of Cuyahoga and State of Ohio, have invented new and useful Improvements in Apparatus for Making Sausage, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle so as to distinguish it from other inventions.

My invention relates to apparatus for making sausages and particularly to apparatus for dividing out from the bulk material such portions as will make individual sausages in link form and rotating such portions so as to twist the ends of said links.

The annexed drawings and the following description set forth in detail certain means embodying my invention, the disclosed means, however, constituting but one of various mechanical forms in which the principle of the invention may be employed.

In said annexed drawings:—

Figure 1 is a plan view partially in section of my improved mechanism; Fig. 2 is a longitudinal, vertical section taken in the plane indicated by the lines II—II, Fig. 1; Fig. 3 is a transverse, vertical section taken in the plane indicated by the lines III—III, Fig. 1; Fig. 4 is an end elevation looking from the plane and in the direction indicated by the lines IV—IV and arrows, Fig. 1; and Fig. 5 is a transverse vertical section taken in the plane indicated by the lines V—V, Fig. 2.

In said annexed drawings in which the same numeral indicates identical parts in the different views, a driving pulley is represented by 1, actuated by any suitable driving mechanism (not shown) and actuating the main shaft 2 journaled in suitable bearings in the supports 3. Carried upon the inner end of said shaft 2 is a bevel gear 4 engaging with the bevel gear 5 carried upon a shaft 6 journaled in suitable bearings in the support 7. Mounted upon the other end of the shaft 6 is a wheel 8 having connected to it on a stud 8', one end of a connecting rod 9, said stud being located near the periphery of said wheel 8 and being capable of some adjustment, as is plainly seen in

Fig. 4. The other end of said connecting rod 9 is secured by means of a pin 10 to a rack 11 meshing with a pinion 12 carried upon a shaft 13 journaled in suitable bearings in supports 13'. Shaft 13 also carries a spur gear 14 meshing with a pinion 15. Said pinion is mounted upon a rotatable tube or cylinder 31, which tube is carried by supports 30. Within said cylinder 31 are a number of angular spring fingers 32 suitably secured at one end to the inner wall of said cylinder and projecting into the interior thereof as to intersect material moving through said cylinder, such as the links 34, Fig. 2, reference to the formation of which will be hereinafter more fully described. Said links are adapted to be fed, when issuing from the cylinder 31, upon an endless belt 35 traveling over pulleys, one of which 36 mounted in the support 37, is shown in said Fig. 2. Referring back to the main driving shaft 2, there is also carried thereupon a spur gear 16 meshing with a pinion 17 carried upon a shaft 18 suitably journaled in the supports 3. Also carried upon the shaft 18 and on shaft 19 journaled in the brackets 20, are two sprockets 18' and 19' over which runs an endless chain 21 to which are secured at spaced distances, four hard rubber cutters or segregators 22. Said endless chain 21 runs through the top part of a trough 23 in its lower path of travel so that said cutters 22 will contact with and dig into but not through the bulk material 33, being conveyed in the ordinary sausage casing 33' through said trough 23 by an endless belt 29, hereinafter further described. The trough 23 is supported by brackets 24 carried upon supports 3 and 25. A further pair of pulleys 27 and 28 are carried upon shaft 2 and a shaft 26 journaled in the supports 25. Over said pulleys 27 and 28 rides the endless belt 29 for conveying the material into and through the trough 23.

From the foregoing description it is evident that the bulk sausage in the casing 33' may be fed from the left-hand end of the mechanism, Fig. 2, into the trough 23 upon the endless belt 29 and the same conveyed through said trough 23 through the action of the pulley 27 from the main driving shaft 2 and that from said shaft 2 through the

medium of the spur gear 16, pinion 17 and pulley 18' the endless chain 23 is actuated in such timed relation to the movement of the endless belt 29 as to cause the hard rubber dividers to dig into the material 33 so frequently as to segregate said material 33 into portions of the desired size, said digging or separating action not being sufficient to tear or injure the sausage casing 33'. Furthermore, it is evident that from said main shaft 2 through the bevel gears 4 and 5, the wheel 8, rod 9, rack 11, pinion 12, spur gear 14, pinion 15 and tube 31, the segregated portions or links 34 are rotated alternately in different directions by reason of the pressure of the spring fingers 32 in the cylinder 31, which pressure is sufficient to carry the links 34 around with the tube 31, but not so strong as to leave any permanent impression upon said links or retard their progressive movement through said tube. By suitable arrangements of the connected gearing, the tube 31 may be rotated any desired number of times in one direction before its direction of rotation is reversed, but I have found that about four times in each direction is the proper number of turns to secure an efficient twisting of the ends of the links 34. By reason of the rotation of the tube 31 in both directions, the turning effect or twist in one direction upon the casing 33' forming ends of the links 34 is not neutralized when the next adjacent portion is being rotated, but is in fact doubled. Otherwise, the effect, if the rotation of the cylinder 31 were always in the same direction, would be to untwist the end of the link which has just escaped from the fingers 32. The further arrangement of the tube 31 and spring fingers 32 with reference to the incoming links 34 is that a whole link shall have passed the contact space 32', Fig. 2, when the reversing action upon the direction of rotation of the tube 31 takes place. A short platform 38 for bridging the gap between the trough 23 and the tube 31 is provided, as shown in Fig. 2.

What I claim is:—

1. In apparatus of the character described, the combination of driving means; conveying means actuated by the latter; means for segregating portions of bulk material; a tube arranged to receive successively said segregated portions; and means for rotating said tube successively in opposite directions, said segregated portions being rotated by said tube and also conveyed longitudinally therethrough by said conveying means.

2. In apparatus of the character described, the combination of driving means; conveying means for the bulk material; means for segregating portions of the latter; a tube arranged to receive successively said segre-

gated portions; means for rotating said tube successively in opposite directions; and means arranged to act upon the segregated portion in said tube to effect its positive rotation therewith.

3. In apparatus of the character described, the combination of a main shaft and means for driving the latter; means actuated by said shaft for conveying bulk material; further means actuated by said shaft in juxtaposition to said conveying means and adapted to segregate said material as conveyed; a rotatable tube arranged to receive successively the segregated portions as conveyed; means for actuating said tube from said main shaft, said means being adapted to effect the successive rotation of said tube in opposite directions; and means arranged to act upon said portions when in said tube to effect their positive rotation therewith.

4. In apparatus of the character described, the combination of a main shaft and means for driving the latter; means actuated by said shaft for conveying bulk material; further means actuated by said shaft in juxtaposition to said conveying means and adapted to segregate said material as conveyed; a rotatable tube arranged to receive the segregated portions as conveyed; means for actuating said tube from said main shaft, said means effecting the alternate rotation in different directions of said tube; and means arranged to act upon said portions when in said tube to effect their positive rotation therewith.

5. In apparatus of the character described, the combination of a main shaft and means for driving the latter; means actuated by said shaft for conveying bulk material; further means actuated by said shaft in juxtaposition to said conveying means and adapted to segregate said material as conveyed; a rotatable tube arranged to receive, successively, said segregated portions as conveyed; means for actuating said tube from said main shaft, including a wheel, a rack and a connecting rod connected at one end to said wheel near the periphery thereof and at the other end to said rack; and means arranged to act upon said portions when in said tube to effect their positive rotation therewith.

6. In apparatus of the character described, the combination of a main shaft and means for driving the latter; means actuated by said shaft for conveying bulk material; further means actuated by said shaft in juxtaposition to said conveying means and adapted to segregate said material as conveyed; a rotatable tube arranged to receive said segregated portions as conveyed; means for actuating said tube from said main shaft, including a wheel, a rack and a connecting rod adjustably connected at one end to said wheel near the periphery thereof and at the other end to said rack; and means arranged

to act upon said portions when in said tube to effect their positive rotation therewith; the arrangement being such as to effect the reversing of the direction of rotation of said tube just after a segregated portion therein has been conveyed so far as to escape from said positive rotating means.

7. In apparatus of the character described, the combination of a main shaft; means for driving the latter; means actuated by said shaft for conveying bulk material; further means actuated by said shaft in juxtaposition to said conveying means and adapted

to segregate said material as conveyed; gearing actuated by said main shaft; a wheel 15 actuated by said gearing; a connecting rod connected at one end to a rack; a shaft rotated by said rack; a tube rotated by said shaft and arranged to receive said segregated portions of said material successively; 20 and spring fingers connected to the inner wall of said tube and adapted to bear upon a segregated portion therein.

Signed by me, this 30th day of October, 1916.

JAMES C. CROCKETT.