No. 835,055. PATENTED NOV. 6, 1906.

W. A. BROOKS.

MACHINE FOR SPLITTING PIGS' FEET.

APPLICATION FILED APR. 2, 1906.

2 SHEETS—SHEET 1.

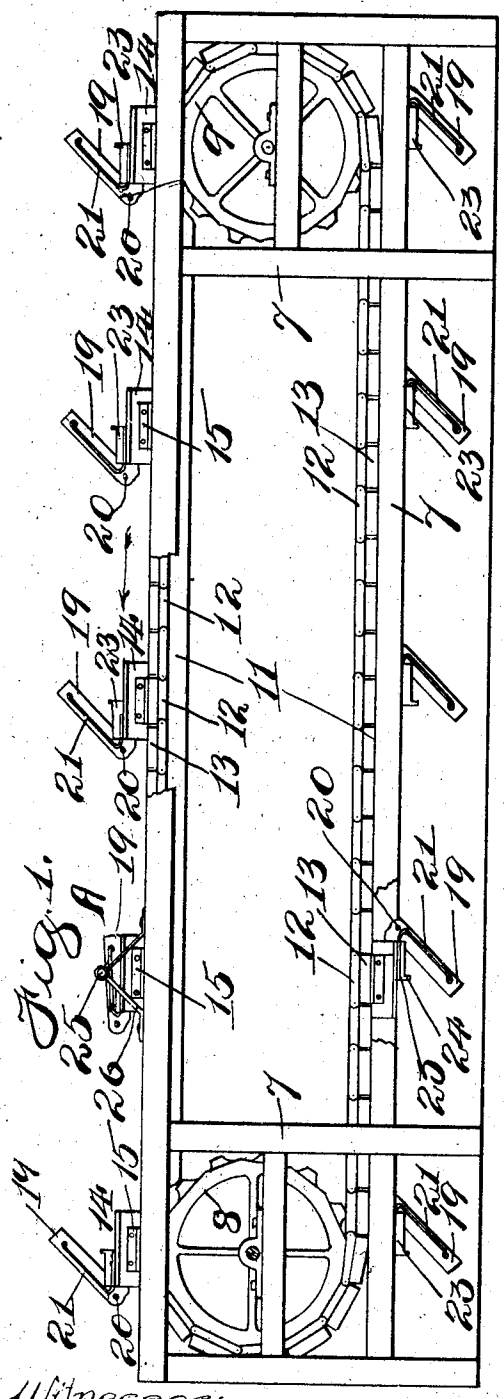


Fig. 1.

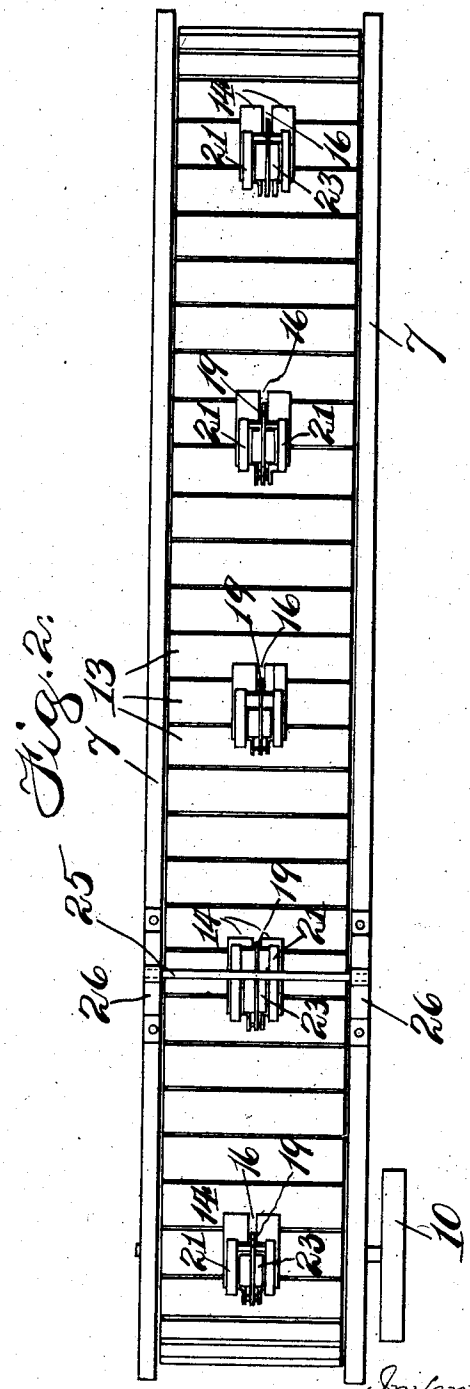


Fig. 2.

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2 SHEETS—SHEET 2.

Fig. 3.

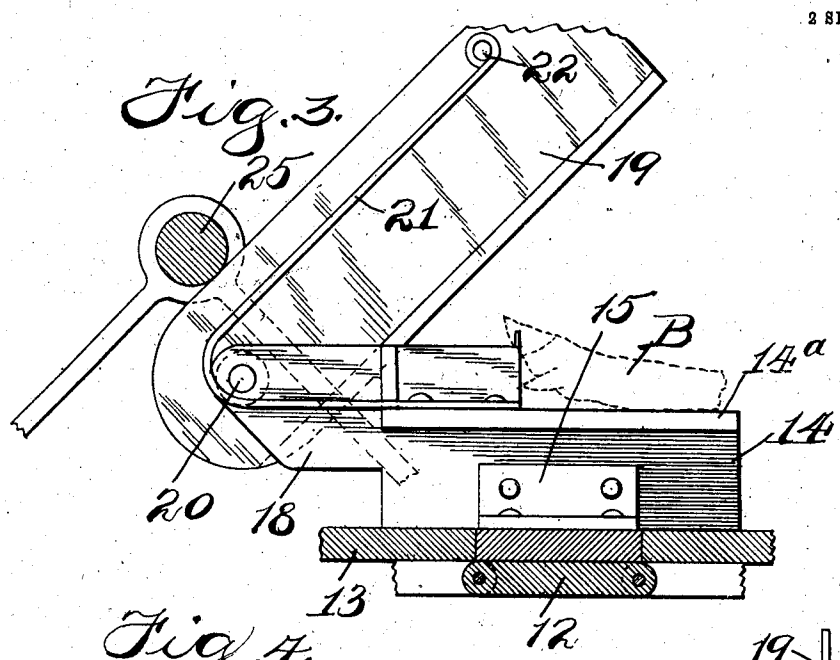


Fig. 4.

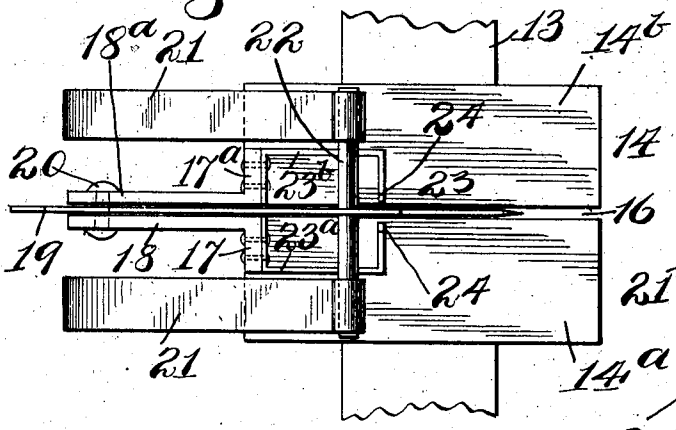


Fig. 5.

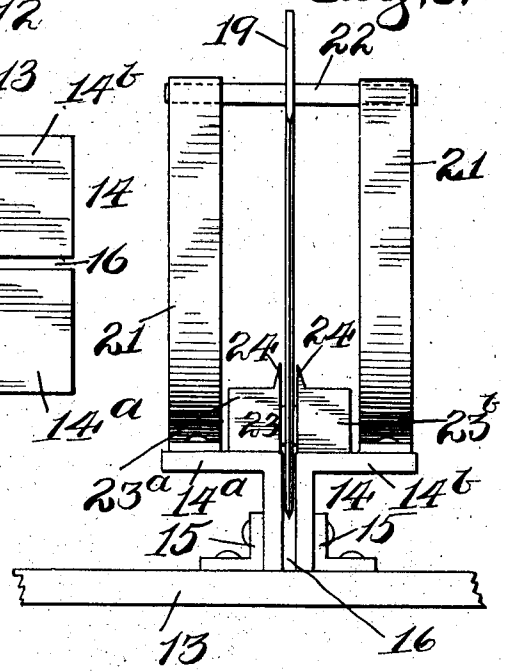
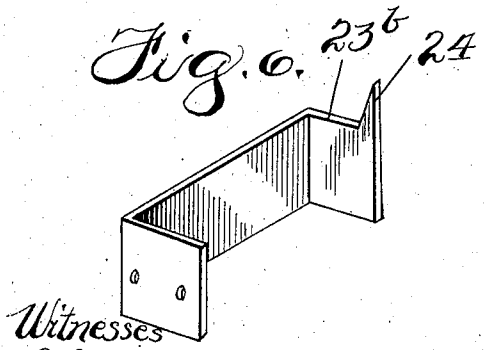


Fig. 6.



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UNITED STATES PATENT OFFICE.

WILLIAM A. BROOKS, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO MORRIS & COMPANY OF ILLINOIS, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

MACHINE FOR SPLITTING PIGS' FEET.

No. 835,055. Specification of Letters Patent. Patented Nov. 6, 1906.

Application filed April 2, 1906. Serial No. 309,459.

To all whom it may concern:

Be it known that I, WILLIAM A. BROOKS, a citizen of the United States, residing at Chicago, county of Cook, State of Illinois, have invented certain new and useful Improvements in Machines for Splitting Pigs' Feet, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to a new and improved splitting-machine which is peculiarly adapted for the splitting of pigs' feet and similar articles; and its principal object is to provide new and improved mechanism by which pigs' feet may be split longitudinally to prepare them for the market.

As is well known, pigs' feet in preparing them for the market are split into halves longitudinally in a line continuous with the division between the toes, and this, so far as I am aware, has been usually done by hand.

It is the principal object of my invention to provide new and improved mechanism by which this splitting may be done automatically; and to that end my invention consists, generally speaking, of a traveling carrier provided with a series of longitudinally-slotted supports upon each of which a pig's foot may be laid and with knives carried by the supports in operative relation thereto and automatically forced down by the movement of the carrier upon the pig's foot, which is engaged by suitable holding devices upon the support. After the splitting is done the knife is automatically released by a spring, and the pig's foot is free to drop off of the carrier as the movement is continued.

As has been said, the device is peculiarly adapted to the splitting of pigs' feet in preparing them for the market, and that is the primary object of my invention. My invention, however, may be used for other similar purposes.

In the drawings, Figure 1 is a side elevation of the machine. Fig. 2 is a top or plan view. Fig. 3 is an enlarged detail showing the table, the knife, and the cross-bar which operates it, the cross-bar and a portion of the carrier being shown in longitudinal section. Fig. 4 is an enlarged detail, being a top or plan view of the part shown in Fig. 3. Fig. 5 is an enlarged detail, being an end view of the parts shown in Figs. 3 and 4 viewed from the right. Fig. 6 is an enlarged detail, being a view of one of the spring members of the holding device.

Referring to the drawings, 7 indicates a frame in which are mounted sprocket-wheels 8 9, driven by the pulley 10, which is connected with any suitable source of power. The sprocket-wheels 8 9 support a carrier 11, which is composed of links 12 12 and cross-boards 13, secured to the links. The carrier may, however, be of any approved form of construction adapted to the purposes for which it is designed.

14 14 indicate supports or tables, which are secured each to one of the cross-boards 13 of the carrier, preferably by angle-irons 15, bolted to the supports 14 and to the cross-boards 13. The support 14 is composed of two portions 14^a and 14^b, which are separated from one another by a slot 16, running longitudinally with the travel of the carrier and adapted to permit of the passage into it of a knife, hereinafter described. The parts 14^a and 14^b are preferably cast, but may be, of course, otherwise formed, and are provided each at its rearward end—that is to say, the end toward which the carrier travels—with end supports 17 17^a, which extend upward and across a portion of the rear end of the members 14^a and 14^b substantially at right angles with the slots 16. Each of the members 14^a and 14^b is also provided with rearwardly-extending lugs 18 18^a. These end parts 17 17^a and lugs 18 18^a are preferably cast or formed integral with the members 14^a 14^b of the holder, as shown.

19 indicates a knife, which is pivoted by a bolt 20 between the lugs 18 18^a in the rear end of the slot 16 and in register therewith.

21 21 indicate bent springs, the lower ends of which are bolted to the rear ends of the members 14^a 14^b upon each side of the knives 19 and the upper ends of which engage pins 22, which pass through the knives 19. The tension of the springs 21 is such as to normally hold the knives 19 in their open positions—as shown, for instance, in Fig. 3.

23 indicates a holder, which is formed of two pieces of spring material, preferably spring-steel, 23^a 23^b. The shape of these pieces is shown in Fig. 6. As best shown in that figure and Fig. 4, they consist of a strip of spring material bent twice at right angles

and provided at the end that lies next the front—that is to say, the feeding end of the machine—each with a point 24, which is adapted to engage with the toes of the pig's foot to be split in the position shown in Fig. 3 and as hereinafter described. The other end of the holder members 23^a 23^b are bolted, respectively, to the end supports 17 17^a of the table 14 upon each side of the slot 16, so as to permit the free passage of the knife 19 between them and down into the slot. It will be readily understood that being formed of spring metal the forward ends of these holder members 23^a 23^b, which are provided with the points 24, can yield laterally away from the slot against the spring action when the knives are operated, as hereinafter described, and will return again to their normal positions, when the knives are returned by the springs to their normal positions after their operation. As is shown in Figs. 1 and 2, the carrier is provided with a number of these tables, knives, and holding devices, which are carried by the operation of the carrier in the direction of the arrows shown in Fig. 1.

25 indicates a cross-bar which is supported above the carrier by brackets 26, bolted or in any appropriate manner secured to the side members of the frame 7 at each side of the carrier and toward the rear or discharge end of the machine. The bar 25 is located at such a height above the carrier as to engage the knife 19 near its pivoted end, as is shown in Fig. 3, as the carrier moves the cutting devices along and as the knife passes under the bar 25 to force it down between the members of the holder 23 and into the slot 16 and in this position to permit the knife to pass under the bar. This position is shown at A in Fig. 1. As soon as the knife has passed beyond the bar 25 and is released from contact therewith, the spring 21 at once raises the knife into its normal position.

The operation of the machine is as follows: The carrier being set in motion, the attendant standing at the side of the machine toward its rear end places a pig's foot, with its forward side uppermost, upon the table 14 as it passes him and hooks the pig's foot upon the holder 23, with the pins 24 engaging the under side of the toe, one upon each side of the division between the toes. In this position, of course, the division between the toes of the pig's foot lies in register with the slot 16 and, of course, in register with the knife 19. The position of the pig's foot upon the table is shown at B in dotted lines in Fig. 3. As soon as the table carrying the pig's foot travels forward, so that the knife is brought into engagement with the bar 25, the knife is forced down, as above described, upon the pig's foot between the toes and splits it longitudinally upon the line of such division. The forward ends of the holder members 23^a 23^b, which engage the pig's foot, yield laterally against the spring to permit the free passage of the knife between them. Having passed beyond the action of the bar 25, the knife, as is said above, is returned to its position, and as the carrier moves on the pig's foot drops from the points 24 of their own weight and may be caught in any suitable receptacle and removed from the machine. It will of course be understood that the attendant places one pig's foot upon each of the supporting-tables as it passes him.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a carrier and mechanism for driving the same, of a holder adapted to engage the article to be divided and mounted on said carrier, a spring-seated knife mounted on said carrier in operative relation to said holder, and means for operating said knife, as said carrier moves, substantially as described.

2. The combination with a carrier and mechanism for driving the same, of a longitudinally-slotted support mounted on said carrier, laterally-yielding spring-holders provided with engaging points and mounted on said support one upon each side of said slot, a knife carried by said carrier in registry with said slot, and means for forcing said knife between said holders by the movement of said carrier, substantially as described.

3. In a machine for splitting pigs' feet, the combination with a carrier and mechanism for driving the same, of a plurality of longitudinally-slotted supports mounted on said carrier, a laterally-yielding spring-holder provided with an engaging point and mounted on said support upon each side of the slot, a spring-seated knife mounted on said support in registry with said slot, and means for forcing said knife into said slot between said holders by the movement of said carrier, substantially as described.

4. In a machine for splitting pigs' feet, the combination with a carrier and mechanism for driving the same, of a plurality of longitudinally-slotted supports mounted on said carrier, a laterally-yielding spring-holder provided with an engaging point and mounted on said support upon each side of the slot, a spring-seated knife mounted on said support in registry with said slot, and a stationary bar adapted to contact said knives successively as said carrier moves and force them successively between said holders and into said slot as said carrier moves, substantially as described.

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