

July 25, 1939.

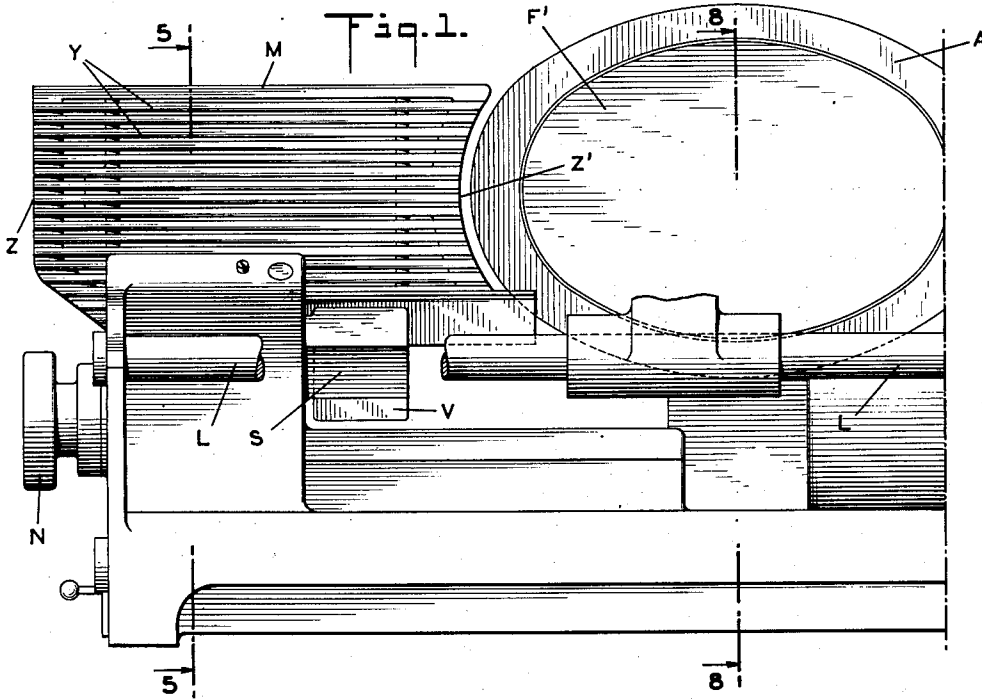
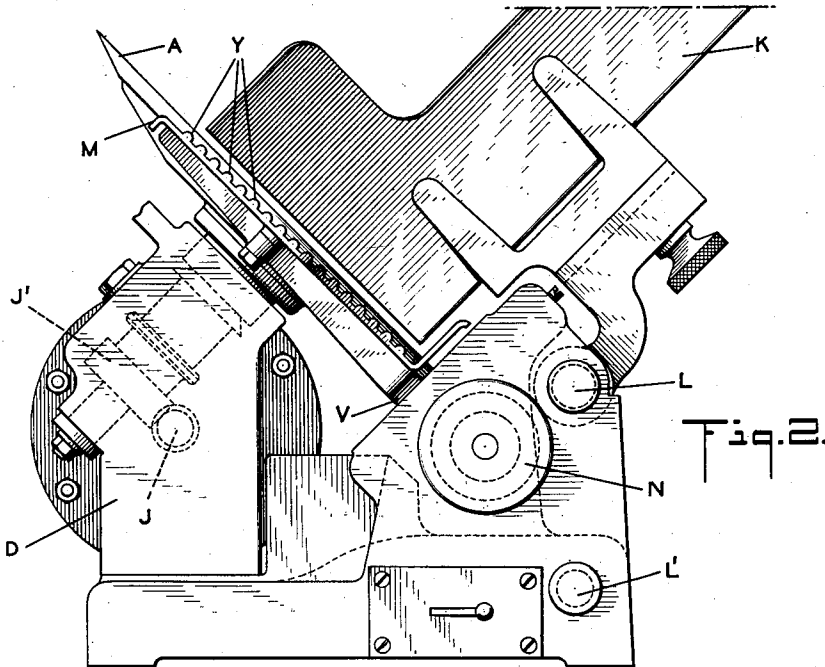
J. J. WAAGE

2,167,015

SLICING MACHINE

Filed Aug. 21, 1936.

3 Sheets-Sheet 1



INVENTOR
JOHN JACOB WAAGE

BY
Ralph E. Flayton
ATTORNEY

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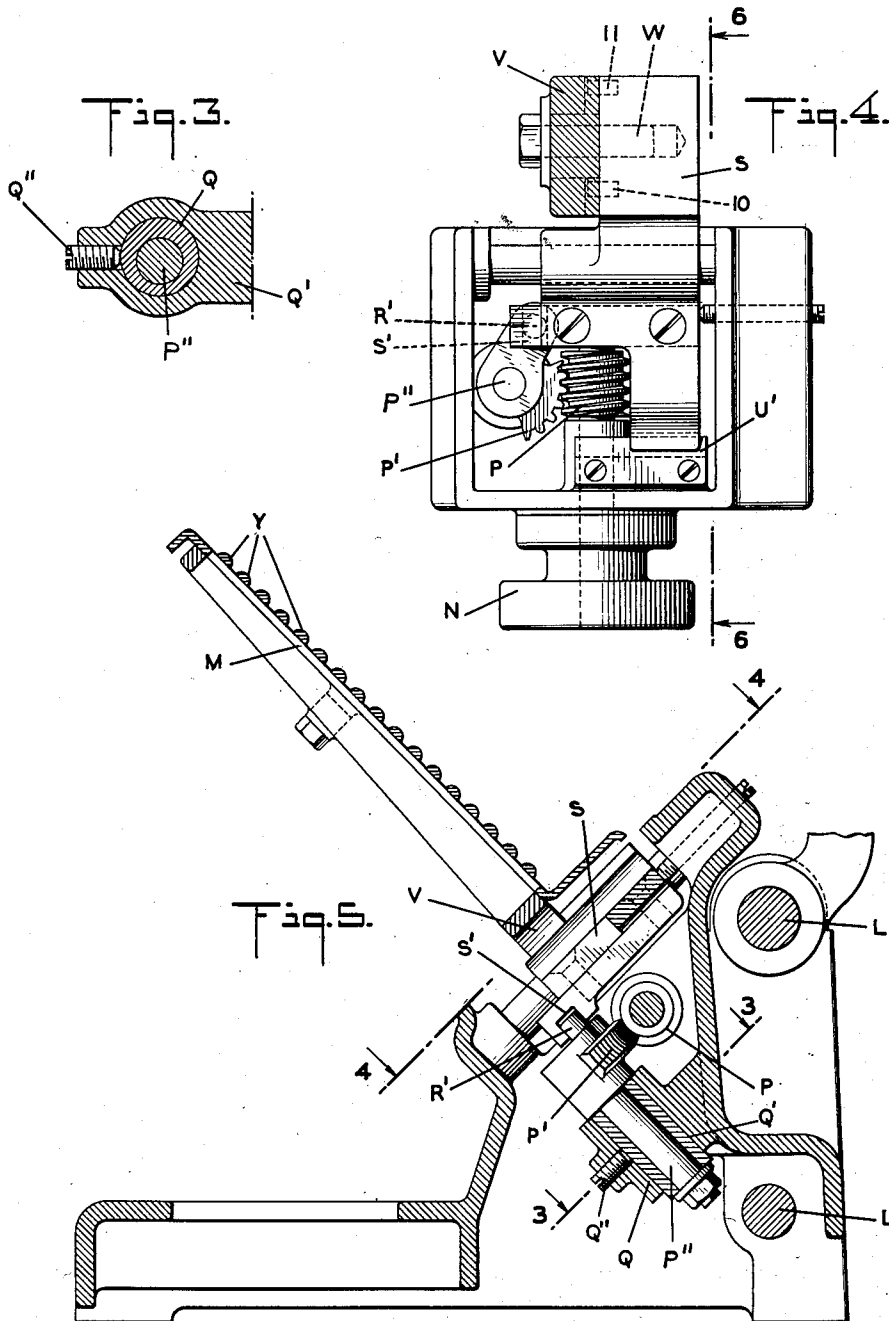
J. J. WAAGE

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3 Sheets-Sheet 2



INVENTOR
JOHN JACOB WAAGE

BY
Ralph E. Clayton
ATTORNEY

July 25, 1939.

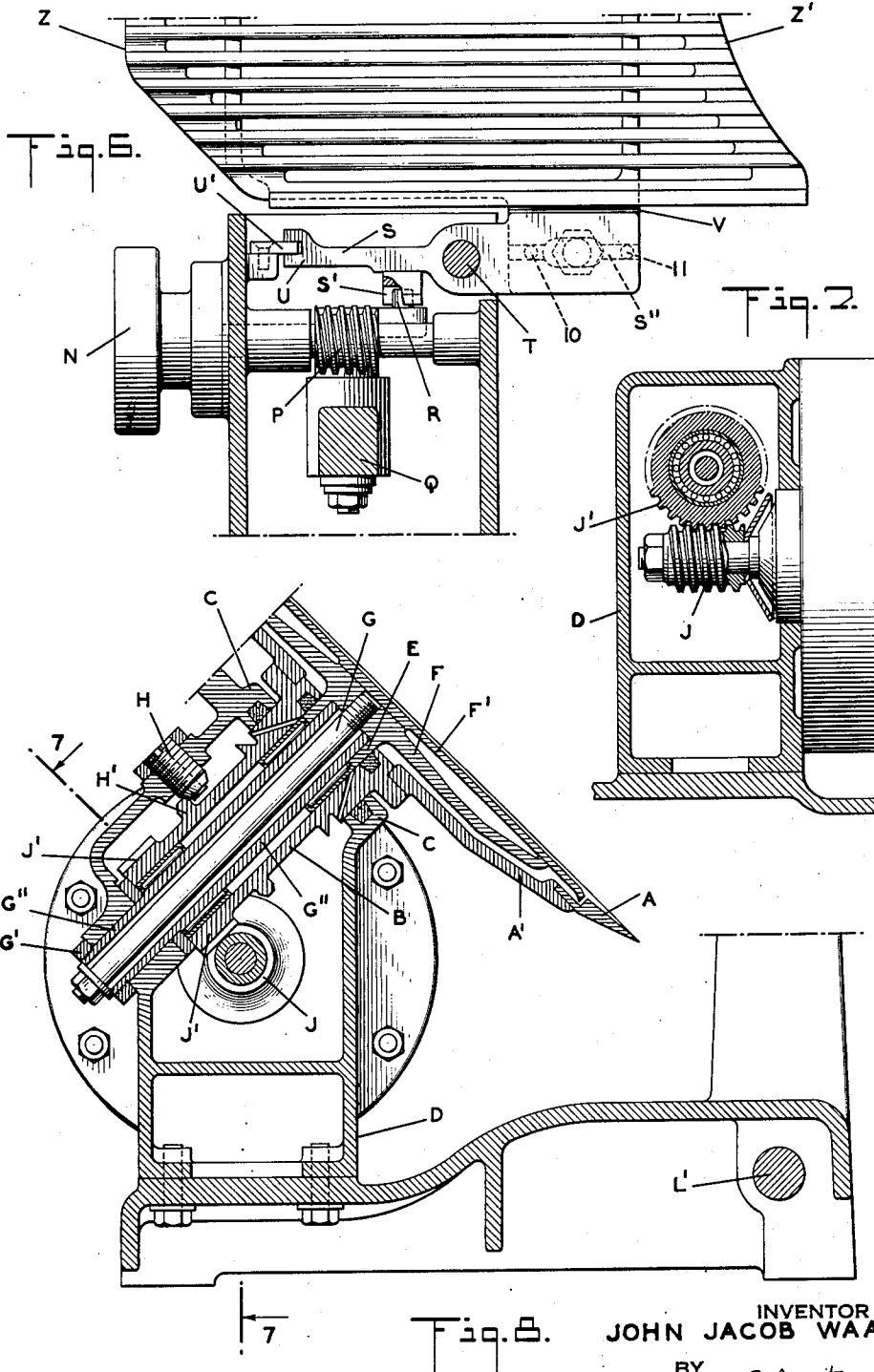
J. J. WAAGE

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SLICING MACHINE

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3 Sheets-Sheet 3



INVENTOR
JOHN JACOB WAAGE
BY
Ralph B. Clayton
ATTORNEY

UNITED STATES PATENT OFFICE

2,167,015

SLICING MACHINE

John Jacob Waage, New York, N. Y., assignor to
Globe Slicing Machine Company, New York,
N. Y., a corporation of New York

Application August 21, 1936, Serial No. 97,114

2 Claims. (Cl. 146—102)

This invention relates to slicing machines and more especially to the type of slicing machine employing a gauge plate to regulate the thickness of the slices and is more particularly directed to the type of slicing machine in which the knife is inclined from the vertical with a normally operated reciprocating carriage. In the latter type of machine, the operator usually stands at one end of the machine with the result that the inclined gauge plate prevents observation of the stacking of the cut slices.

It is an object of the present invention to provide a gauge plate which will permit stacking of the sliced material to be conveniently observed. To this end, a gauge plate, of the form as shown in the illustrated embodiment of the invention, is located in a plane substantially parallel with the plane of the inclined knife and has a plurality of longitudinally disposed object supporting strips arranged in spaced relation so as to afford a view through the gauge plate and permit the stacking of the cut slices to be observed. This avoids waste by enabling the operator to judge the weight of the cut slices. The arrangement of the strips in the gauge plate reduces the resistance to the movement of the object and tends to prevent lateral movement of the object with respect to the object holder.

While one embodiment of the invention is shown in the drawings accompanying this application and forming part thereof, it is to be understood that such embodiment is merely illustrative of the underlying principles of the invention so as to afford a clear understanding thereof to those skilled in the art and is not intended as limiting the invention to the specific form disclosed therein.

In said drawings:

Fig. 1 is a front elevation of the invention partly fragmentary.

Fig. 2 is an end elevation of the invention partly fragmentary.

Fig. 3 is a section of Fig. 5 on the line 3—3.

Fig. 4 is a section of Fig. 5 on the line 4—4.

Fig. 5 is a section of Fig. 1 on the line 5—5.

Fig. 6 is a section of Fig. 4 on the line 6—6.

Fig. 7 is a section of Fig. 8 on the line 7—7, and

Fig. 8 is a section of Fig. 1 on the line 8—8.

Continuing now by way of a more detailed description and referring more particularly to the embodiment of the invention illustrated in the accompanying drawings, an annular strip A is detachably secured in any convenient manner to the periphery of a rotatable plate A' which in turn is secured in any convenient manner to

the upper end of a rotatable geared knife drive sleeve B. The sleeve may be, and preferably is, journaled between the internal bearing C formed at one end of the casting housing the knife drive and an annular bearing flange axially disposed with respect to and depending from a disc F. The disc F supports a stationary center or face plate F', the latter being disposed within the knife strip A and having its upper surface substantially flush therewith to afford a stationary abutment for the end of the object during the slicing operation as will be readily understood. The supporting disc F and face plate F' are bolted to the casting D by a through bolt G having one end threaded in the center plate supporting disc F and its opposite end locked by a nut clamping a washer G' threaded on a spacing sleeve G'' and abutting against the end of the casting. The stationary center plate F', its supporting plate F, may be removed from the casting by removing the nut at the end of bolt G. The knife strip A and its supporting plate A' and sleeve B are retained in position by a set screw H and an annular stop flange H' formed with the sleeve B thereby keeping the worm J and worm wheel J' in engagement. The worm J is driven by any suitable source of motive power and rotates the sleeve B, its supporting disc A' and knife strip A, as will be readily understood. A reciprocating V-shaped object holder K is arranged to slide back and forth relatively to the knife A on the guide rod L and auxiliary rod L' and is inclined from the horizontal. The object to be sliced is placed in the V-shaped object holder and slides by its own weight longitudinally of the holder toward the knife. In order to regulate the thickness of the slice to be cut an adjustable gauge plate M is located adjacent to the knife A and in a plane substantially parallel therewith, and has an arcuate cut-away knife receiving portion. In order to adjust the plane of the gauge plate M with respect to the plane of the knife A and to effect this adjustment at will, a manually operable dial N is conveniently located outside of one end of the casting and rotates a worm P located within the casting. In cutting position, the gauge plate is lower than the knife edge so as the end of the object is slid along the former, it meets the knife and a slice is severed as will be readily understood. The worm meshes with a worm wheel segment P' the latter being mounted on a shaft P'' eccentrically journaled in a bearing Q. The bearing Q is seated in an opening formed in bracket Q', the latter extending from the casting and preferably

being integral therewith. A set screw Q' locks the bearing Q in the bracket, the arrangement permitting adjustment of the segment P' and facilitating its assembly. A crank pin R projects upwardly from an elongated portion or crank of the worm wheel segment and engages slot S' of the slide S to reciprocate the latter. The slide S is carried on a guide rod T and is held in position by a forked end U sliding on a guide plate U'. An extension plate V is preferably formed with the lower edge of the gauge plate M so as not to obstruct the operator's view and is adjustably connected to the end of the movable slide S by means of a bolt W. In order to adjust the position of the slide S on the extension piece V, the extension piece has an elongated opening S'' to receive the bolt W and pin guide slots oppositely disposed with respect to opening S'' engaged by guide pins 10 and 11 projecting from one side of the slide S. From the foregoing, it will be noted that rotation of the dial N through the intervention of the worm P and worm wheel segment P', moves the slide S with the extension piece V and gauge plate M back and forth.

The gauge plate M comprises a plurality of parallel half-round strips Y arranged in spaced relation so that the operator of the machine may observe the stacking of the cut slices behind the gauge plate. The strips Y are connected at their opposite ends by the webs Z and Z'. The strips and webs, as well as the extension piece may be cast in one piece.

The present invention is a continuation in part of an application of John Jacob Waage filed March 22, 1933, Serial Number 662,009, and while the invention is more particularly adapted to the type of slicing machine having an inclined knife it may be also used to advantage with other types of machines, for instance one with a horizontal gauge plate.

I claim:

1. A slicing machine combining a base having

an upstanding guide sleeve, a rotary knife having its axis of rotation fixed with respect to the base, a gauge plate, a marginal stiffening frame for said gauge plate, a plurality of dependent guides secured to one edge of the stiffening frame, the said guides sliding in said guide sleeves, means including a cam cooperating with one of said guides to raise and lower the stiffening frame and its attached gauge plate with respect to the knife, said gauge plate having a plurality of longitudinal slits forming a plurality of parallel object supporting strips and object supporting means reciprocal relatively to the knife and gauge plate to slide the object back and forth on the strips and knife, the object supporting means being over the knife at one end of the cutting stroke, leaving the gauge plate entirely free of the object to permit an unobstructed view of the severed slices in back of the gauge plate through the slits of the gauge plate from a point in front of the gauge plate.

2. A slicing machine combining a base, a rotary knife having its axis of rotation fixed with respect to the base, a gauge plate, a stiffening frame for said gauge plate, means cooperating with the base and an edge of the stiffening frame to guide the gauge plate relatively to the base, means including a cam to raise and lower the gauge plate with respect to the knife, said gauge plate having a plurality of longitudinal slits forming a plurality of parallel object supporting strips and object supporting means reciprocal relatively to the knife and gauge plate to slide the object back and forth on the strips and knife, the object supporting means being over the knife at one end of the cutting stroke, leaving the gauge plate entirely free of the object to permit an unobstructed view of the severed slices in back of the gauge plate through the slits of the gauge plate from a point in front of the gauge plate.

JOHN JACOB WAAGE.