

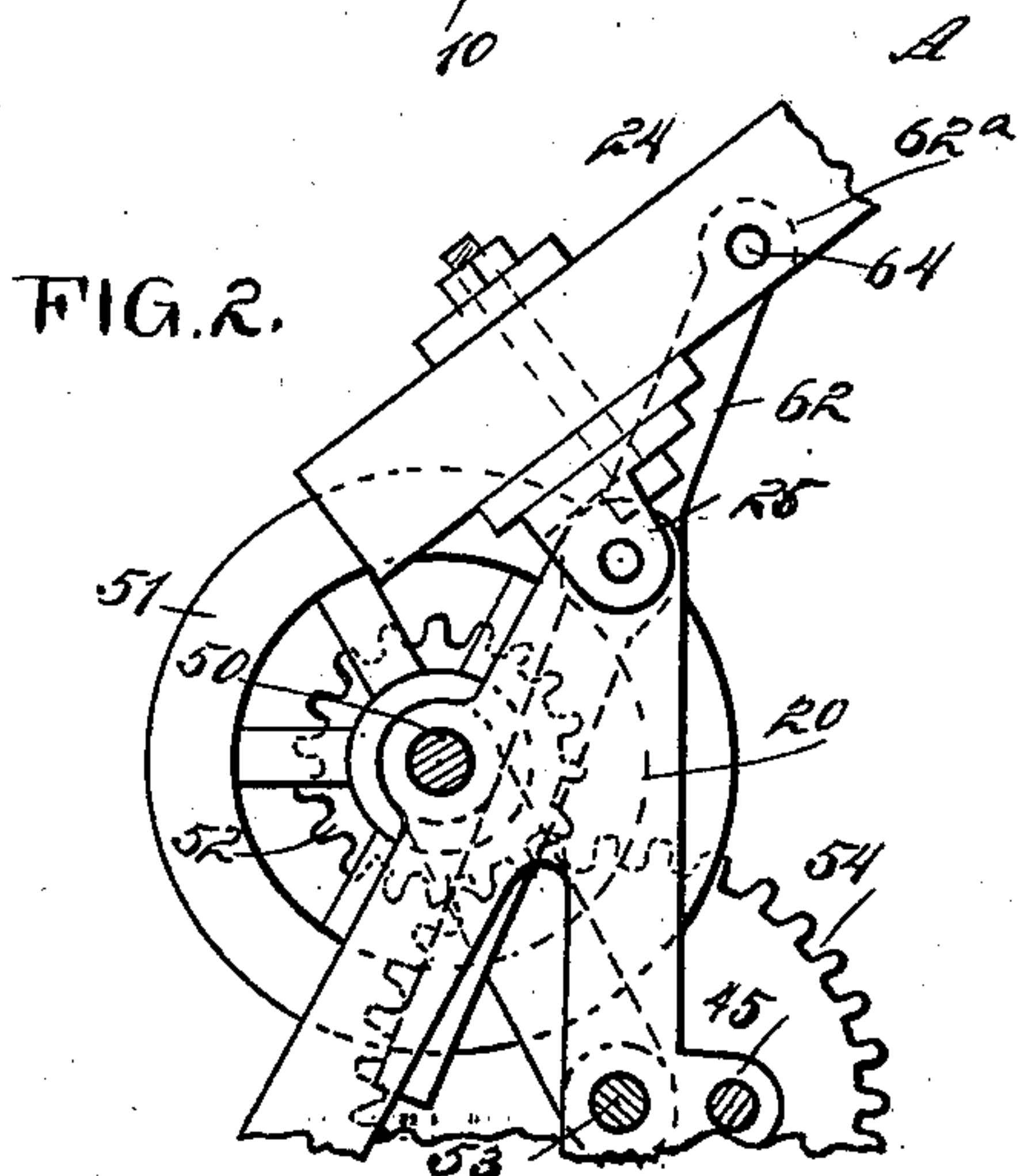
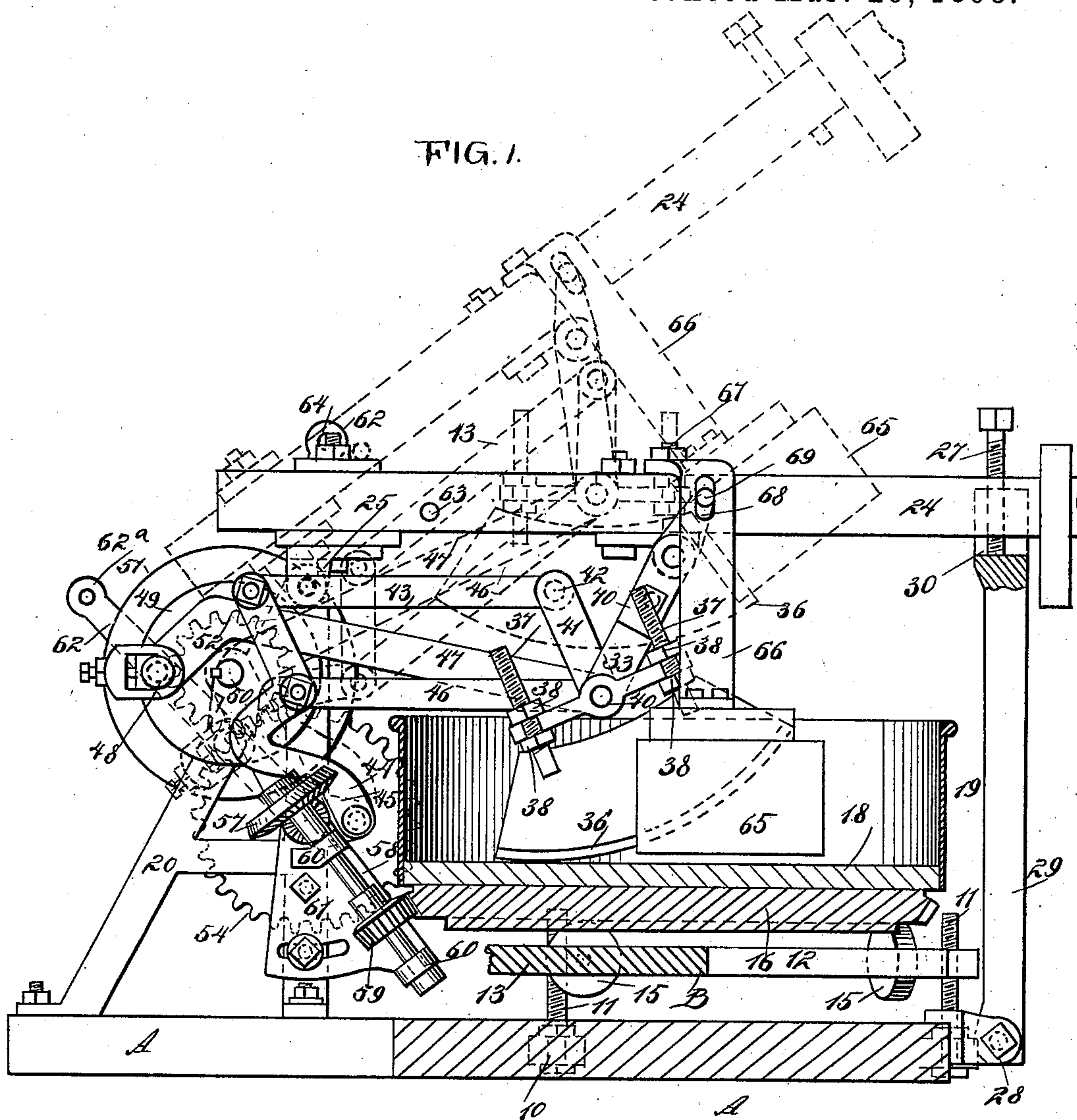
(No Model.)

2 Sheets—Sheet 1.

A. S. STEWART.  
CHOPPING MACHINE.

No. 601,532.

Patented Mar. 29, 1898.



WITNESSES:

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*John A. Ken*

INVENTOR

*A. S. Stewart*

BY

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ATTORNEYS.

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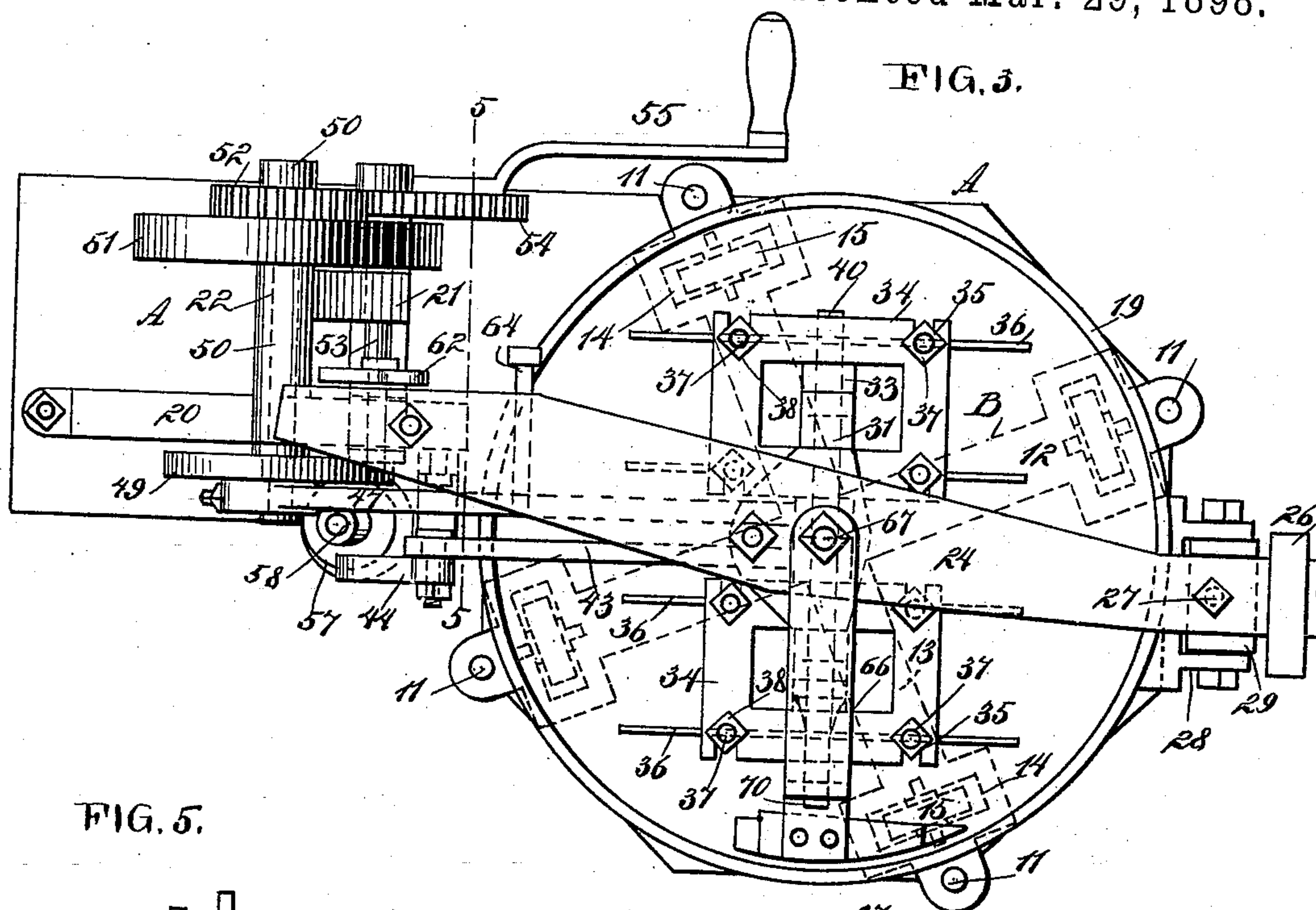
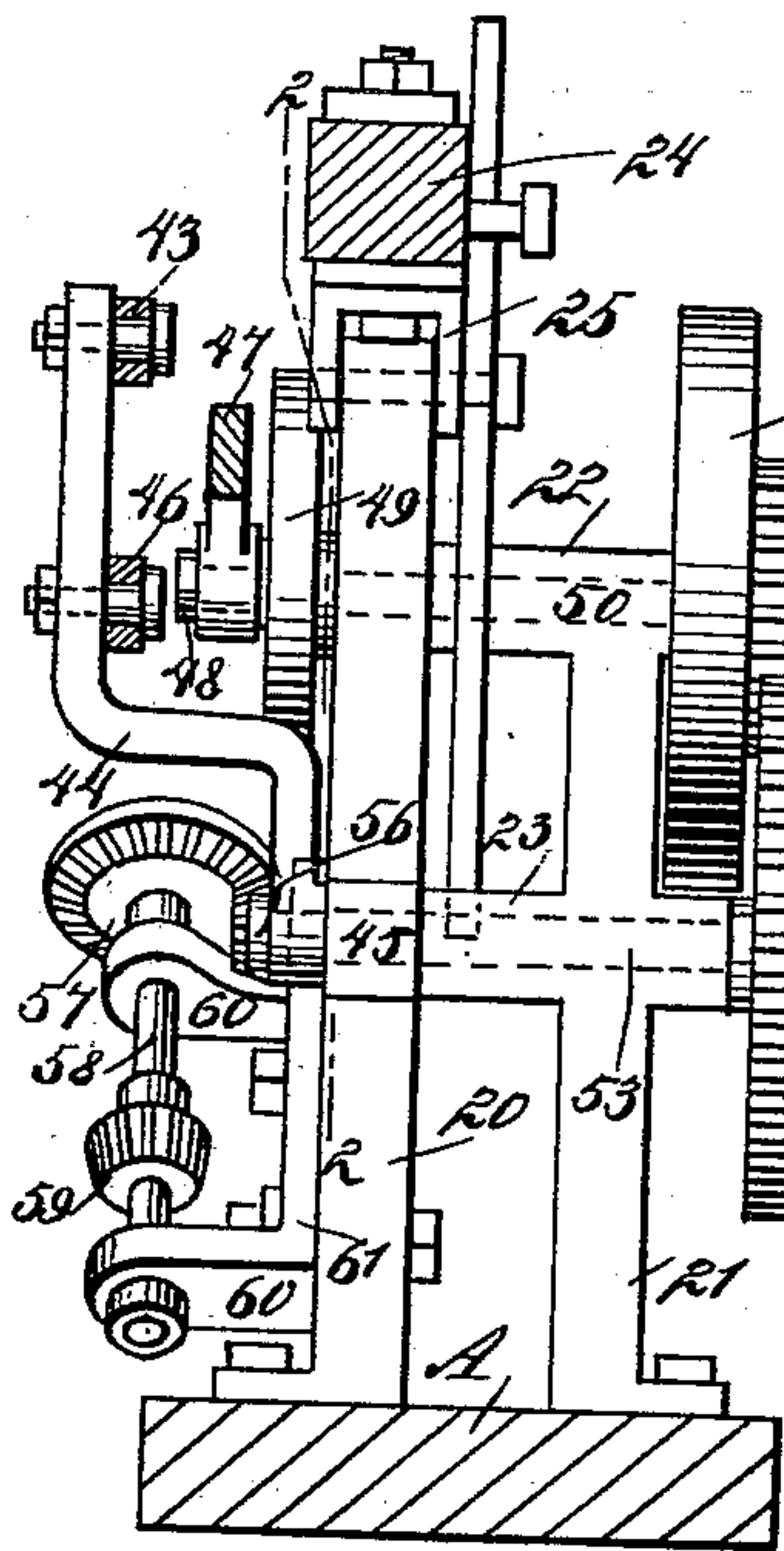
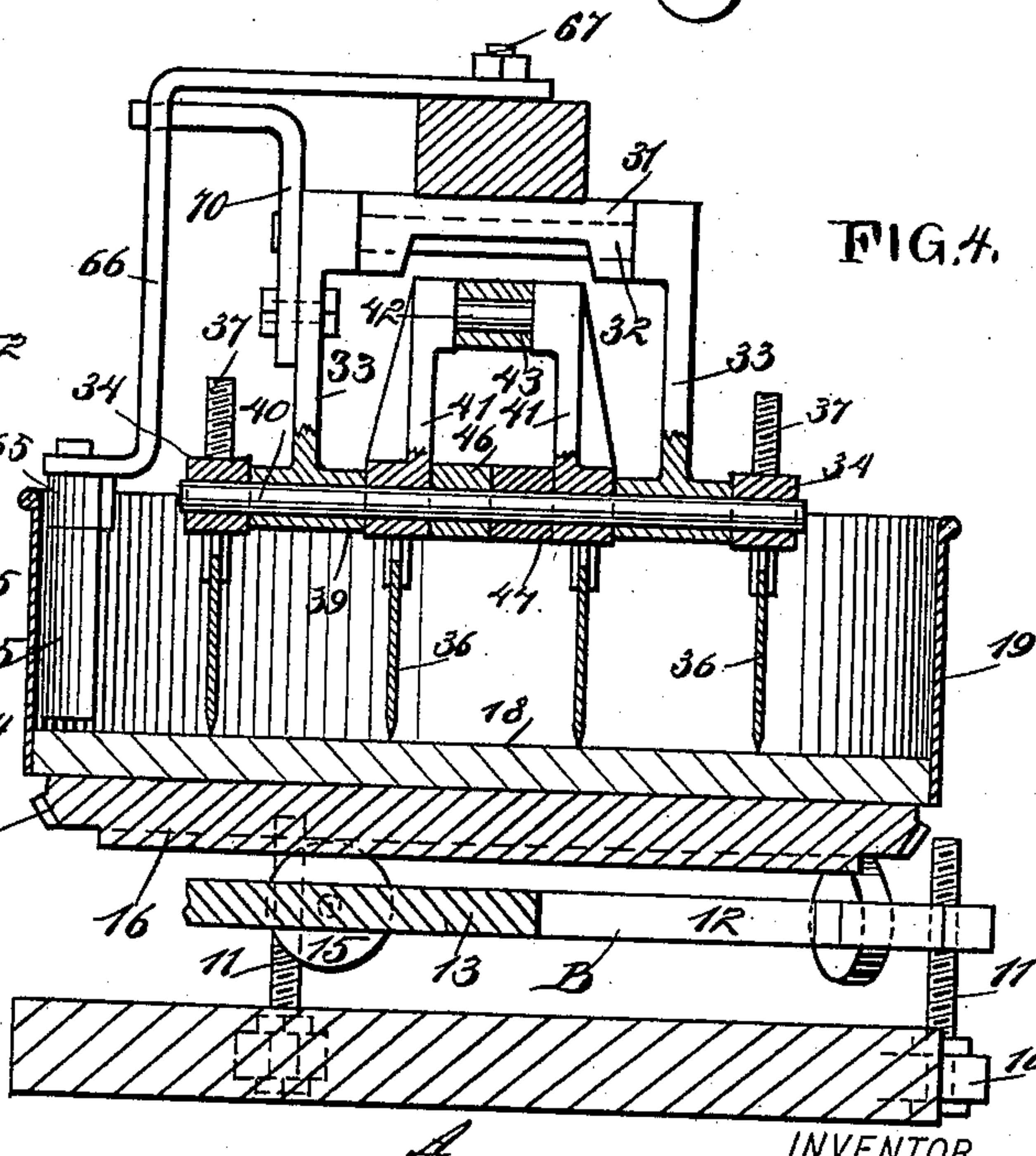


FIG. 5.



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# UNITED STATES PATENT OFFICE.

ALEXANDER S. STEWART, OF NECHE, NORTH DAKOTA.

## CHOPPING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 601,532, dated March 29, 1898.

Application filed July 12, 1897. Serial No. 644,225. (No model.)

*To all whom it may concern:*

Be it known that I, ALEXANDER STEWART STEWART, of Neche, in the county of Pembina and State of North Dakota, have invented  
5 a new and Improved Chopping-Machine, of which the following is a full, clear, and exact description.

The object of my invention is to provide a machine especially adapted for cutting meat  
o fine for sausages and other purposes and to provide a mechanism whereby the knives will have a rocking reciprocating movement.

Another object of the invention is to provide a driving and guiding mechanism for  
15 chopping-knives of the rocker type, and also to provide a means whereby the knives may be readily adjusted and whereby any desired amount of pressure may be brought to bear upon the knives, and, furthermore, to construct a machine of the above character  
20 which will be simple, durable, compact, and economic.

The invention consists in the novel construction and combination of the several  
25 parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.  
30

Figure 1 is a side elevation of the frame of the machine and the parts carried thereby, the chopping-receptacle and rocker-frame for the knives being in vertical section. Fig. 2  
35 is a detail sectional view taken substantially on the line 2 2 of Fig. 5. Fig. 3 is a plan view of the machine. Fig. 4 is a vertical section through the central portion of the machine, taken at a right angle to the section  
40 shown in Fig. 1; and Fig. 5 is a vertical section on the line 5 5 of Fig. 3.

A base A is provided which is much wider at one end than at the other. Along the edges of the wider portion of the base nuts 10 are  
45 secured, each nut carrying a screw 11, having an upward direction, and the said screws are passed through threaded apertures in the ends of the members 12 and 13 of a cross-frame B, each member of the cross-frame  
50 near its outer end being provided with a socket or a pocket 14, in which a friction-roller 15 is journaled. The friction-rollers

engage with the bottom of a circular platform 16, having peripheral beveled teeth 17. This platform carries a chopping-block 18, preferably surrounded by a pan-like casing 19. At  
55 the narrower end of the base A two substantially A-shaped or inverted-U-shaped standards 20 and 21 are secured, the standard 21 being of less height than the standard 20, and  
60 the two standards are connected by cross-bars 22 and 23, preferably circular in cross-section. A compressing-lever 24 is pivoted at one end at the top of the longer standard 20, the pivotal ears 25 of the said lever being  
65 best shown in Fig. 5. This compressing-lever is carried over the casing 19, extending beyond both the front and rear sides of the said casing, and the lever is provided at its free end with a weight 26 and an adjusting-screw  
70 27 near the weighted end.

At the outer or front edge of the front or wider portion of the base A a bearing 28 is secured, as shown in Fig. 1, to which the lower end of an upright 29 is secured, the  
75 said upright having its upper end provided with a vertical recess 30 to receive the free end of the compressing-lever, the adjusting-screw 27 being adapted for engagement with the bottom of this recess, as shown in Fig. 1,  
80 and by means of this groove the central portion of said lever may be made to approach more or less closely the chopping-block.

At or about the central portion of the lever a transverse socket 31 is formed in which a  
85 pin 32 is held to turn, the pin having attached to each of its ends an arm 33. These arms are adapted to support two frames 34, said frames being preferably of rectangular shape and of skeleton formation, as illustrated in  
90 Fig. 3. The frames are spaced a distance apart, and a recess 35 is made in each side edge of each frame near its ends. The frames are adapted to carry chopping-knives 36, having convex cutting edges, the knives being  
95 of the rocker type. Two screws 37 are attached to each knife, and the screws of each knife are passed upward through a set of recesses in one side of a frame, the knives being adjustably attached to the frames by  
100 means of nuts 38, located on the screws, one above and the other below the frames, as shown in Fig. 1.

Each arm 33, carried downward from the



compressing-lever, terminates in an eye 39, adapted to loosely fit into the spaces at the center of the frames, and a pivot-pin 40 is passed through the center of each frame and through the eyes of both of said arms 33, as illustrated in Fig. 4. Two parallel guide-arms 41 are employed in connection with the frame, the guide-arms being attached to or made integral with the upper faces of the frames 34 near the central portion of their inner edges. These guide-arms 41 extend upwardly and in direction of one end of the base A, being connected by a pin 42, upon which one end of a link 43 is mounted.

The lower end of a lever 44 is pivoted to an offset 45, formed upon the forward edge of the larger standard 20. This lever, which may be termed a "guide-lever," is shown curved in order that it may clear various of the operating parts with which it would otherwise come in engagement. The link 43, attached to the arms 41, is pivotally secured to the upper end of the guide-lever 44, and a second guide-link 46 is pivoted to the central portion of the guide-lever and upon the pin 40 between the two frames 34, as shown in Figs. 1 and 4. One end of a pitman 47 is pivoted on the said pin 40, also between the two frames 34, which pitman is carried to a pivotal engagement with a wrist-pin 48, secured upon a crank-disk 49, the disk being mounted on a shaft 50, journaled in the two standards 20 and 21 and the upper cross-bar 22.

At the end of the shaft 50 opposite that at which the disk is attached a balance-wheel 51 is secured, as is likewise a pinion 52. A drive-shaft 53 is journaled in the two standards 20 and 21 and in the lower cross-bar 23 of said standards, as shown in Fig. 5, the shaft 53 being provided at one end with a gear 54, meshing with the pinion 52, and is further provided at the same end with a crank-handle 55. At the opposite end of the drive-shaft 53 a beveled pinion 56 is secured, which pinion meshes with a beveled gear 57, secured at the upper portion of an inclined shaft 58, which carries a beveled pinion 59, arranged for engagement with the teeth on the revolving platform 16. The inclined shaft is journaled in bearings 60, projected from a plate 61, the said plate, as illustrated in Fig. 1, being adjustably attached to an outer side face of the longer standard 20.

A locking-pin 62 is usually pivoted on the compressing-lever by the same pivot-pin which pivots said lever on the standard 20. The locking-pin extends farther below than above its pivot and at its upper end terminates in an eye 62<sup>a</sup>, the lower end of the locking-pin entering the space between the two cross-bars 22 and 23 of the standards 20 and 21. A transverse aperture 63 is made in the pressing-lever near its pivot, the said aperture being adapted to receive a pin 64. When the lever is elevated, as shown in dotted lines in Fig. 1, the chopping-knives will be carried out of the casing 19 and may be held in this

position by passing the pin 64 through the eye of the locking-pin 62 and into the aperture 63 of the lever, as illustrated in Fig. 2.

After the meat has been placed upon the chopping-block the chopping-knives are lowered a distance, the distance at which they shall approach the chopping-block being regulated by the set-screw 27 in the pressing-lever, as illustrated in Fig. 1. The weight of the pressing-lever will hold said lever down and keep the knives to their work except when said knives encounter a bone or other hard substance, when the said knives may move upward to clear the same. The knife-frame is given its reciprocating movement through the medium of the pitman 47 and the driving-gear connected therewith, while the rocking movement of the knives is controlled by the guide-links 43 and 46 and the guide-lever 44.

When the guide-lever is in the position shown in Fig. 1, the knives will have an inclination upward in direction of the front of the machine. When the guide-lever is perpendicular, the knives will be horizontal, and when the guide-lever is given an inclination to the front the knives will incline upwardly toward the rear.

In order that the meat shall not clog between the knives, I provide what I denominate a "plow" 65, which has one side curved to conform to the curvature of the casing 19, the other or inner side being substantially straight, and the front of the plow is more or less pointed, the entire body tapering in direction of the rear. This plow is adapted to travel over the chopping-block, along its outer edge and quite close to the casing, and moves with the rocking table carrying the knives. This movement is brought about by attaching an arm 66 to the top of the plow and carrying the said arm upward and then inward over the central portion of the pressing-lever, where it is pivoted by means of a suitable bolt 67. In the upright portion of the shank of the plow an opening 68 is made, (shown best in Fig. 1,) which receives an end 69 of a bracket 70, preferably of angular construction and secured to one of the supporting-arms 33 for the rocking table.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with a block, and a lever arranged to extend across the block, of a frame pivotally supported from the said lever, rocker-cutters carried by the said frame, and means for imparting a guided rocking movement to the frame and a lateral movement, substantially as described.

2. The combination, with a block, a weighted lever extending across the block, and pivoted arms carried by the lever, extending downwardly therefrom, of frames pivotally supported by said arms, cutters carried by said frames, a drive-shaft, a pitman operated from the drive-shaft and connected with the said frames, a guide-lever, and link connec-



tions between the guide-lever and said frames, for the purpose set forth.

3. The combination, with a block, a weighted lever fulcrumed to extend across the said block, arms pivotally supported by the weighted lever and extending downwardly therefrom, frames pivotally carried by said arms, and rocker-cutters carried by the said frames, of a drive-shaft, a crank-disk driven from the drive-shaft, a pitman connection between the crank-disk and the frames, a guide-lever, guide-links pivoted to said lever, one of the said links being connected directly with the frames, and arms projected from the frames, pivotally attached to the other of the said guide-links, for the purpose specified.

4. The combination, with a block, a weighted lever pivoted at one of its ends upon an adjacent support, the said weighted lever being arranged to extend over the said block, a frame pivotally supported by the said weighted lever, and rocker-cutters carried by the said frame, of a plow arranged to receive movement from the pivotal support for the said frame, a drive-shaft, a crank-and-pitman connection between the drive-shaft and the said frame, a guide-lever, parallel links pivoted to the upper and central portions of said guide-lever, the lowermost link being connected directly with the pivot of the frame, and arms projected from the frame, pivotally connected with the uppermost link, all arranged for operation as and for the purpose specified.

5. The combination, with a rotating block, a drive-shaft, a crank-disk operated from the drive-shaft, and a driven shaft also operated

from the drive-shaft and geared to revolve said block, of a support adjacent to the block, a weighted lever fulcrumed upon said support, adapted to extend over the block, arms pivoted to the weighted lever and extending downwardly therefrom, frames pivoted to said arms, cutters carried by the said frames, a pitman connecting the frames with the said crank-disk, a guide-lever, and links connecting the said guide-lever with the said frames, the said links being one above the other, as and for the purpose specified.

6. The combination, with a rotating block, a drive-shaft, a crank-disk operated from the drive-shaft, and a driven shaft also operated from the drive-shaft and geared to revolve the said block, of a support adjacent to the block, a weighted lever fulcrumed upon the said support, adapted to extend over the block, arms pivoted to the weighted lever and extending downwardly therefrom, frames pivoted to said arms, cutters carried by the said frames, a pitman connecting the frames with the said crank-disk, a guide-lever, and links connecting the said guide-lever with the said frames, the said links being one above the other, an upright provided with a socket to receive the free end of the weighted lever, an adjusting device for the free end of the weighted lever, and means for adjusting the cutters on the said frames, as and for the purpose specified.

ALEXANDER S. STEWART.

Witnesses:

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RICHARD GYNN.