

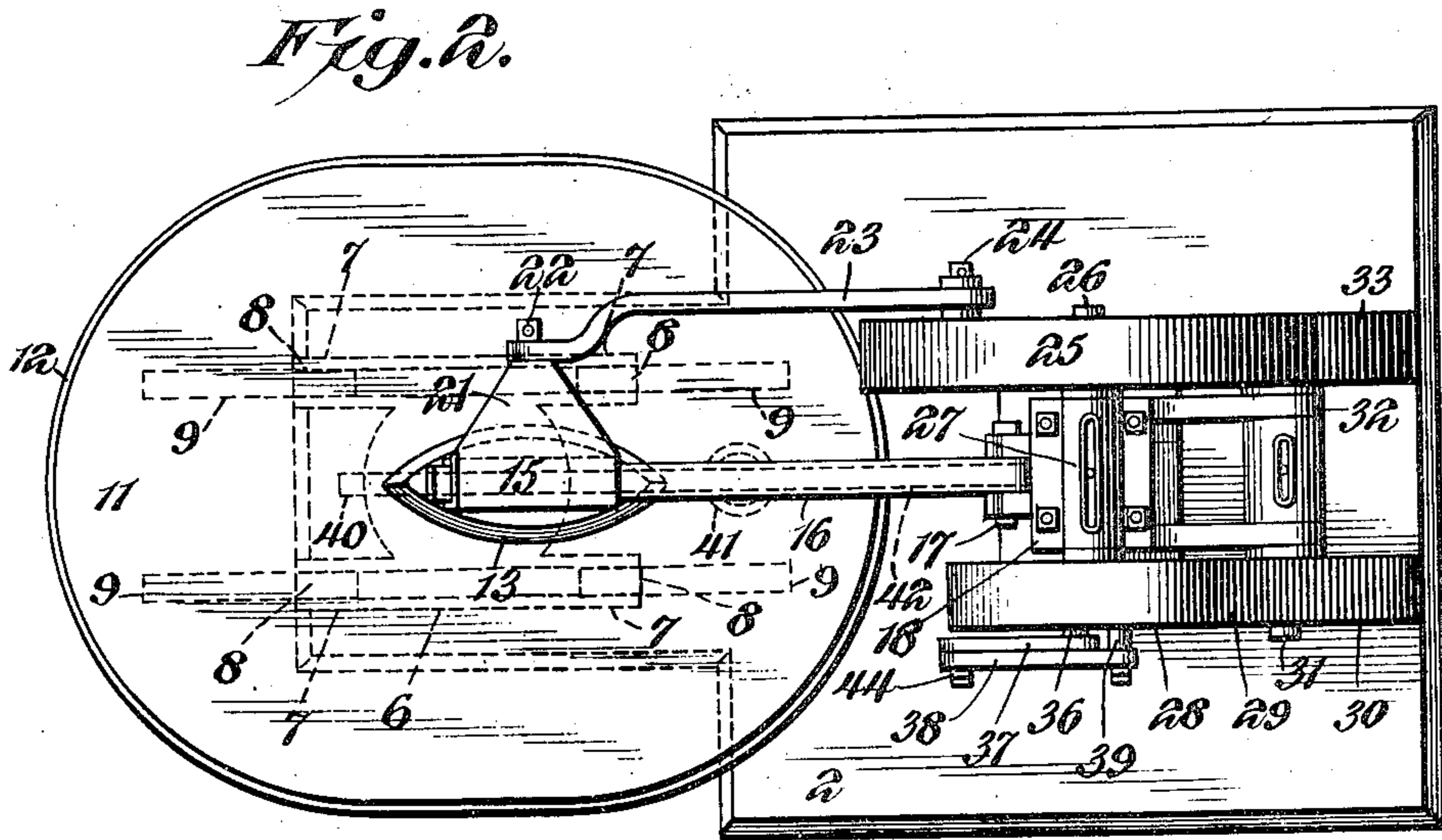
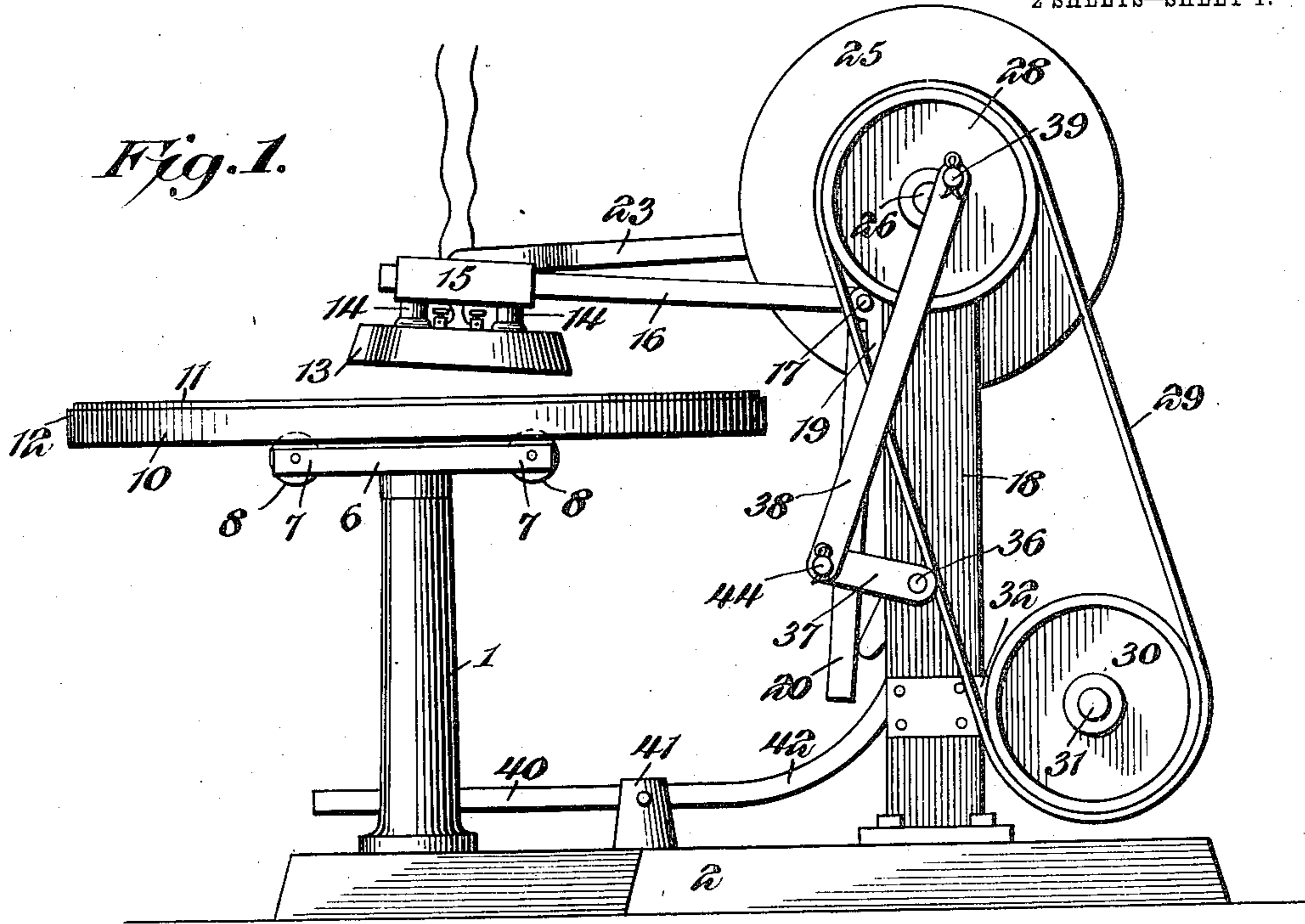
No. 861,630.

PATENTED JULY 30, 1907.

H. P. BECKER.  
IRONING MACHINE.

APPLICATION FILED MAY 12, 1906.

2 SHEETS—SHEET 1.



Harvey P. Becker, Inventor,

Witnesses  
Howard D. Orr.  
J. J. P. May

By *E. G. Siggers*

Attorney

No. 861,630.

PATENTED JULY 30, 1907.

H. P. BECKER.  
IRONING MACHINE.  
APPLICATION FILED MAY 12, 1906.

2 SHEETS—SHEET 2.

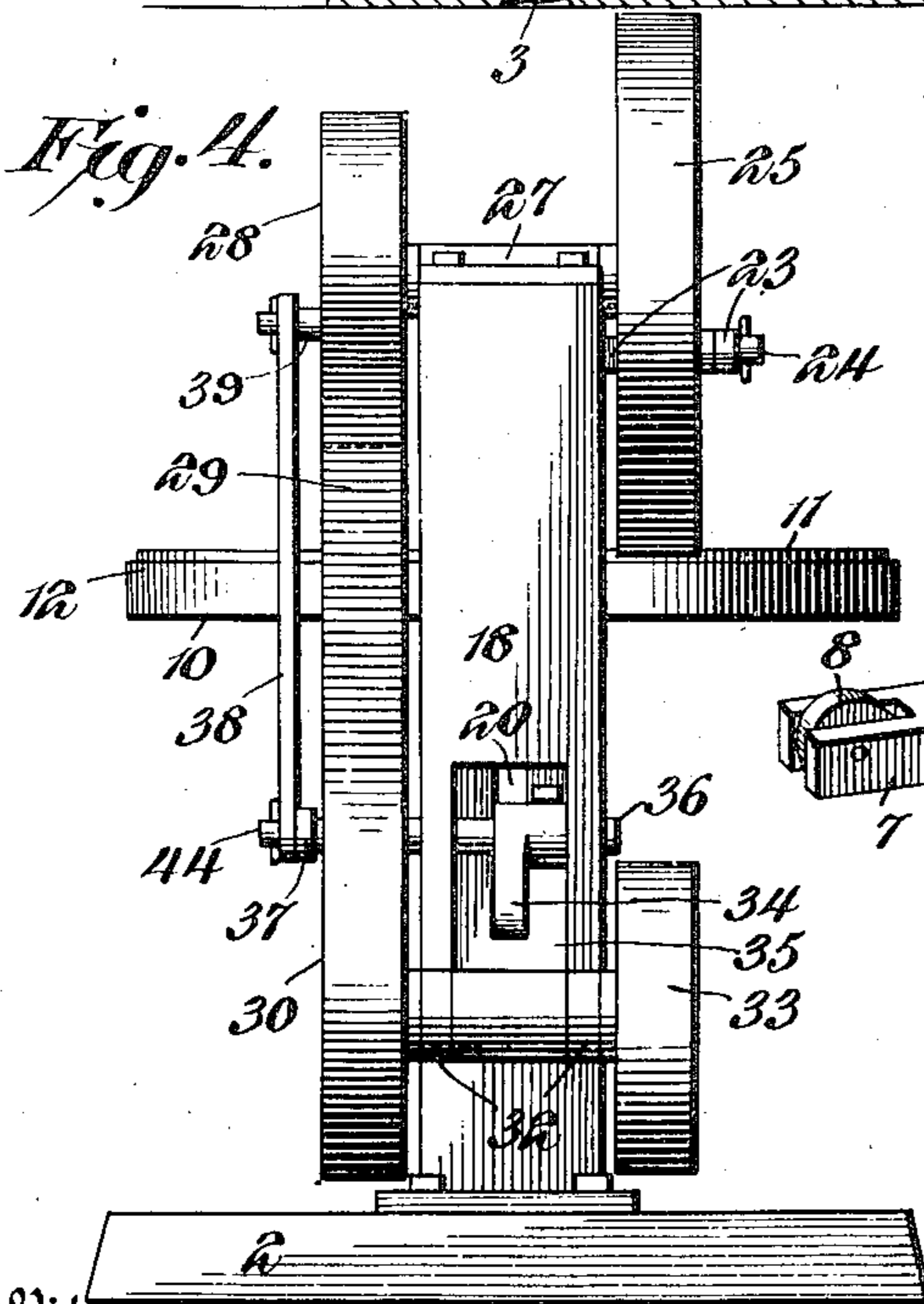
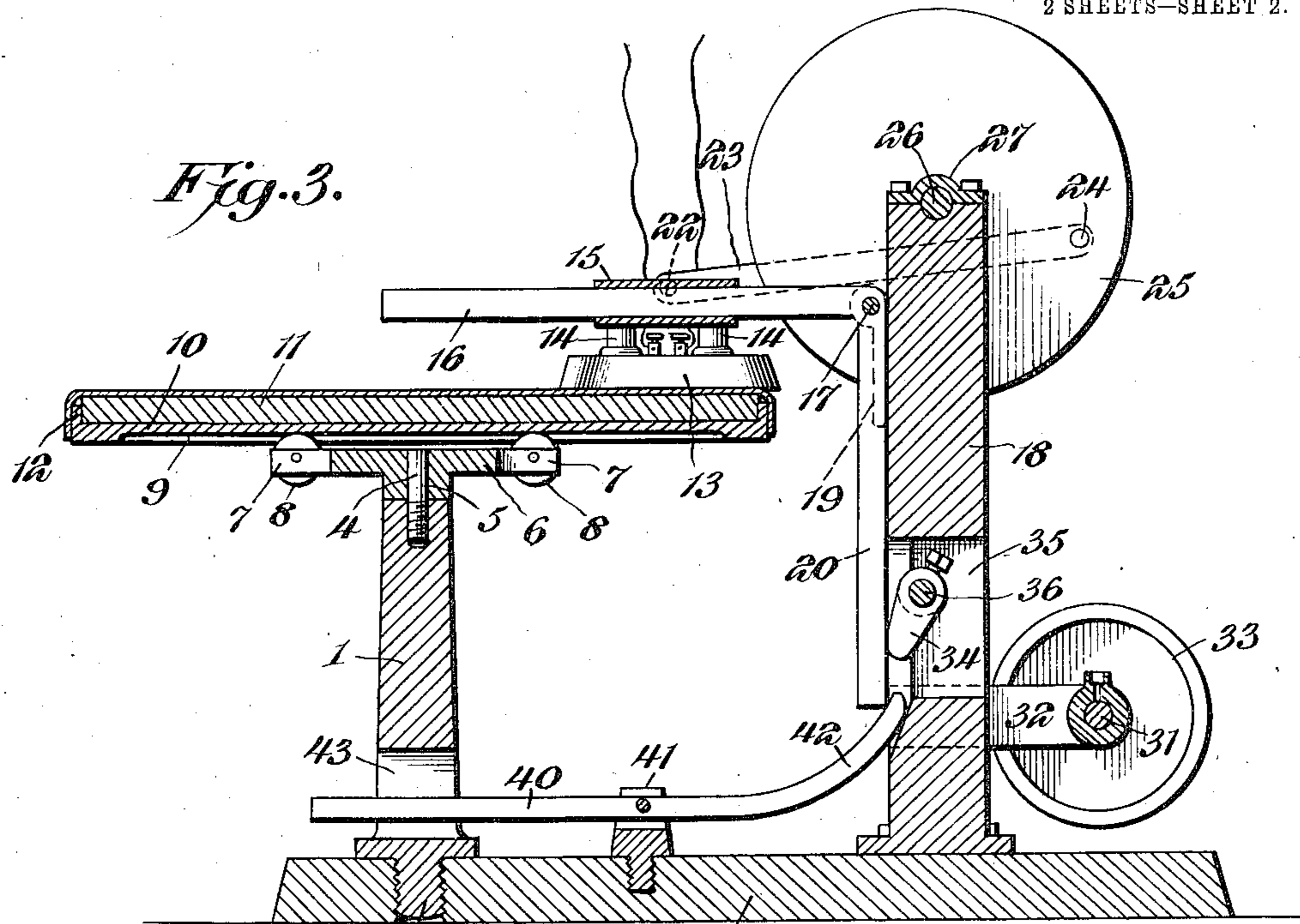
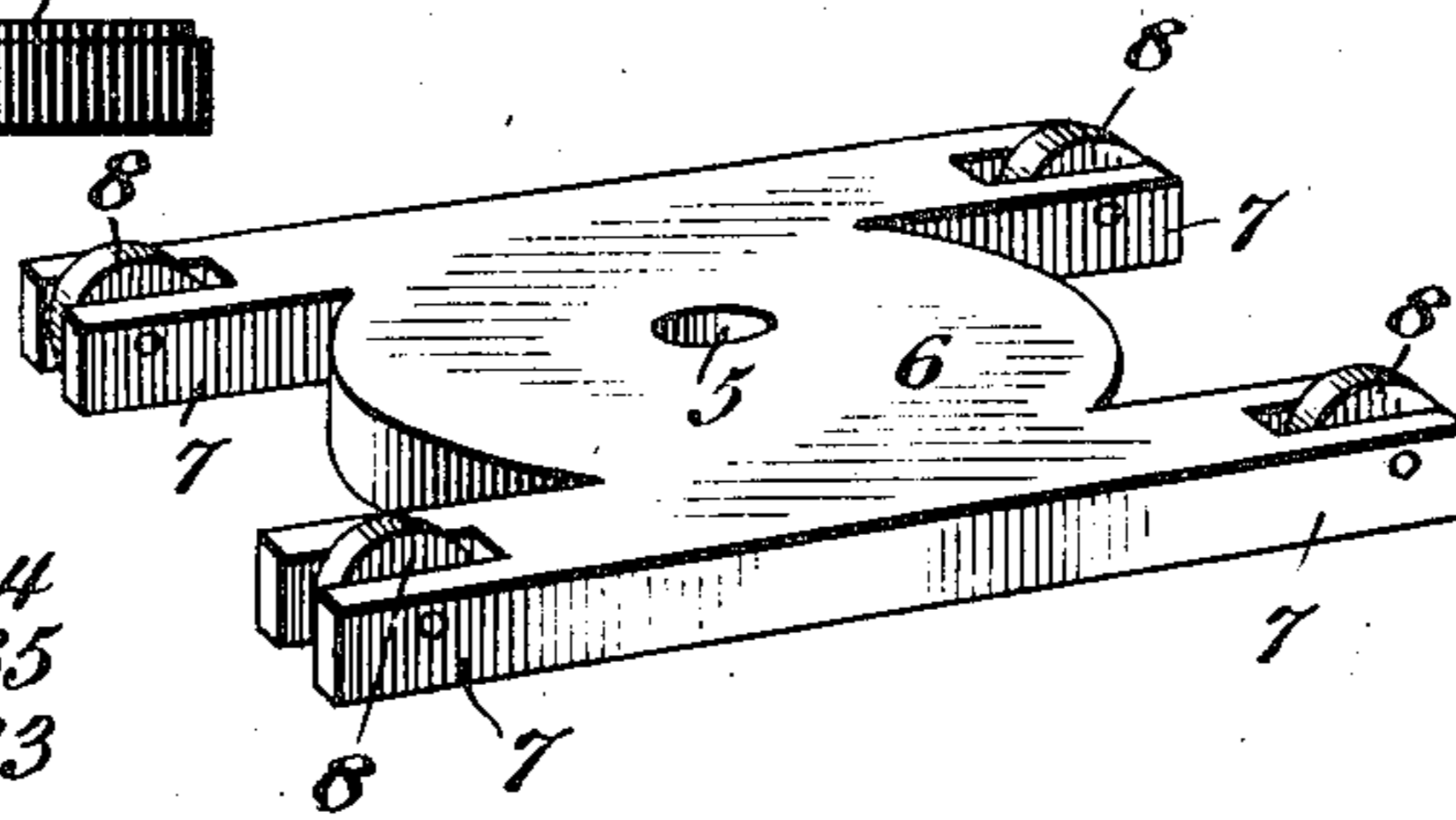


Fig. 5.



Harvey P. Becker, Inventor,

Witnesses

Howard D. Orr.  
J. J. Piley

By

C. G. Siggers

Attorney



# UNITED STATES PATENT OFFICE.

HARVEY P. BECKER, OF GLOVERSVILLE, NEW YORK.

## IRONING-MACHINE.

No. 861,630.

Specification of Letters Patent.

Patented July 30, 1907.

Application filed May 12, 1906. Serial No. 316,548.

*To all whom it may concern:*

Be it known that I, HARVEY P. BECKER, a citizen of the United States, residing at Gloversville, in the county of Fulton and State of New York, have invented a new and useful Ironing-Machine, of which the following is a specification.

The invention relates to improvements in ironing machines.

The object of the present invention is to improve the construction of ironing machines, and to provide a simple, inexpensive and efficient one adapted for ironing leather, cloth, or other material, with either a single or double stroke, and capable of affording free movement of the material beneath the iron to enable any portion of the material to be ironed.

A further object of the invention is to provide an ironing machine of this character adapted to operate on leather with a single stroke, and capable of automatically ironing the same from the center to the outer edge, whereby the grain is ironed out of the leather, and the latter is polished and stretched.

A further object of the invention is to provide an ironing machine adapted to automatically raise the iron at one end of its stroke, and capable of depositing the iron gently on the leather at the center thereof at the other end of the stroke of the iron.

Another object of the invention is to provide means operable independently of the automatic means for raising the iron at the will of the operator, whereby the leather, skins, cloth, or other material may be changed on the table without stopping the machine.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:—Figure 1 is a side elevation of an ironing machine constructed in accordance with this invention. Fig. 2 is a plan view of the same. Fig. 3 is a vertical longitudinal sectional view. Fig. 4 is a rear elevation. Fig. 5 is a detail perspective view of the pivoted support upon which the table is mounted.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a vertical post or standard mounted on a horizontal base 2 at the front portion thereof, and provided with a lower reduced threaded end 3, which is screwed into the base, as clearly illustrated in Fig. 3 of the accompanying drawings, but the post or standard may be mounted on the base in any other desired manner.

The post or standard is provided at its upper end with a projecting vertical pivot 4, which extends into a central opening 5 of a horizontal rotary support 6. The rotary support 6, which is adapted to be turned freely on the pivot 4, is provided with projecting arms 7, arranged in pairs at the ends of the support and spaced apart, and provided with anti-friction wheels 8, which are mounted in slots or bifurcations of the arm 7, as clearly shown in Fig. 5 of the drawings. The anti-friction wheels 8 project above the upper face of the rotary support 6 and fit in parallel grooves or ways 9, which are formed in the lower face of a table 10. The table 10 may be constructed of metal, or any other suitable material, and the grooves 9, which are located at opposite sides of the center of the table, terminate short of the periphery thereof. By this construction, the table is capable of reciprocation on the anti-friction devices of the horizontal support, and rotary movement on the vertical pivot 4. The support 6, which turns freely on the pivot, is adapted to be arranged to permit the table to be reciprocated in any desired direction, but in practice, the table will be reciprocated mainly either to the right or to the left. The table is provided with a slab 11 of marble, cement, or any other suitable material, that is retained on the table by a peripheral flange 12, which projects from the bed or body of the table, as clearly illustrated in Fig. 3 of the drawings.

The table, which is substantially elliptical, is adapted to receive a hide, or other piece of material, to be ironed, and it is engaged by a reciprocating self heating sad iron 13. The sad iron 13, which may be heated by electricity, gas, steam, or any other suitable means, is connected by short posts or members 14 with a head 15. As the particular construction of the sad iron, and the means for heating the same, do not constitute any portion of the present invention, a detail description and illustration thereof is not deemed necessary.

The head 15 consists of a rectangular sleeve, which is slidably arranged on a horizontal arm 16 of a bell crank lever, that is fulcrumed at its angle by a pivot 17 on a vertical standard 18. The standard 18, which rises from the rear portion of the base, is suitably secured to the same and is provided at its upper portion with bearing plates 19, having ears to receive the pivot 17, and located at opposite sides of the bell crank lever. The bell crank lever is provided with a depending vertical arm 20, which is arranged contiguous to the standard 18 and which extends downwardly from the pivot 17.

The arm 16, which forms a guide for the sad iron, extends forwardly from the rear standard 18, and the head 15 is provided with a laterally extending arm or portion 21, having a terminal pivot 22, which receives the front end of a pitman 23. The front end of the pitman is provided with an opening for the pivot 22, and it is secured on the same by means of a key or other suitable



fastening device. The rear end of the pitman 23 is similarly connected to a wrist pin 24 of a crank disk or wheel 25, but any other crank element may be employed for imparting a reciprocatory motion to the sad iron. The crank disk or wheel 25 is mounted on one end of a horizontal shaft 26, which is journaled in suitable bearings 27 of the upper end of the rear standard 18. The shaft 26 projects laterally from each side of the standard 18; the crank disk or wheel 25 is located at one side of the rear standard, and a smaller crank disk or wheel 28 is mounted on the shaft 26 at the opposite side of the standard. The large crank disk or wheel operates as a balance or fly wheel, and the other crank disk or wheel 28 serves as a pulley and receives a belt 29, which extends downwardly and rearwardly to a pulley 30 of a lower counter-shaft 31. The shaft 31 is journaled in suitable bearings of a bracket 32 and it has a pulley 33 keyed or otherwise secured to it for the reception of a suitable belt, not shown, for operating the ironing machine. The lower shaft 31 may be rotated by any suitable means, as may be readily understood, and it is adapted to impart rotary motion to the upper shaft by means of the belt 29 and the upper and lower pulleys 28 and 30. When the upper shaft is rotated, the sad iron will be reciprocated.

The machine, which is designed particularly for operating on leather and other skins, is adapted to iron out the grain and to polish and stretch the leather or other skin. For this purpose the iron is deposited gently on the leather at the center, and is moved therefrom towards the outer edge of the leather, and it is lifted at the end of such stroke adjacent to the inner end of the guide to prevent it from contacting with the leather during the other stroke of the iron. The iron is raised and lowered automatically by means of an oscillatory cam 34, which is located in a slot or opening 35 of the rear standard, as clearly shown in Fig. 3 of the drawings. The cam, which is mounted on a transverse crank shaft 36, extends downwardly from the said shaft, and is swung outwardly and inwardly by the same. The cam is carried by such outward movement into engagement with a depending arm 20 of the bell crank lever, which is oscillated to raise the horizontal arm 16. The inward movement of the cam permits the sad iron to descend by gravity and rest upon the leather.

The crank shaft is provided at one end with a crank arm 37, which is connected by a pitman 38 with an eccentrically arranged wrist pin 39 of the upper combined pulley and crank wheel 28. The crank arm 37 is of a length greater than the distance between the wrist pin 39 and the center of the pulley or wheel 28, so that the rotary movement of the wheel 28 operates to slowly oscillate the crank arm 37.

The sad iron is adapted to be swung upward by the operator without stopping the machine, when it is desired to change the leather, or other material, and for this purpose a treadle or foot lever 40 is provided. The foot lever, which extends longitudinally of the base, is fulcrumed at an intermediate point on a support 41, and it has an upwardly extending rear arm or portion 42, which is arranged to engage the lower end of the depending arm 20 of the bell crank lever, when the front arm of the treadle or foot lever is depressed. The rear arm 42 is curved, and it engages the depending arm 20 at the rear face thereof. The front arm of the

foot lever or treadle extends through a slot 43 of the post or standard 1, and is guided by the same.

The pitman or connecting rod 38 is detachably secured to the wrist pin 39 and to a pin 44 of the crank 37, and it is adapted to be detached to throw the oscillatory cam 34 out of operation. This will enable the machine to iron the material on each stroke or movement of the sad iron.

It will be seen that the ironing machine is exceedingly simple and inexpensive in construction; that while it is designed particularly for ironing leather and skins, it is also adapted for smoothing or ironing cloth and other fabrics, and that it may be arranged for ironing with either a single or double stroke. It will also be clear that when it is arranged for operating on leather, skins, and the like, the sad iron is gently deposited on the material at the center, and engages the same during its movement from the center to the outer edge of the material, whereby it is adapted to iron out the grain, and at the same time polish and stretch the material. Furthermore it will be apparent that the sad iron is automatically raised from the material at the outer edge thereof, and that, in its movement toward the center of the same, it is out of contact with the material so that leather and skins are ironed on one stroke only. Also it will be seen that the sad iron may be raised and held in an elevated position, out of contact with the material without stopping the machine, and that the foot lever does not interfere with the means for raising and lowering the sad iron automatically.

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

1. In a leather ironing machine, the combination with a relatively fixed table, of a sad iron, and means for reciprocating the sad iron from an intermediate point of the table backwardly to the inner edge thereof, then automatically raising the sad iron when it reaches the edge, then moving it outwardly above the table and out of contact with the leather, and then returning the sad iron to the material at the said intermediate portion of the table, whereby the leather is ironed from the center of the skin to the edge.

2. In a leather ironing machine, the combination with a relatively fixed table, of a sad iron, and means for reciprocating the sad iron from the center of the table backwardly to the inner edge thereof, then automatically raising the sad iron when it reaches the edge of the table, then moving it forwardly above the table and out of contact with the leather, and then returning the said sad iron to the material at the center of the table, whereby the leather is ironed from the center of the skin to the edge.

3. In a leather ironing machine, the combination with a relatively fixed table, of a pivotally mounted guide arranged above the table, a sad iron mounted on the guide, means for reciprocating the sad iron along the guide from an intermediate point of the table to the inner edge thereof, and means acting automatically on the guide when the iron reaches the edge of the table so as to swing the guide upwardly and lift the sad iron from the table, and for holding the guide with the iron thereon in an elevated position while the iron is being moved forwardly to the said intermediate portion of the table, whereby the leather is ironed from the center of the skin to the edge.

4. In a leather ironing machine, the combination with a relatively fixed table, of a pivotally mounted guide arranged above the table, a sad iron mounted on the guide, means for reciprocating the sad iron along the guide from an intermediate point of the table to the inner edge thereof, and independent means acting automatically on the guide when the iron reaches the edge of the table so as to swing the guide upwardly and lift the sad iron from the table, and for holding the guide with the iron thereon in



an elevated position and out of contact with the leather while the iron is being moved forwardly to the said intermediate portion of the table, whereby the leather is ironed from the center of the skin to the edge.

5 5. In a leather ironing machine, the combination with a relatively fixed table, of a pivotally mounted guide arranged above the table, a sad iron mounted on the guide, means for reciprocating the sad iron along the guide from an intermediate point of the table to the inner edge thereof, and means embodying a cam acting automatically on the guide when the iron reaches the edge of the table so as to swing the guide upwardly and lift the sad iron from the table, and for holding the guide with the iron thereon in an elevated position out of contact with the material while the iron is being moved forwardly to the said intermediate portion of the table, whereby the leather is ironed from the center of the skin to the edge.

10 6. In an ironing machine, the combination of a standard, a bell crank lever fulcrumed at its angle on the standard, and composed of a horizontal guide arm and a depending arm, a reciprocatory sad iron mounted on the guide arm, an upper shaft mounted on the standard, a crank disk or wheel fixed to one end of the shaft, a pitman connecting the crank disk or wheel with the sad iron, a 15 25 crank shaft mounted on the standard and provided with a cam arranged to engage the depending arm of the bell crank lever, and a second crank disk or wheel mounted on the upper shaft and connected with the crank shaft.

30 7. A machine of the class described comprising a base having front and rear standards, a pivoted guide mounted on the rear standard and having a depending arm to form a bell crank lever, a reciprocatory sad iron mounted on the guide, means mounted on the rear standard for reciprocating the sad iron, a table supported by the front standard, 35 and an operating lever guided on the front standard and arranged to engage the depending arm of the bell crank lever, said bell crank lever being also movable independently of the operating lever.

40 8. In an ironing machine, the combination with a table, of a pivoted guide having an angularly disposed arm, an iron movable on the guide, automatically operable means arranged to engage the arm at intervals for raising the iron at the edge of the table and for depositing the said iron on the table at the center thereof, and manually operable means engaging the arm for enabling the iron to be 45 lifted by the operator.

50 9. In an ironing machine, the combination with a table, of a pivotally mounted guide having an angularly disposed arm, a sad iron movable on the guide, a shaft provided with a cam arranged to engage the arm of the guide to raise the iron at the outer edge of the table and deposit

the said iron on the table at the center thereof, and manually operable means arranged to engage the said arm to enable the iron to be raised by the operator.

10. In a leather ironing machine, the combination with 55 a relatively fixed table, of a guide pivoted at an intermediate point to form two arms, a sad iron mounted on one of the arms, means for reciprocating the sad iron along such arm from an intermediate point of the table to the inner edge thereof, and means embodying a cam automatically acting on the other arm of the guide when the iron reaches the edge of the table so as to swing the guide upwardly and lift the sad iron from the table, and for holding the guide with the sad iron thereon in an elevated position and out of contact with the material while the iron 60 is being moved forwardly to the said intermediate portion of the table, whereby the leather is ironed from the center of the skin to the edge.

11. In a leather ironing machine, the combination of a base having front and rear standards, a pivoted guide 70 mounted on the rear standard and having an arm, a reciprocatory sad iron mounted on the guide, a table supported by the front standard, means mounted on the rear standard for reciprocating the sad iron from an intermediate portion of the table backwardly to the inner edge 75 thereof, an operating lever having means for actuating the arm of the guide to swing the sad iron upwardly from the table, and means for automatically actuating the arm for raising the sad iron when the latter reaches the edge of the table, and for holding the guide with the iron thereon 80 in an elevated position while the iron is being moved forwardly to the said intermediate portion of the table, whereby the leather is ironed from the center of the skin to the edge.

12. In a leather ironing machine, the combination with 85 a relatively fixed table, of a pivoted guide having an arm, an iron movable on the guide from an intermediate portion of the table to the inner edge thereof, automatically operable means arranged to engage the arm at intervals for raising the iron at the edge of the table and for depositing the said iron on the table at an intermediate position thereof, whereby the leather is ironed from the center of the skin to the edge, and manually operable means for actuating the arm to enable the iron to be lifted by the operator. 90

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses. 95

HARVEY P. BECKER.

Witnesses:

J. R. ROBERTSON,  
J. H. WARD.