

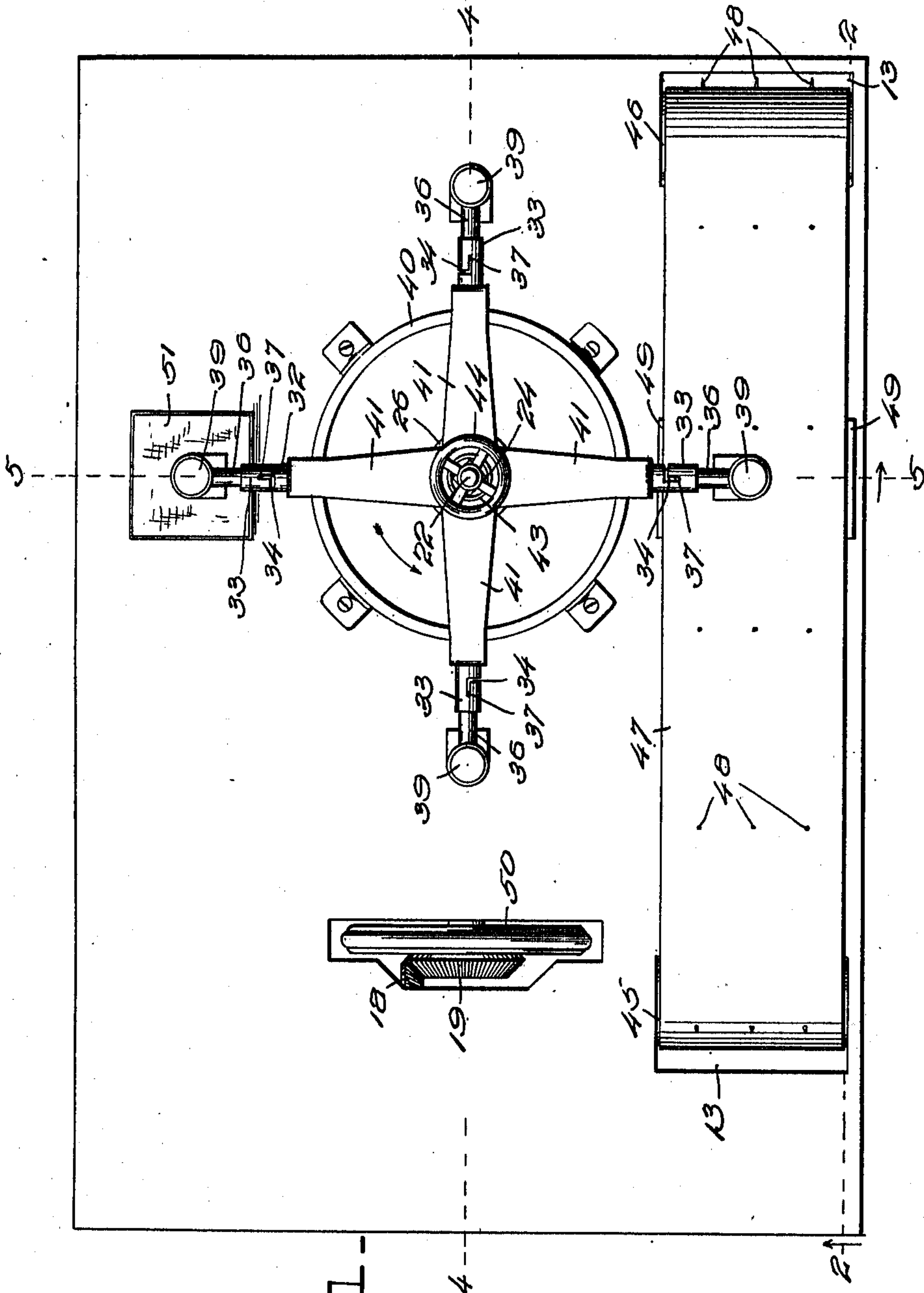
C. A. PFALZGRAF.
CANCELING MACHINE.

APPLICATION FILED OCT. 18, 1910.

Patented May 30, 1911.

4 SHEETS—SHEET 1.

993.712.



Witnesses
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FIG. 1

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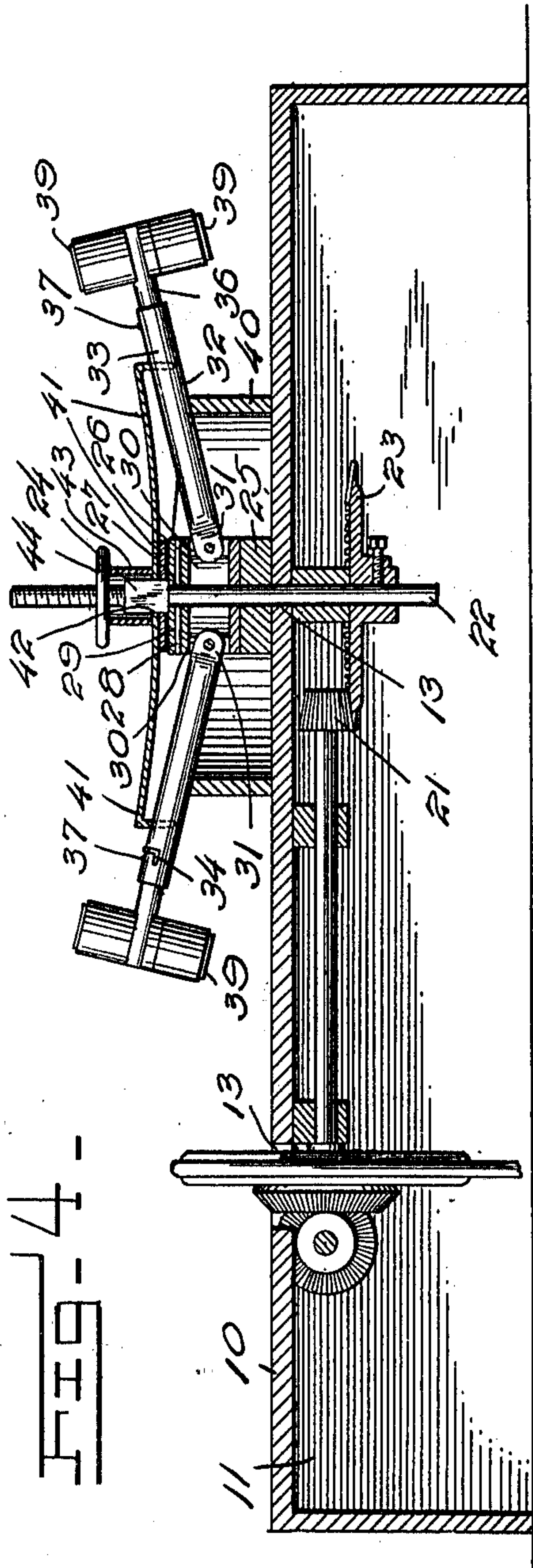
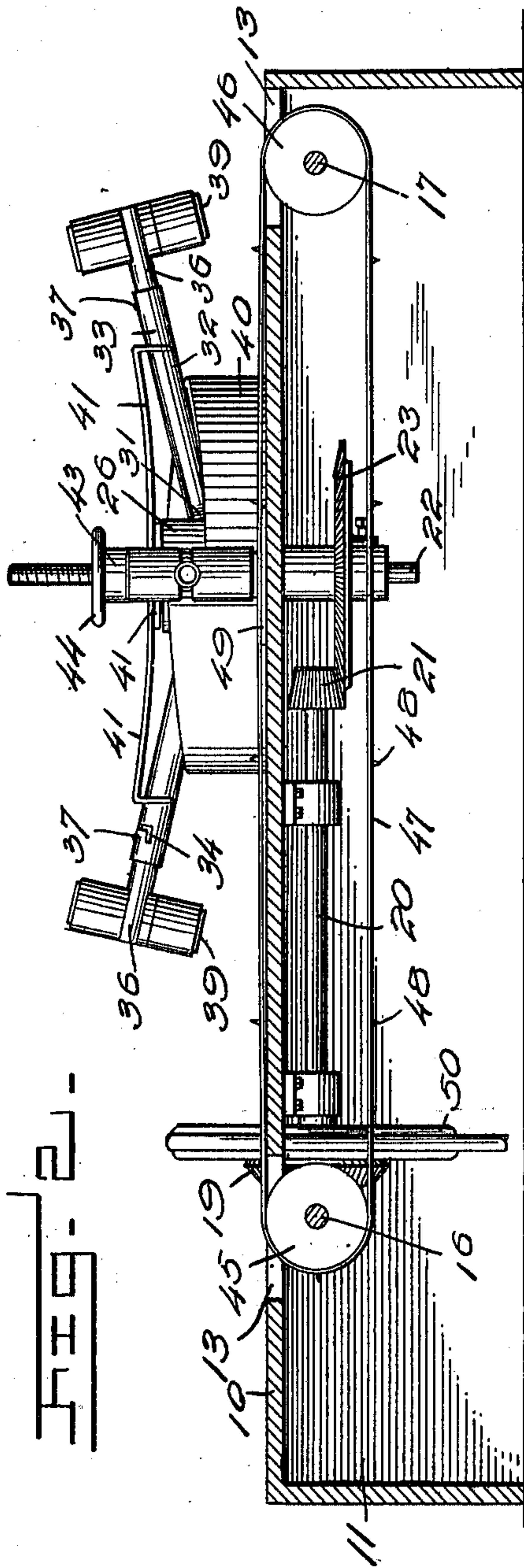
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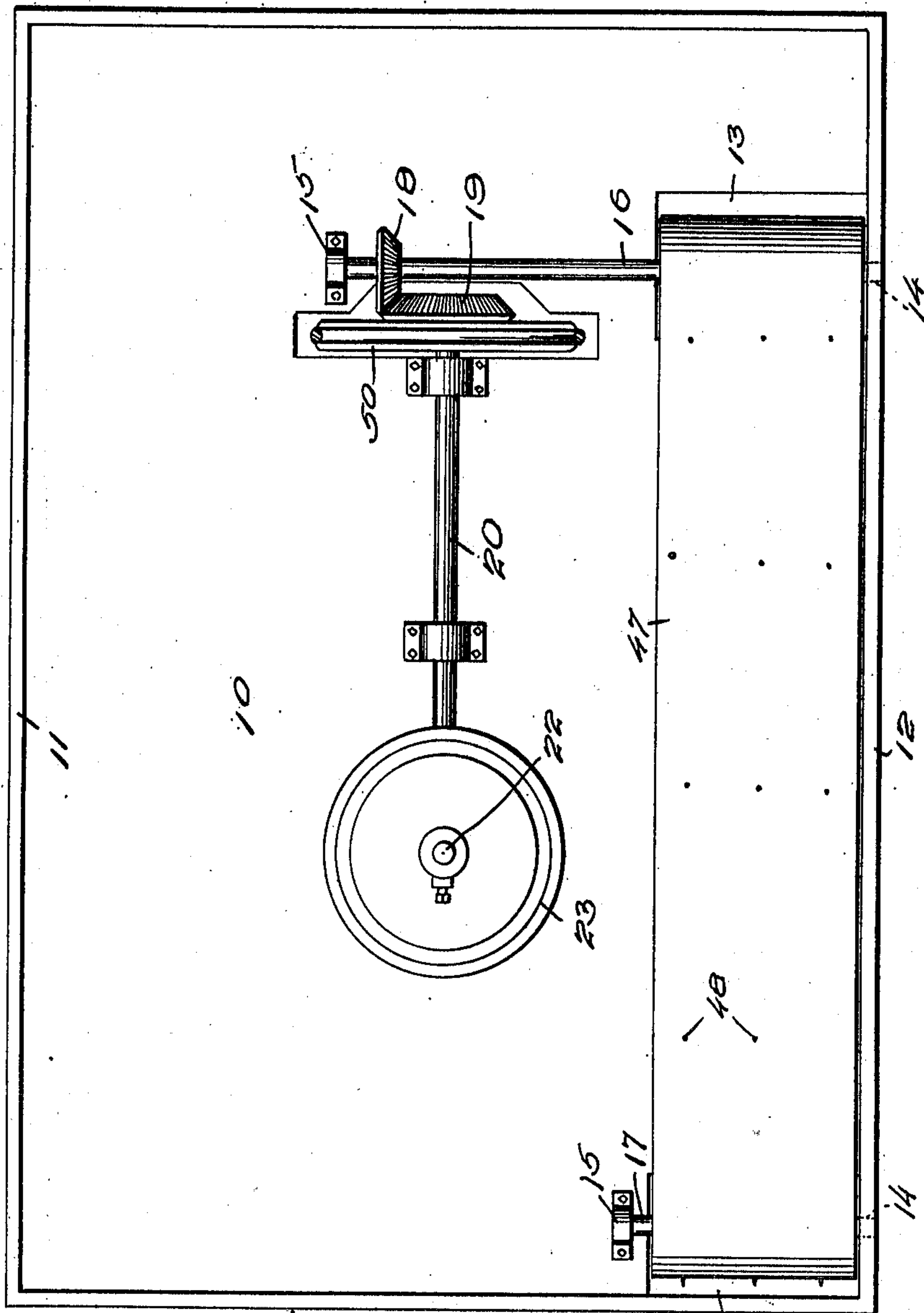
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4 SHEETS—SHEET 3.



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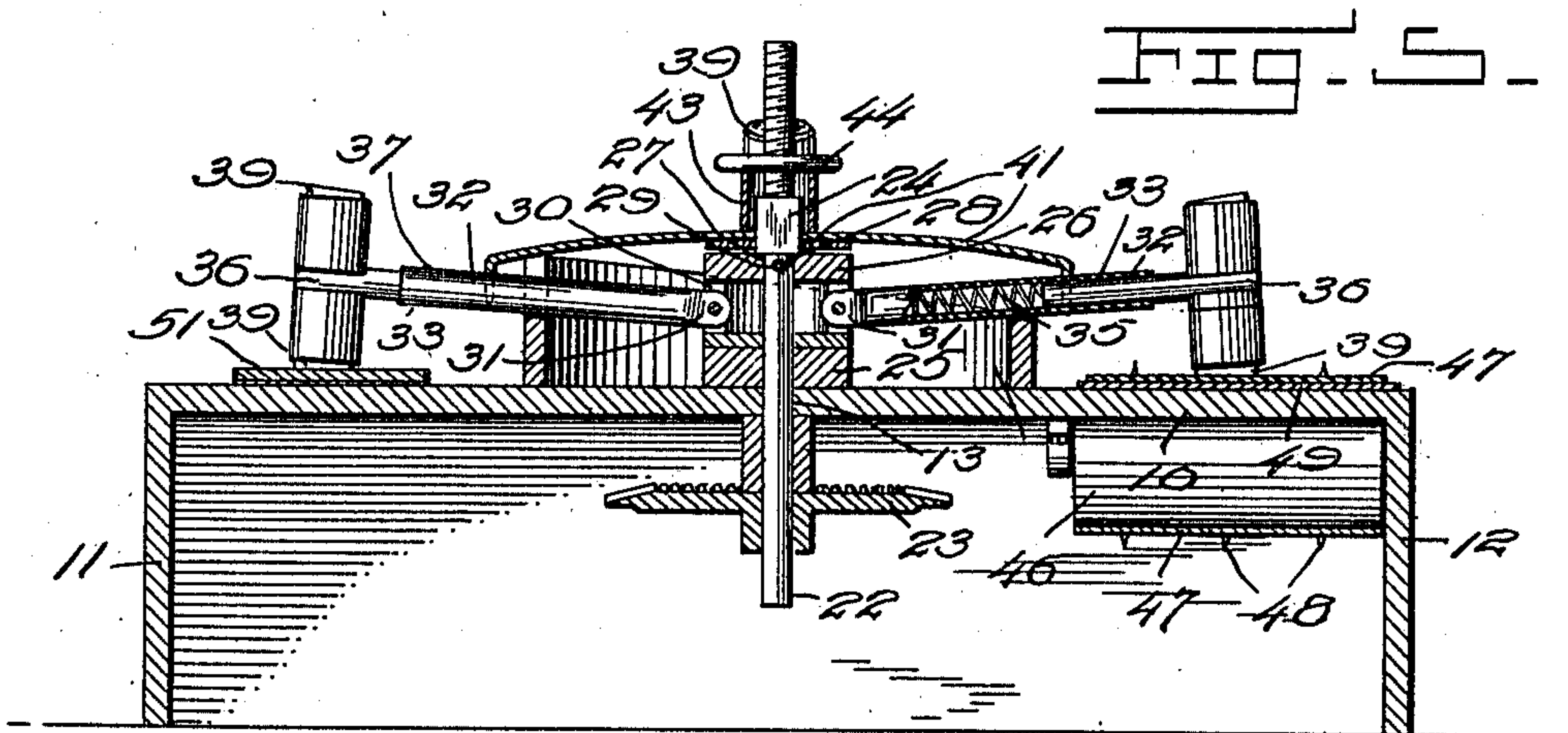
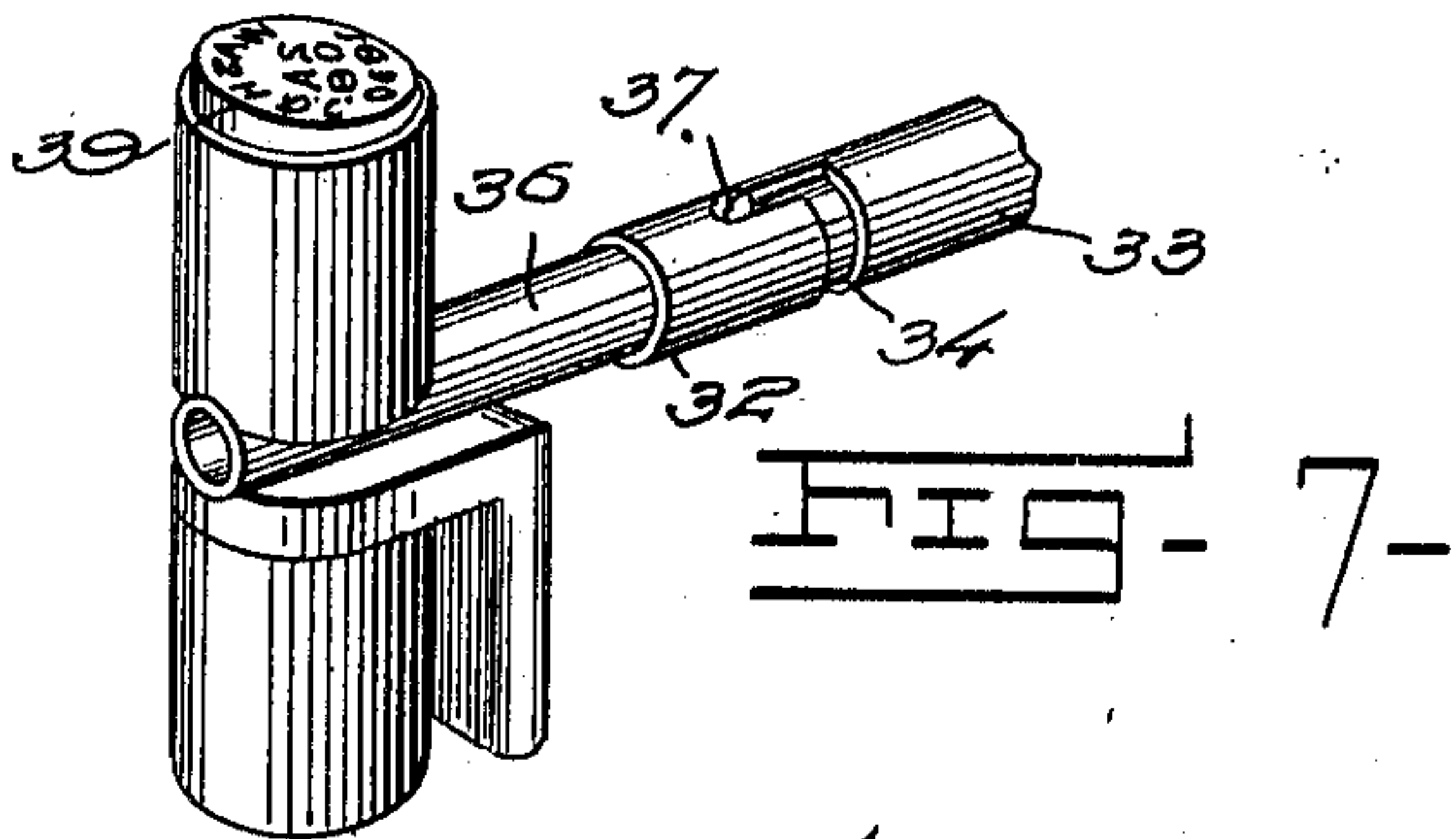
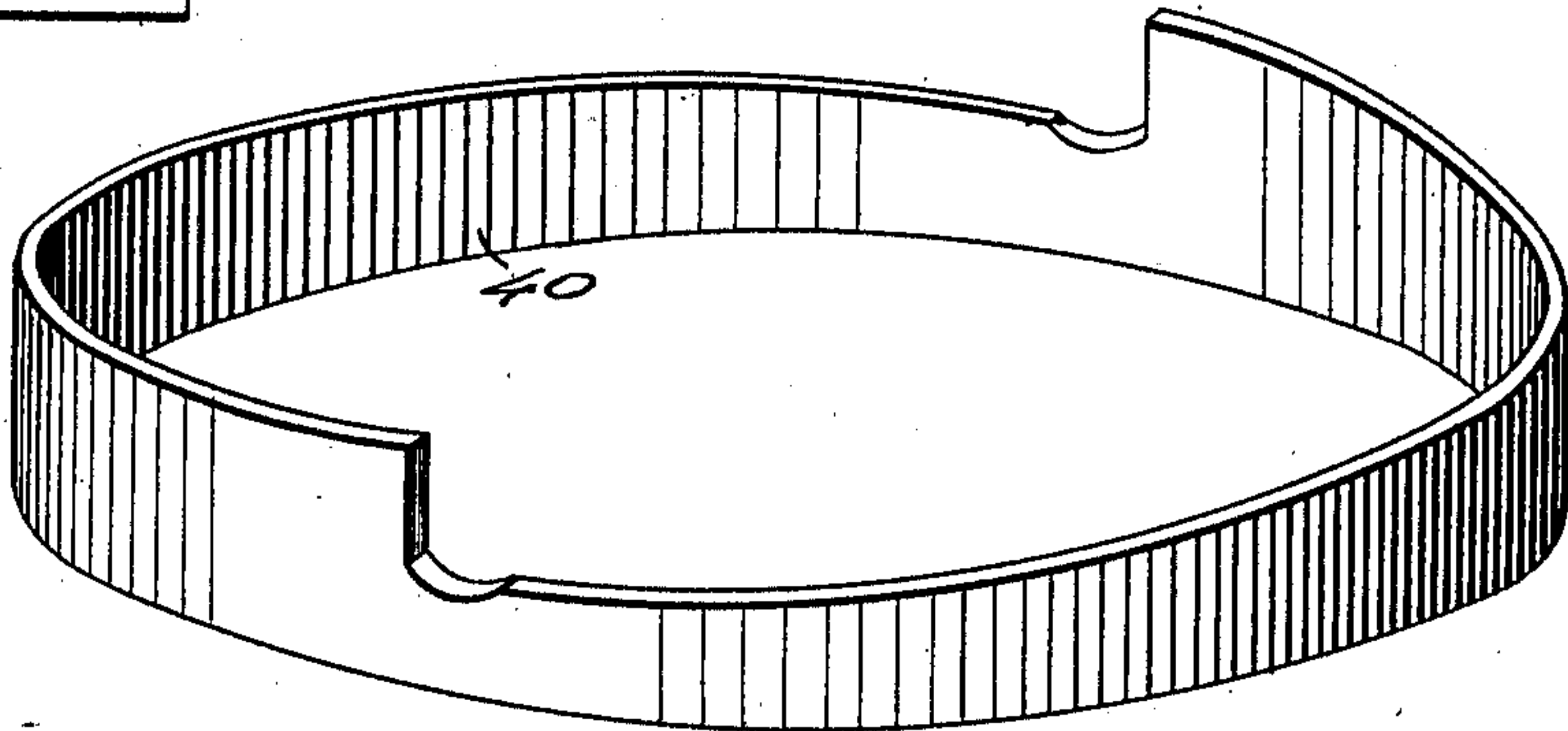


FIG. 6.



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UNITED STATES PATENT OFFICE.

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CANCELING-MACHINE.

993,712.

Specification of Letters Patent.

Patented May 30, 1911.

Application filed October 18, 1910. Serial No. 587,648.

To all whom it may concern:

Be it known that I, CHARLES A. PFALZGRAF, a citizen of the United States, residing at Northwood, in the county of Grand Forks and State of North Dakota, have invented certain new and useful Improvements in Canceling-Machines, of which the following is a specification.

This invention relates to canceling machines, and more particularly to that class adapted for use in post offices for canceling stamps on envelops, postal cards and the like.

The primary object of this invention is to provide a machine which will effectually perform all of the duties for which it is intended.

Another object of this invention is to so construct a canceling machine that the same may automatically cancel the stamps or other matter, and which will require a minimum amount of power to operate the same.

A further object is to so construct the device that the envelops, postal cards, etc., may be fed either by hand or automatically at one end thereof, and delivered at the opposite end with their stamps canceled, with great rapidity.

A still further object is to construct a stamp-canceling machine of extremely simple construction provided with a number of rotating arms adapted to carry upon their free ends suitable rubber or metallic canceling stamps for canceling the stamps upon the envelops, etc., said canceling stamps being detachable.

In the drawings: Figure 1 is a top plan view of the canceling machine in operation. Fig. 2 is a sectional view on the line 2—2 of Fig. 1. Fig. 3 is a bottom plan view. Fig. 4 is a section on the line 4—4 of Fig. 1. Fig. 5 is a section on the line 5—5 of Fig. 1. Fig. 6 is a detail perspective view of the elevated interrupted cam track. Fig. 7 is a detail view of one of the rotating arms carrying a canceling stamp.

In the drawings: 10 represents a table or base having side pieces 11 and 12. Within this table 10 are suitable openings 13 through which the axles, wheels, etc., protrude. The side members 11 and 12 may be secured to the table 10 in any suitable manner, the member 12 being provided with apertures 14 near the opposite ends thereof, while the table is provided upon its under side with bracket bearings, said openings 14 and bearings 15 being oppositely positioned. Shafts 16 and

17 are positioned transversely of the table 10 and have their ends secured in the apertures 14 and bearings 15. The shaft 16 has secured near one end thereof, a beveled gear 18 adapted to mesh with a corresponding beveled gear 19 carried upon one end of a longitudinal shaft 20, which longitudinally extending shaft is secured in suitable brackets and carries upon its opposite end a small beveled gear 21, the purpose of which will be later described. A short distance from the end of this shaft 20 is a vertically extending shaft 22 which protrudes for some distance in either direction through one of the openings in the table 10. Upon the lower end of this shaft is removably and adjustably secured a slightly beveled, large gear wheel 23 which is adapted to mesh with the small beveled gear 21 and is operated thereby. The upper end of the vertical shaft 22 is threaded for a short distance and at the lower termination of these threads is a squared flange 24 formed integral therewith, the purpose of which will be later described. Formed around the vertical shaft 22 is a sleeve 25 which is secured upon the upper side of the table and is adapted to act as a guide for the vertical shaft to prevent the latter from swaying.

An inverted cup 26 is provided with a central circular opening 27 which is adapted to receive the vertical shaft 22. This inverted cup is placed upon the shaft 22 between the flange 24 and the sleeve 25 and by means of a suitable pin 28, and apertures 29 through said cup and vertical shaft, the said cup is locked to the shaft 22. If so desired, the vertical shaft may be provided with a series of suitable spaced apertures. The cup 26 is provided with a suitable number of vertical slots 30 in the lower portion thereof, said slots adapted to receive the flattened ends 31 of the canceling arms 32 which will later be more fully described. The arms 32 are preferably in the form of hollow tubes 33 which have their inner ends flattened as before described, and their outer ends provided with substantially U-shaped locking slots 34, and springs 35 located within said tubes, said tubes 33 having smaller tubes 36 slidably arranged therein, the ends of said slidable tubes pressing against the ends of the springs 35, the outer ends of said smaller tubes project a short distance beyond the large tubes 33. Lock screws 37 are carried by said smaller tubes and are adapted to

work within the lock slots 34 within the outer ends of the larger tubes for the purpose of locking the smaller tubes in either of two positions. The flattened ends 31, of the arms 32 are adapted to be pivotally held within the slots 30 by means of suitable pins passing through said flattened ends and the slotted portions of the said cup 26. Suitable canceling stamps (or stampers) 39 are detachably secured upon the outer free ends of the arms 32.

An elevated interrupted cam track 40 is positioned upon the top of the table 10 and encircles the vertical shaft 22. The cam track 40 is of such construction and size that the larger tubes 33 rest upon the edge thereof and are held thereagainst by means of forked U-shaped springs 41. These springs 41 are of flat material and have a square central opening through which square central opening 42 passes the squared flange 24. The forked ends of these springs receive the outer ends of the large tubes 33 and resiliently hold them against the interrupted cam track 40. A collar 43 rests against the springs 41 and surrounds the threaded portion of the shaft 22 to a certified distance. A tension wheel 44 is adapted to be rotated upon the threaded portion of the shaft 22 and screwed down against the collar 43 for the purpose of regulating the tension of the flat springs 41.

The transverse shafts 16 and 17 are provided with rollers 45 and 46 over which rollers passes an endless belt 47 provided with spacing and guiding pins 48 which pins are adapted to space the letters from one another and guide them properly along the machine. It will be understood that these rollers 45 and 46 are positioned within two oppositely located openings within said table 10, and are of such diameter that the surface thereof is practically flush with the upper side of the table 10. Upon the table 10 near the stamping end thereof, and opposite the vertical shaft 22 is secured a flat piece 49 of resilient material such as leather, rubber etc. The endless belt 47 is adapted to pass over this pad 49 and as each letter reaches its position on the belt, a canceling stamp upon one of the cancel arms is forced down upon the said letter and thereby cancels the stamp, or stamps thereupon.

The machine may be operated by means of a gas engine, electricity or any other suitable power, a belt from the engine passing over the belt wheel 50, carried upon the longitudinally extending shaft 20, and thereby operating the entire machine.

The device operates as follows: The wheel 50 is operated by means of the power most suitable, this wheel being rigid with the longitudinal shaft 20; the latter is caused to rotate, and through the medium of the beveled gears 18 and 19, the shaft 16 is op-

erated, and the endless belt is thereby rotated. As the longitudinal shaft 20 rotates, it also causes, through the medium of the gears 21 and 23, the vertical shaft to revolve. As each arm reaches a position opposite the endless belt, it is forced downwardly by means of the forked U-shaped springs and the canceling stamp is pressed against the ink pad 51, the arm is immediately raised from engagement with this pad, by means of the cam track and is gradually elevated until it reaches a position opposite the pad 49 and directly over the endless belt, at which moment owing to the shape of the interrupted track, it is forced downwardly and the canceling stamp with ink thereupon is pressed against the letter or other matter to be canceled, and the work of canceling the stamps thereupon is performed. The arm is immediately raised from against the mail matter and is gradually elevated until it reaches the proper position to be again pressed against the ink pad and carried around to cancel other matter. It will be readily understood that these arms and canceling stamps are carried around and pressed against the ink pad and then against the matter to be canceled in rapid succession and perfect order, the letters and other matter being continually fed upon the opposite end of the endless belt and guided by means of the guide pins to the proper position above the cushion pad 49 to be stamped after which they are delivered from the stamping end of the machine with the stamps properly canceled.

It will be noted that the canceling stamps may be of such form that they may be reversed, thus allowing a double stamp to be carried by each arm. By means of the U-shaped locking slots and the locking pins, the reversible stampers may be locked in either position.

It will be apparent that changes in the form, proportions and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What is claimed is:

1. In a canceling machine, the combination of a table having suitable openings therethrough, transverse shafts secured to the underside of said table, rollers upon said transverse shafts, an endless belt passing over said rollers, guide members on said endless belt, a beveled gear upon one end of one of the transverse shafts, a longitudinally extending shaft secured to the underside of said table, a beveled gear upon one end of said longitudinal shaft, said beveled gear adapted to mesh with said beveled gear upon the said transverse shaft and adapted to operate the transverse shaft, a belt wheel mounted upon said longitudinal shaft, said belt wheel projecting through the said table,

said rollers upon said transverse shafts being positioned within two of the said openings in the said table in order to allow the endless belt passing thereover, to also pass
 5 over the upper surface of the said table, a beveled gear upon the other end of the said longitudinal shaft, a vertically extending shaft projecting through the said table and revolvably secured in one of the said table
 10 openings, a gear wheel upon the lower end of said vertical shaft, said gear wheel adapted to mesh with the last named gear wheel carried by the said longitudinal shaft, and to be operated thereby, an interrupted cam
 15 track surrounding said vertical shaft, radially extending arms secured to said vertical shaft and projecting over said cam track, canceling stamps carried upon the
 20 outer free ends of the said radially extending arms, and means for resiliently holding said arms against the cam track.

2. In a canceling machine, the combination of a table, transverse shafts secured to the underside of said table, rollers upon
 25 said transverse shafts near the ends thereof, an endless belt passing over said rollers, a beveled gear upon one of the said transverse shafts, a longitudinally extending shaft carried upon suitable mountings, a beveled gear
 30 upon one end of said longitudinal shaft for engagement with said beveled gear of the transverse shaft, a belt wheel mounted upon said longitudinal shaft, a beveled gear upon the other end of the said longitudinal shaft,
 35 a vertically extending shaft carrying a gear wheel upon its lower end, said gear wheel adapted to be engaged and rotated by the last named gear wheel carried by the longitudinal shaft, radially extending arms carried
 40 by said vertical shaft, a circular interrupted cam track surrounding said vertical shaft, said radial arms adapted to move upon the said interrupted cam track, means for retaining said radial arms resiliently engaged
 45 upon the said track, means for regulating the tension upon said arms, canceling members carried by said arms, a cushion pad beneath the said endless belt, and an ink pad opposite said endless belt.

50 3. In a canceling machine, the combination of a table having depending side members and bearings, transversely extending shafts having their ends secured in one of said side members and bearings, rollers upon
 55 said transverse shafts, an endless belt passing over said rollers, a longitudinally ex-

tending shaft, a vertically extending shaft, said longitudinal shaft having one end engaged with one of the transverse shafts, the other end of the said longitudinal shaft being in engagement with the lower end of
 60 the said vertical shaft, means whereby the said longitudinal shaft may be operated to rotate both the said transverse shafts and the said vertical shaft, a cam track, radially
 65 extending arms secured to said vertical shaft, and adapted to rotate therewith, said arms resiliently engaged against the upper face of the said cam track and adapted to be raised and lowered by the said cam track
 70 during their rotary movement thereupon, canceling members carried by said arms, a cushion pad, and an ink pad.

4. In a canceling machine, a table, transverse shafts, a longitudinal shaft, connections between one of said transverse shafts and the said longitudinal shaft, a vertical
 75 shaft, connections between said longitudinal shaft and said vertical shaft, rollers carried by said transverse shafts, a belt engaged over said rollers, guide members upon said
 80 belt, a cushion pad beneath said belt, an ink pad carried by said table opposite the said belt, a belt wheel mounted upon one of the said shafts, a squared flange integral with
 85 said vertical shaft approximately midway of its length, threads upon said vertical shaft from the said flange to the upper end of the said shaft, an inverted cup mounted upon said vertical shaft, radially extending
 90 arms pivotally secured to the said inverted cup, substantially U-shaped springs each having forked ends and a square central opening, said springs adapted to be placed upon the said shaft in an inverted position,
 95 the squared flange fitting snugly within the said square opening of said springs, the said forked ends of the springs fitting over the radial arms, a spacing collar fitting around the squared flange and a part of the
 100 threaded portion of the said vertical shaft, and resting upon the said springs, and a tension wheel having a threaded central opening working upon the said threaded portion of the said vertical shaft to adjust
 105 the tension of the said springs.

In testimony whereof I affix my signature, in the presence of two witnesses.

CHARLES A. PFALZGRAF.

Witnesses:

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 MARTIN HARALDSON.