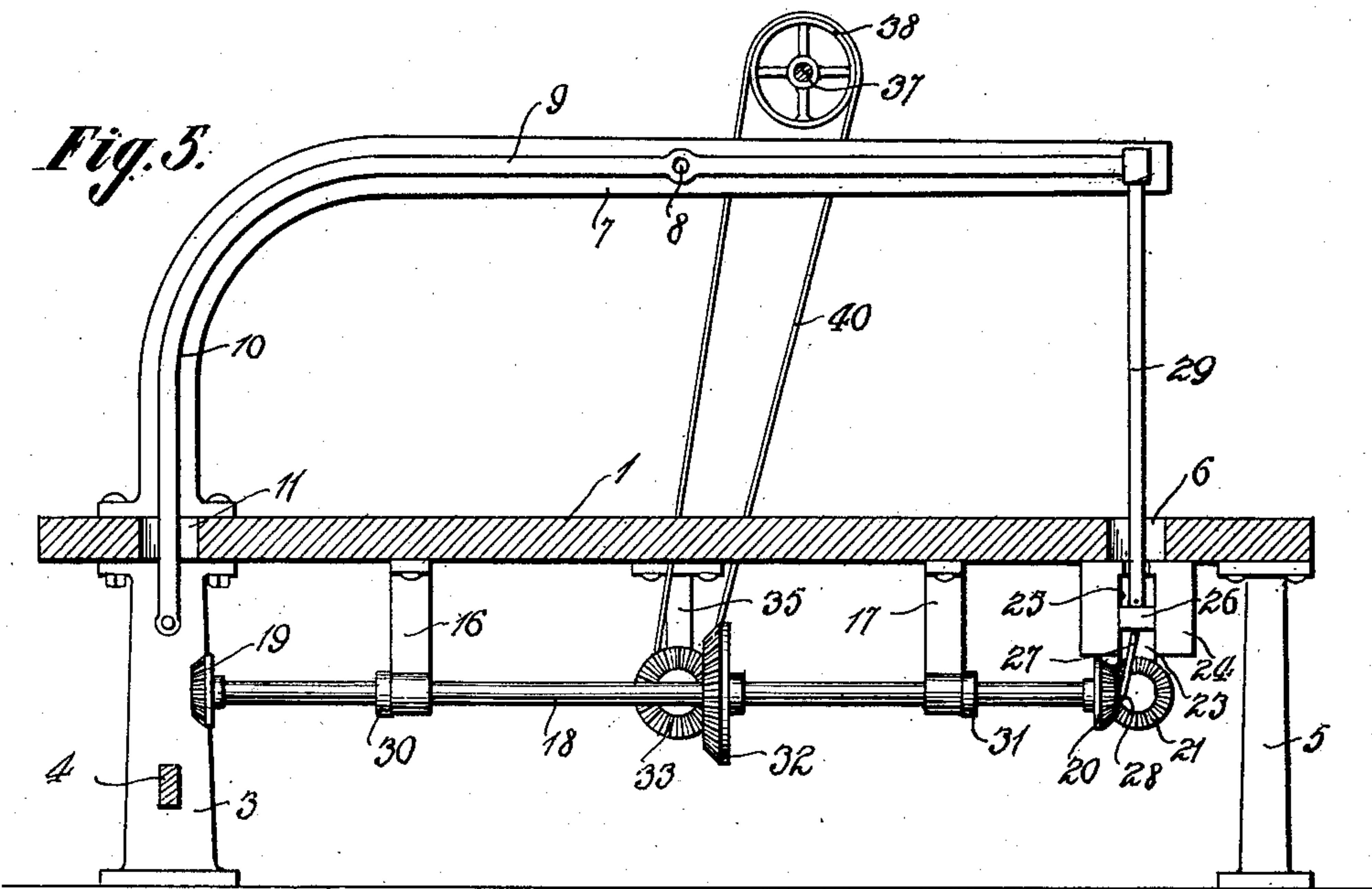
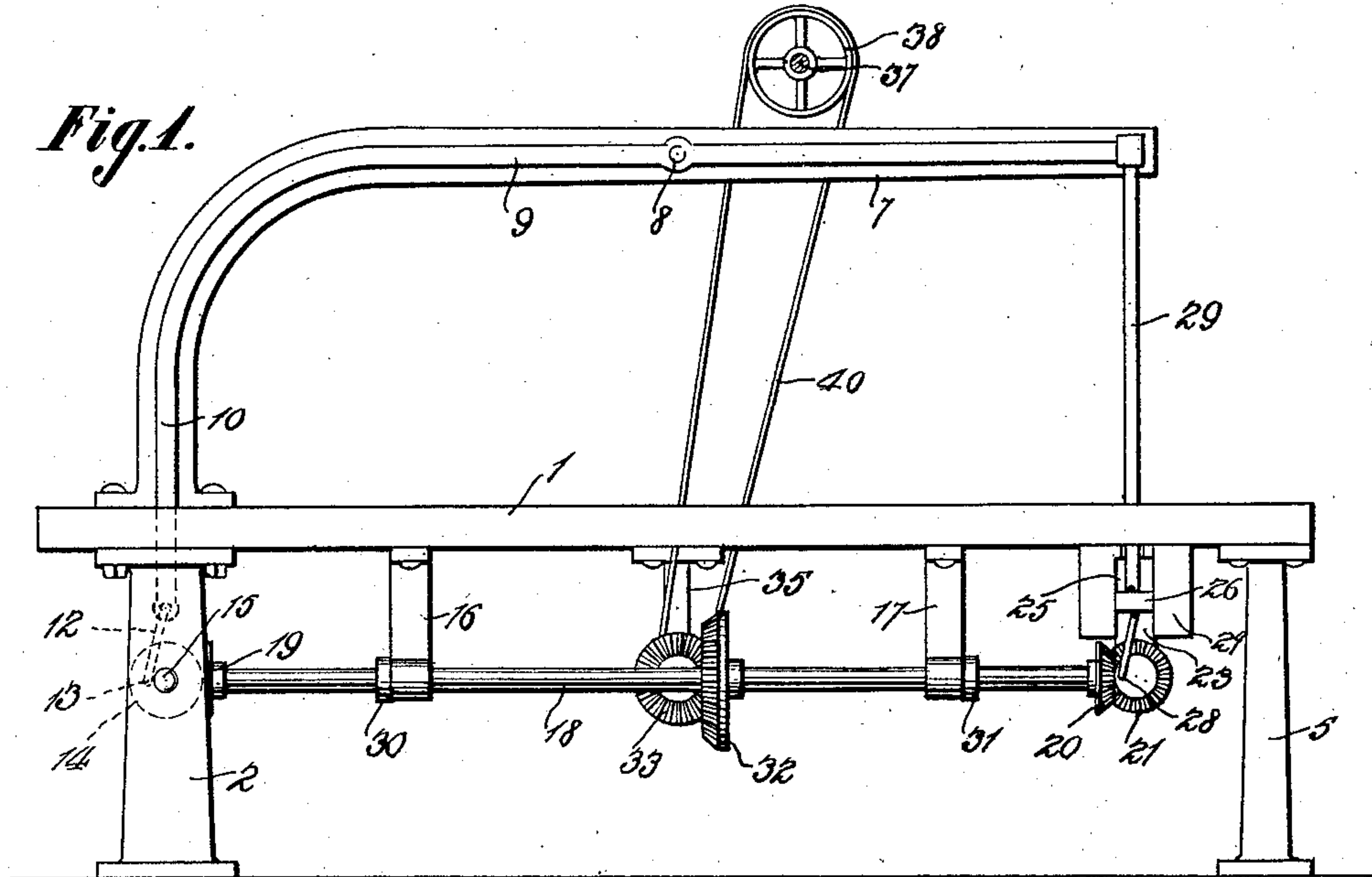


C. H. HEIDEL.
 SCROLL SAW MACHINE.
 APPLICATION FILED NOV. 29, 1910.

994,394.

Patented June 6, 1911.

2 SHEETS—SHEET 1.



Inventor
Charles H. Heidel.

Witnesses
C. E. Chandlee.

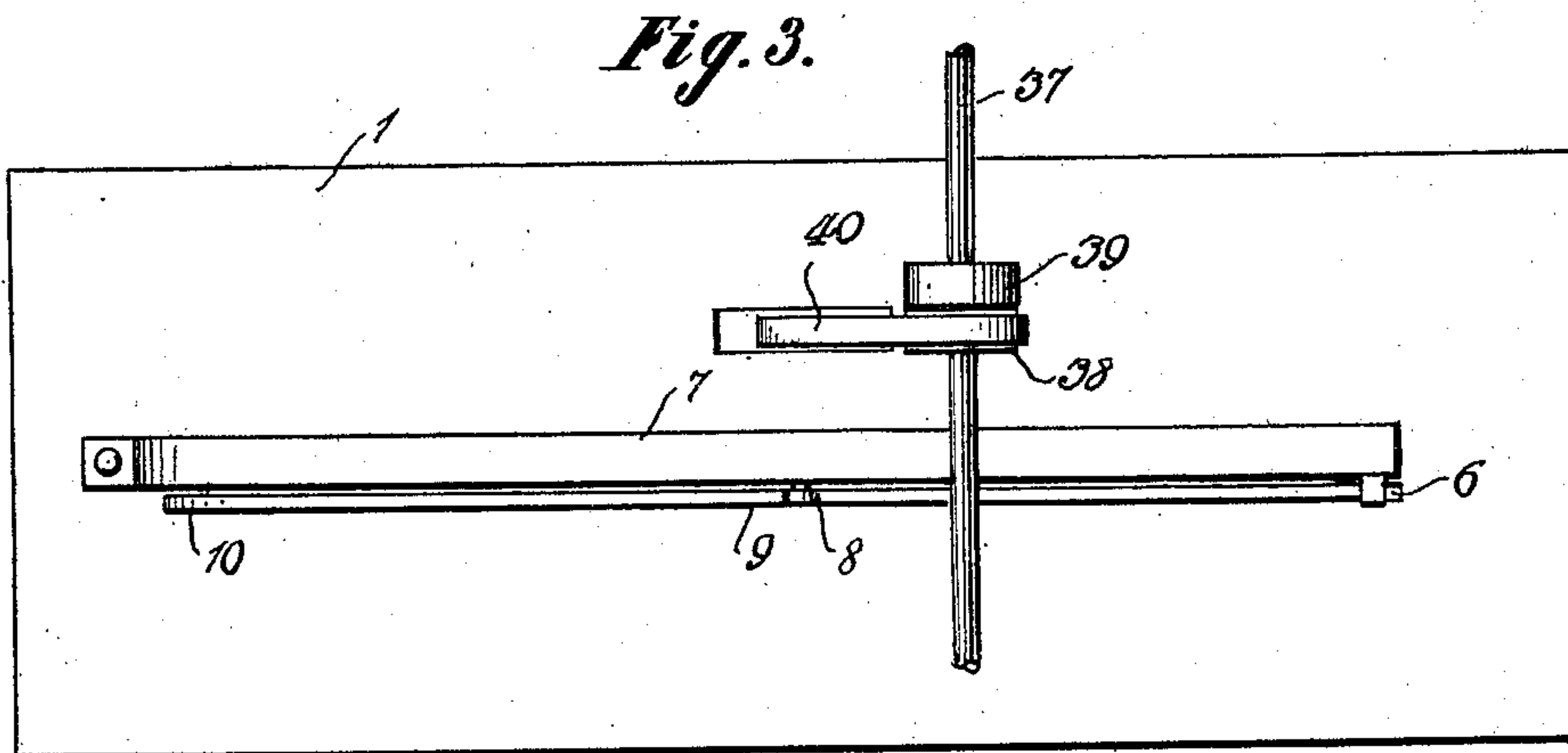
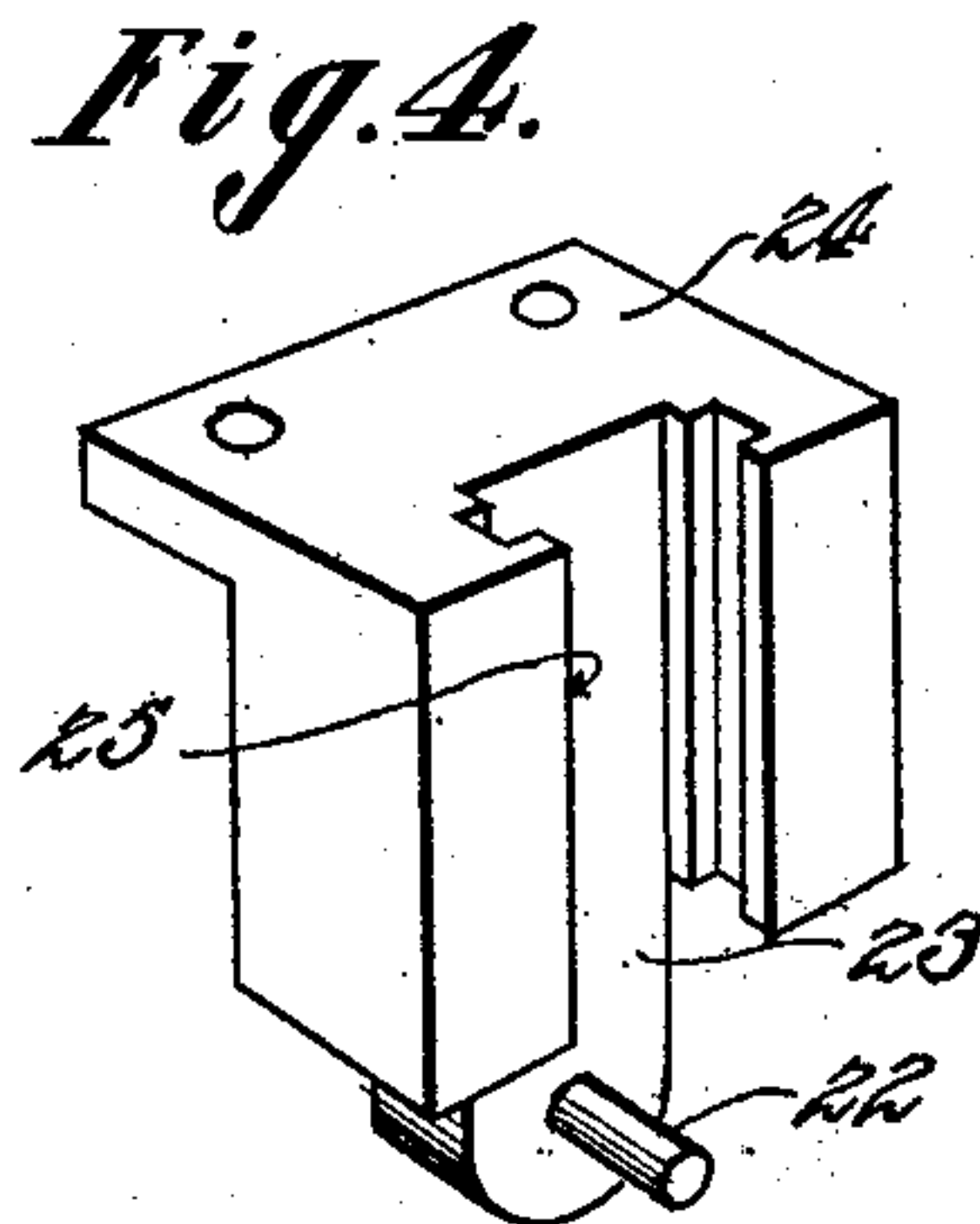
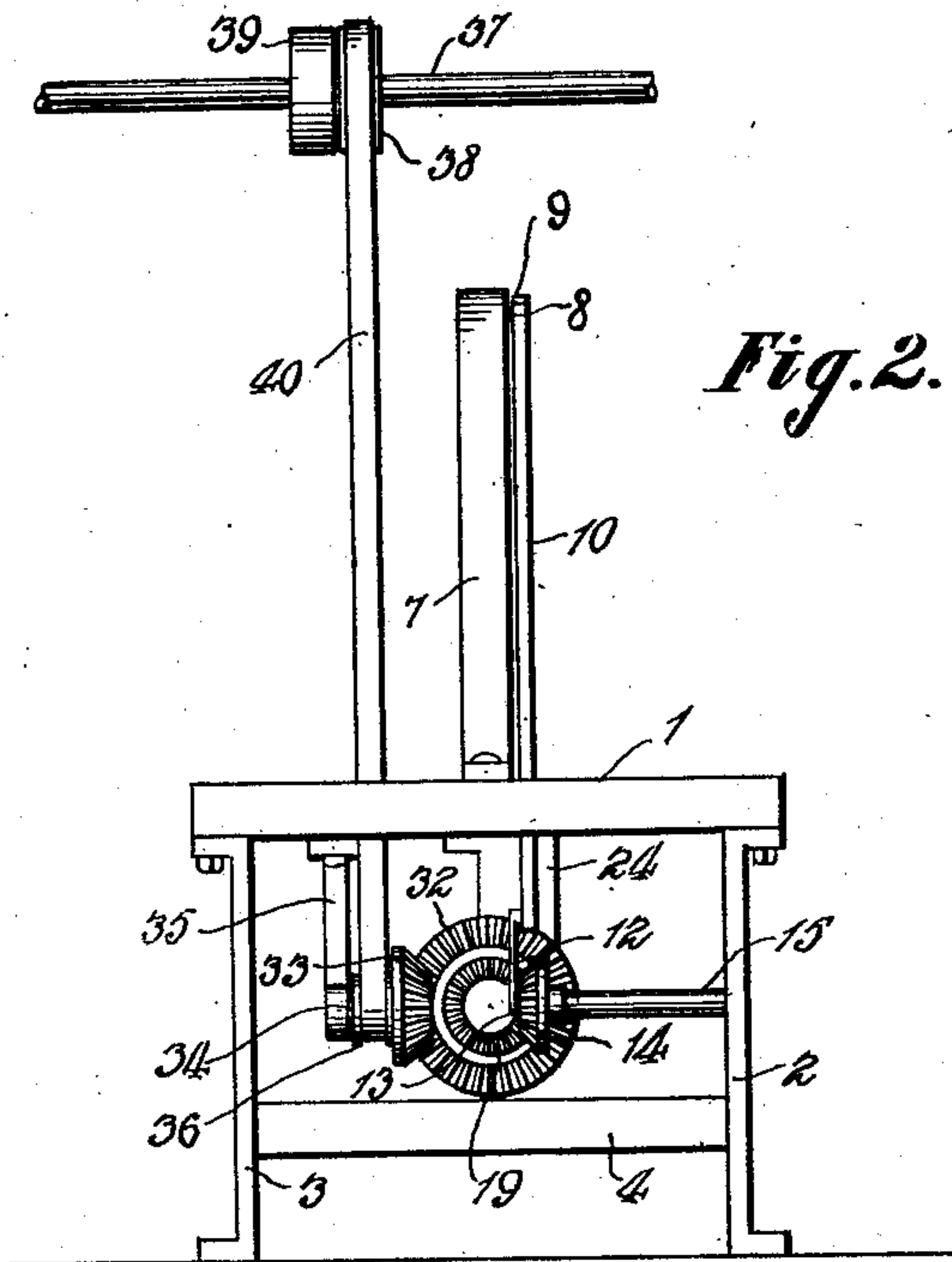
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UNITED STATES PATENT OFFICE.

CHARLES H. HEIDEL, OF BETHLEHEM, PENNSYLVANIA.

SCROLL-SAW MACHINE.

994,394.

Specification of Letters Patent.

Patented June 6, 1911.

Application filed November 29, 1910. Serial No. 594,752.

To all whom it may concern:

Be it known that I, CHARLES H. HEIDEL, a citizen of the United States, residing at Bethlehem, in the county of Northampton and State of Pennsylvania, have invented certain new and useful Improvements in Scroll-Saw Machines, of which the following is a specification.

This invention relates to scroll saw machines, and has for its object to produce a device of this character which is simple in construction, durable, and efficient in operation.

Other objects and advantages will be apparent from the following description, and it will be understood that changes in the specific structure shown and described may be made within the scope of the claims without departing from the spirit of the invention.

In the accompanying drawings: Figure 1 is a side elevation. Fig. 2 is an end view. Fig. 3 is a top plan view. Fig. 4 is a detail perspective view of the saw guide block. Fig. 5 is a longitudinal sectional view.

Referring to the drawings the numeral 1 designates the saw table, having supporting legs 2 and 3, and a transverse brace 4. To the under side of the front part of the table 1 is a supporting leg 5, to prevent the tipping of the table. Near the front end of the table is provided a saw opening 6. Secured near the end of the table 1 is a curved arm 7, to which is pivoted at 8, the saw bar 9, said saw bar being provided with a downwardly curved portion 10 which projects through an opening 11. A pitman 12 has one of its ends pivoted to the lower end of the saw bar 9, and its other end pivotally connected to a wrist pin 13 rigidly secured to a beveled gear 14, said beveled gear being mounted upon a stub shaft 15. The stub shaft 15 is rigidly secured to the leg 2.

Suitably secured to the under side of the table 1 are hangers 16 and 17 in which is mounted a rotatable shaft 18 to one end of which is rigidly secured a beveled gear 19, said gear being adapted to mesh with the gear 14. Fixed to the other end of the shaft 18 is a beveled gear 20 which meshes with a beveled gear 21. The gear 21 is mounted upon a stub shaft 22, said stub shaft being rigidly secured to an apron 23 of the guide block 24. The guide block 24, is secured to the under side of the table 1 and adjacent to the opening 6, and is formed with a vertical

guideway 25, in which is adapted to travel the block 26. Pivotally secured to the lower end of the block 26 is one end of a pitman 27, the other end of which is pivotally connected to a wrist pin 28 carried upon the beveled gear 21. The saw blade 29 has its lower end pivotally connected to the sliding block 26 and its upper end pivotally connected to one end of the saw bar 9. To prevent endwise movement of the shaft 18, collars 30 and 31 are provided. Intermediate the hangers 16 and 17 is a beveled gear 32, said gear being keyed to the shaft 18 and adapted to mesh with a beveled gear 33. The gear 33 is mounted upon a stub shaft 34 carried by a bracket 35, which is suitably secured to the under side of the table. Formed integral with the beveled gear 33 is a pulley 36.

Conveniently arranged in relation to the pulley 36 of the gear 33 is a driving shaft 37 having fixed thereto a pulley 38 and a loose pulley 39, so that the driving belt 40 may be shifted to start or stop the machine. The belt 40 passes around the pulley 36 of the beveled gear 33, and when the shaft 37 is driven, motion is imparted through the gearings to the saw and saw bar. From this construction it will be noted that the saw bar, when rocking, is subjected to a pushing movement at its curved end, and a pulling movement at its other end, through the saw 29 and pitman 12.

What is claimed is:

1. A scroll saw machine, comprising a table, supporting legs for the table, a saw supporting arm, a bar pivoted to the arm, and having one of its ends curved downwardly and projecting through an opening formed near the rear end of the table, a saw blade having its upper end pivotally connected to the other end of the bar, an opening formed in the table near its front end, said saw blade passing therethrough and being pivotally connected to the upper end of a sliding block, a guide block for the sliding block, a vertical guideway formed in the guide block, a pitman connected at one end to the sliding block and connected at its other end to a beveled gear, said beveled gear being rotatably mounted on the guide block, a beveled gear mounted on a stub shaft carried by the rear supporting legs, a pitman pivotally connecting the curved end of the pivoted bar and last mentioned beveled gear, hangers secured to the under side of the table, a rotatable shaft carried by said hangers, beveled

gears fixed to each end of the shaft, one of which meshes with the gear carried by the guide block and the other of which meshes with the gear carried by the supporting legs, an intermediate beveled gear fixed to the shaft, a suitably supported beveled gear meshing therewith, and means for driving the gear to rotate said shaft to impart movement to the saw.

10 2. A scroll saw machine, comprising a table, supporting legs for the table, an arm fixed to said table, a curved bar pivoted to the arm, openings formed near the front and rear ends of the table, a guide block provided with a guideway, a sliding block mounted in the guideway and secured adjacent to the front opening, a saw blade pivot-

ally connected to said bar and sliding block, a bevel gear carried by the guide block, a pitman connecting the sliding block and gear, the curved end of the bar projecting through the rear opening, a bevel gear mounted on one of the supporting legs, a pitman connecting the curved end of the bar and the bevel gear, means for rotating the bevel gears to force the curved end of the bar upwardly and pull its other end downwardly to reciprocate the saw.

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

CHARLES H. HEIDEL.

Witnesses:

JOS. F. METZGER,

LEWIS F. HEFFELFINGER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."