

No. 722,820.

PATENTED MAR. 17, 1903.

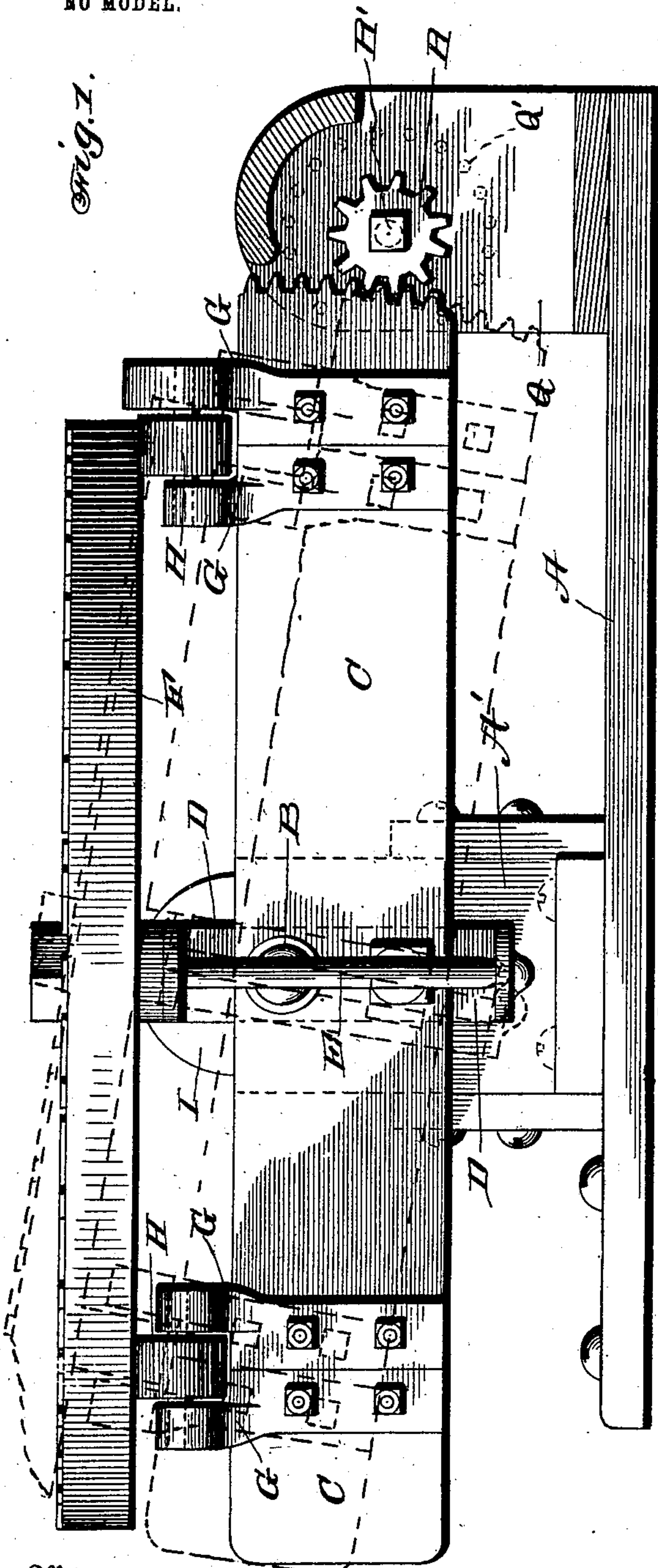
W. DE GRAW.  
TREAD POWER.

APPLICATION FILED DEC. 5, 1902.

NO MODEL.

3 SHEETS—SHEET 1.

Fig. 1.

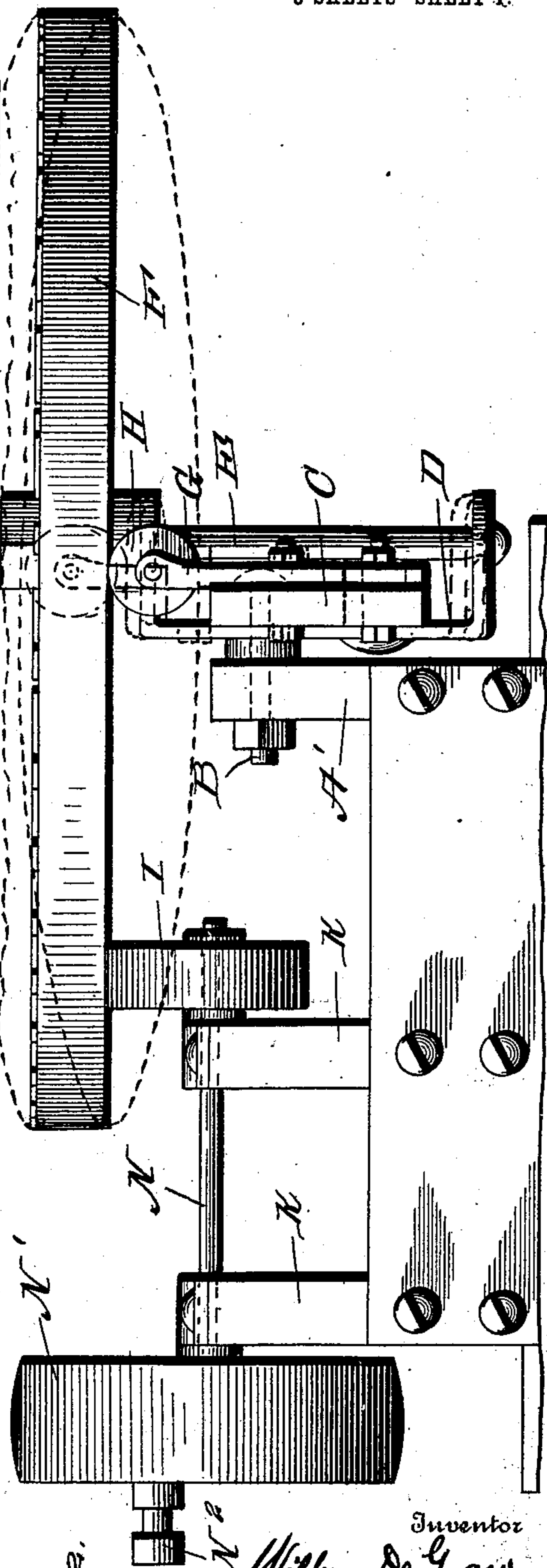


Witnesses

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Fig. 2.



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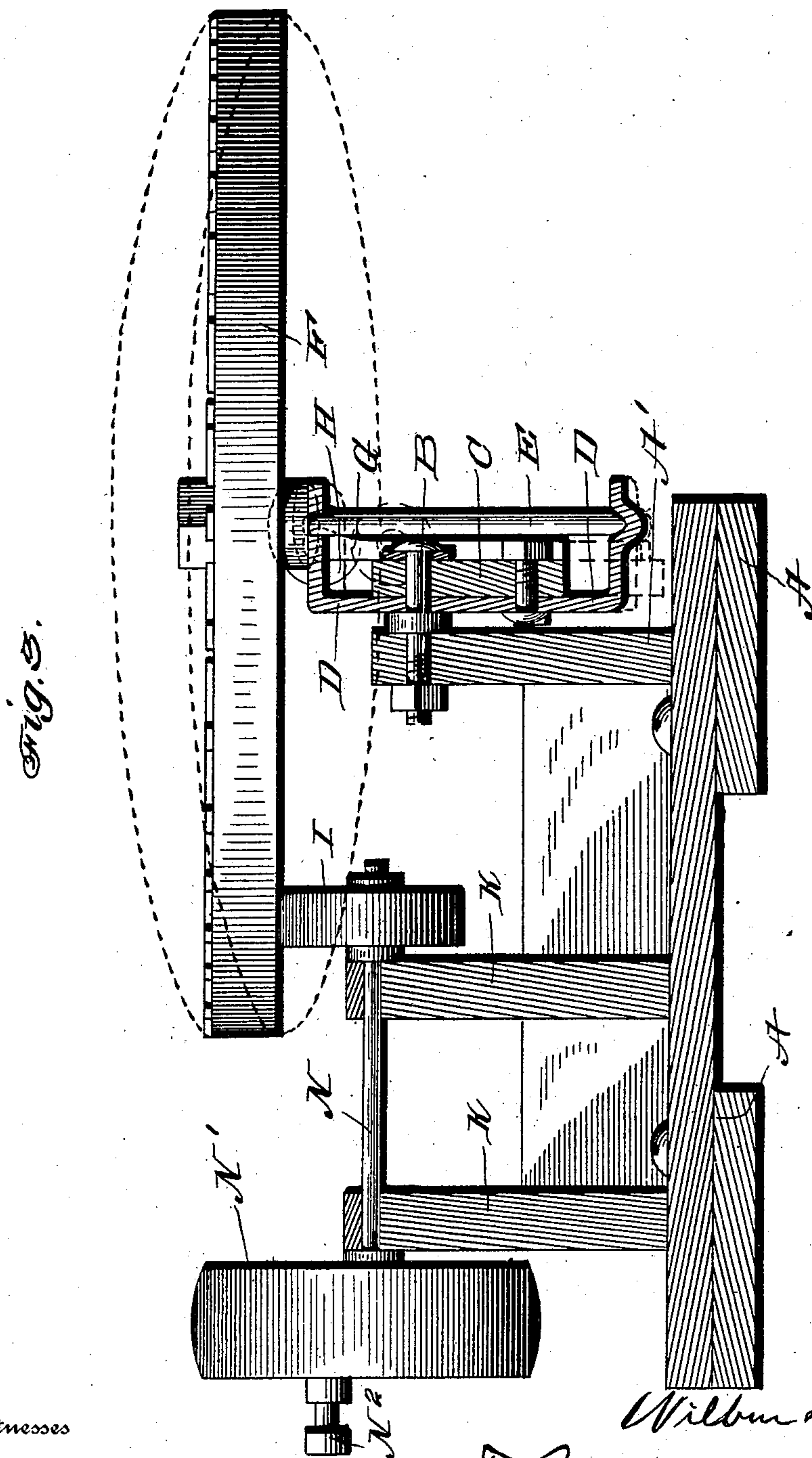
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3 SHEETS—SHEET 2.



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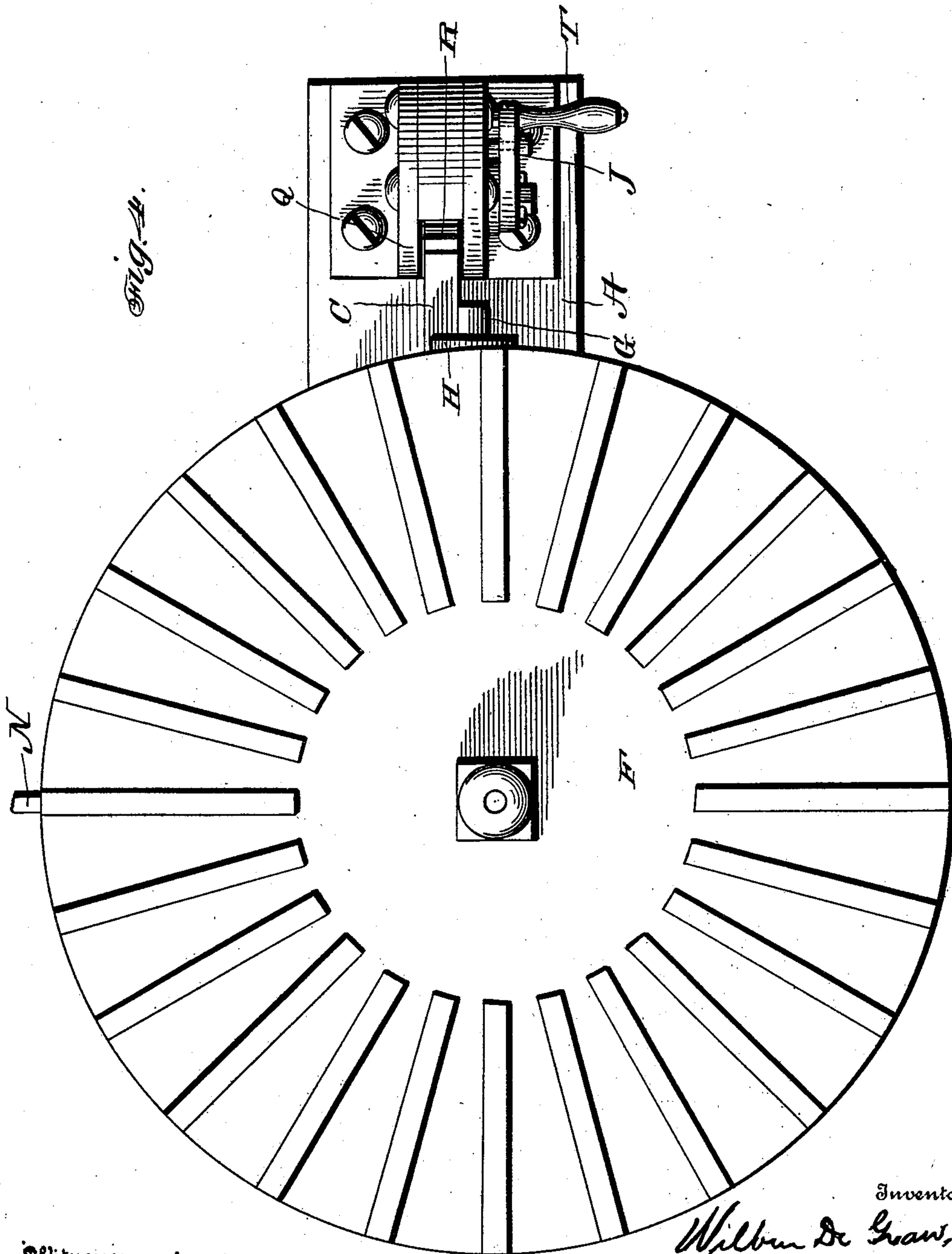
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W. DE GRAW.  
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NO MODEL.

3 SHEETS—SHEET 3.



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# UNITED STATES PATENT OFFICE.

WILBUR DE GRAW, OF CLOVIS, CALIFORNIA.

## TREAD-POWER.

SPECIFICATION forming part of Letters Patent No. 722,820, dated March 17, 1903.

Application filed December 5, 1902. Serial No. 134,045. (No model.)

*To all whom it may concern:*

Be it known that I, WILBUR DE GRAW, a citizen of the United States, residing at Clovis, in the county of Fresno and State of California, have invented certain new and useful Improvements in Tread-Powers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in tread-power motors adapted for use in transmitting power for pumping and other purposes; and it consists in the provision of a rotatable platform which is mounted upon a central post held in a bracket and in the provision of a pinion-wheel which is adapted to mesh with teeth in the end of a beam to which the bracket is fastened, whereby the platform may be tilted at different angles, and in the provision of antifric-tion-wheels which are carried by the beam and adapted to contact with the under surface of the platform.

My invention consists, further, in various details of construction and the combinations of parts, which will hereinafter be fully described and then specifically defined in the appended claim, and is clearly illustrated in the accompanying drawings, with the letters of reference marked thereon, and in which drawings—

Figure 1 is a side elevation of the tilting mechanism, a portion being shown in section to illustrate the means for tilting the frame or carrying the platform. Fig. 2 is an end view of the machine. Fig. 3 is an end elevation of the apparatus, parts being shown in vertical section. Fig. 4 is a top plan view.

Reference now being had to the details of the drawings by letter, A designates a platform of the machine from which a standard A' rises, which has mounted therein a bolt B, on which a beam C is pivotally mounted. A bracket member D, having its ends pinned parallel to each other, is bolted to said beam, and one end of said bracket-arm is apertured to receive a spindle E, the other end of which spindle rests in a depression formed in the

upper face of the opposite end of the bracket. Said spindle is fastened centrally to the circular tread-platform F, which latter is preferably provided with cleats on its upper face in order to give a better footing to the animal as it travels up the platform held at an inclination.

Supported in suitable bearings on the bracket-arms G, which are fastened to the beam C on opposite sides of its pivotal portion, are antifric-tion-rollers H, against which the under surface of the rotary platform contacts, and mounted in the standards K, forming a part of the frame supporting the apparatus, is a shaft N, journaled in suitable bearings, and a frictional pulley I is mounted upon and adapted to rotate with said shaft. Said friction-pulley I is so positioned in a plane parallel to the plane in which said beam tilts that its circumference will be held in contact with the under face of the platform in whatever position the platform may be held, thereby imparting a rotary movement to said pulley and said shaft carrying same as the platform is driven by the animal walking up the inclined surface thereof. A pulley N' is keyed to the opposite end of the shaft and has a crank-pin N', to which the pitman-rod or other member may be connected for the purpose of driving a pump or any other machinery.

It will be observed that one end of the tilting beam has a series of rack-teeth formed thereon which are in mesh with the teeth of the pinion-wheel R, which pinion-wheel is mounted in and adapted to rotate with a shaft R', which shaft is provided with a crank or hand-wheel T, journaled in the uprights Q, rising from the base of the machine. By the provision of this pinion-wheel it will be observed that the beam may be tilted to throw the platform at different inclinations.

In order to hold the platform at any desired inclination, a pin J may be inserted in any of the apertures Q' and in the path of the crank in order to prevent the pinion from rotating.

In order to hold the animal to its work, a stall or any other suitable means may be provided in a position above the platform to guide the animal as it travels up the incline and by so doing causing the platform to rotate.

While I have shown the particular construction of the apparatus whereby my invention may be produced, it will be understood that I may make alterations in the construction of  
5 the motor-power without departing from the spirit of the invention.

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

10 A tread - power comprising a frame, a bracket member pivoted to an upright of the frame, a beam fastened to said bracket member, a shaft journaled in an aperture in one end of said member and its other end resting  
15 in a depression in the other end of the bracket

member, a tread-platform fixed to the upper end of said shaft, antifriction-wheels bearing against the under surface of said tread-platform, a shaft and pinion-wheel mounted in uprights in the frame and having gear connection with teeth formed at the end of said beam, and means for rotating the pinion, whereby the platform may be held at different inclinations, as shown and described.

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

WILBUR DE GRAW.

Witnesses:

C. R. DAMON,  
L. W. GIBSON.