

A. H. C. MEYER.
 VARIABLE FEED GEARING.
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969,895.

Patented Sept. 13, 1910.

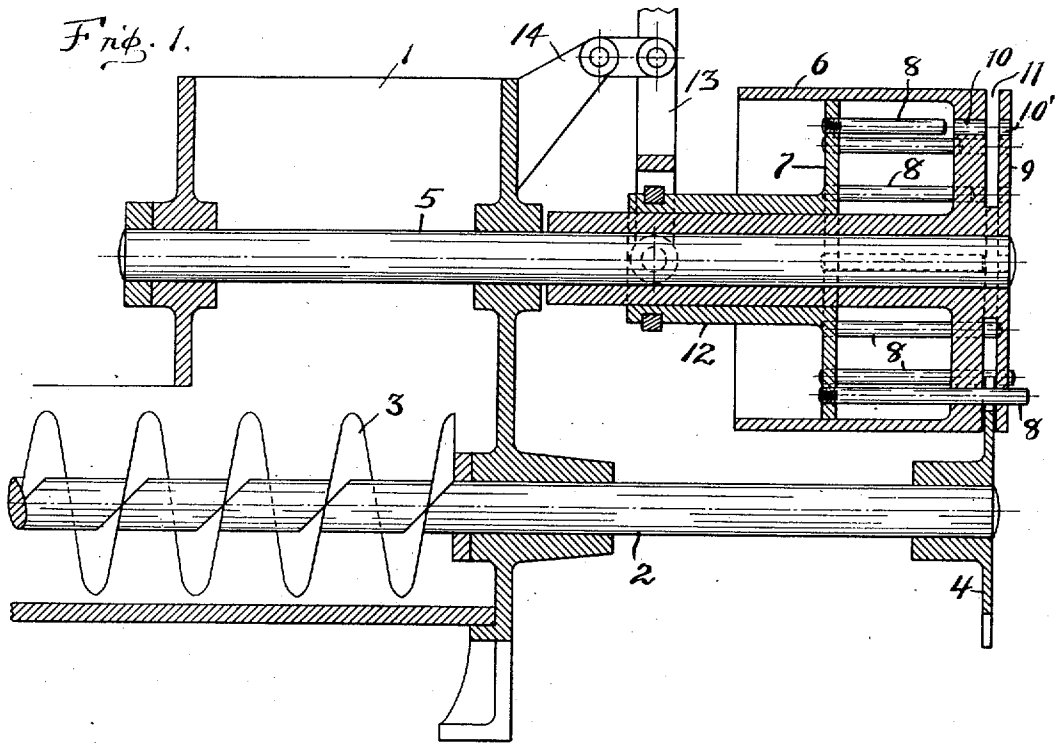
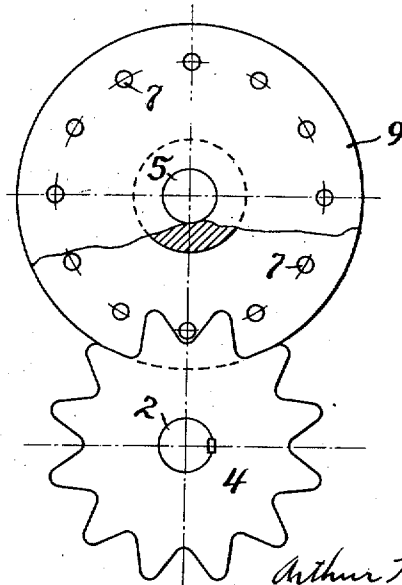


Fig. 2



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VARIABLE-FEED GEARING.

969,895.

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To all whom it may concern:

Be it known that I, ARTHUR H. C. MEYER, a citizen of the United States of America, and resident of Fort Wayne, in the county of Allen and State of Indiana, have invented certain new and useful Improvements in Variable-Feed Gearing, of which the following is a specification.

This invention relates to improvements in variable feed gearing, and the object thereof is to afford a simple construction by means of which a feeder may be operated at various speeds while the driving member rotates at a constant velocity, or the ratio of rotation between the driving and driven members may be adjustably varied. This object is accomplished by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal section showing the relative arrangement of parts; and Fig. 2 is an end view of the driving and driven members, the former partly cut away.

Similar numerals of reference indicate corresponding parts in both views, and referring now to the same: 1 is a feed box having in its lower part a shaft 2 that has in connection therewith a feeder 3 of a type adapted to be actuated upon rotation of the shaft. The feeder shown is a spiral conveyor of well known form, but in matter of type is immaterial to the present invention, any other feeder adapted to be operated by the rotation of the shaft being more or less serviceable.

The shaft 2 extends through the end of the feed box and has fixed thereon a star wheel or driven member 4 by which it is actuated. Another shaft 5 is mounted in parallel relation with the feeder shaft 2 and has thereon a driving member consisting of a revoluble pulley 6 with an adjustable disk 7 in concentric relation therewith, and which is provided with an annular series of pins 8 of various lengths. The pulley has at its side a radial flange 9, and an annular series of holes 10, corresponding with the pins, extend through the side of the pulley, and another series of holes 10' extend through the flange at points correspondingly opposite the holes in the pulley. Between the flange and pulley is an annular space 11 into which the star wheel extends part way. The pins 8 are adapted to be extended through the corresponding holes so as to engage the teeth of

the star wheel and drive the same upon rotation of the driving member.

The disk 7 has a sleeve 12 with which an adjusting lever 13 has connection so that the disk can be shifted to extend one or more of the pins through their corresponding openings and into working relation with the star wheel, or all of the pins may be drawn back by the movement of the disk so as to miss the star wheel entirely. When the pins are in the latter position the star wheel is idle; when one pin only engages the star wheel, the latter is moved one fraction of a cycle with each complete cycle of the driving member; and when more of the pins engage the star wheel, it is moved as many more fractions of a cycle as there are pins engaging it with each complete cycle of the driving member. It will therefore be understood that the ratio of movement between the driving and driven members will vary accordingly as the lever 13 is shifted, and the feeder will be actuated accordingly.

The pulley may be driven by any suitable means such as by a belt, and the adjusting lever may be supported in any convenient manner such as by a bracket 14.

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

1. A mechanical movement comprising a revoluble driven member; a driving member; a disk in adjustable relation with the driving member, the latter having an annular series of holes in its end; an annular series of pins extending from the disk and adapted to project through the corresponding holes in the driving member upon adjustment of the disk, said pins being of different lengths; and means to shift the disk.

2. A mechanical movement comprising a revoluble driven member; a driving member; an annular series of pins in adjustable relation with the driving member, said pins being of different lengths and adapted to be projected through the end of the driving member and into engagement with the driven member and actuate the same upon rotation of the driving member; and means to adjust the pins.

3. A mechanical movement comprising a revoluble driving member; a star wheel; an annular series of adjustable pins in connection with the driving member adapted to be shifted successively into engagement with

the star wheel and actuate the same upon rotation of the driving member; and means to shift the pins.

4. In a mechanical movement, a driving
5 member comprising a pulley having a radial
flange adjacent thereto, the end of the pulley
having an annular series of holes therein
and the flange having a like series of holes
correspondingly opposite those in the pul-
10 ley; an annular series of adjustable pins in
connection with the pulley adapted to be
projected successively through the corre-
sponding holes respectively; a star wheel

suitably mounted and with a portion there-
of extending between said pulley and flange 15
and being adapted to become engaged and
actuated by the pins when the latter are pro-
jected through the holes and upon rotation
of the pulley; and means to shift the pins.

In testimony whereof I affix my signa- 20
ture, in presence of two witnesses.

ARTHUR H. C. MEYER.

Witnesses:

MATHILDA METTLER,
WALTER G. BURNS.