

April 27, 1937.

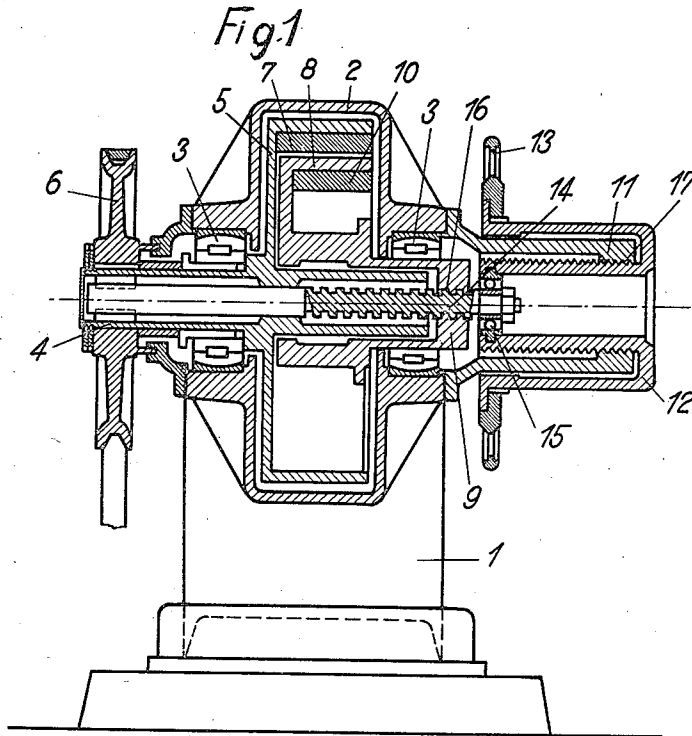
K. LURZ ET AL

2,078,715

OSCILLATING MECHANISM FOR THE OSCILLATING WIRES
OR SIEVES OF PAPER MAKING AND OTHER MACHINERY

Filed Nov. 9, 1934

2 Sheets-Sheet 1



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Fig. 2

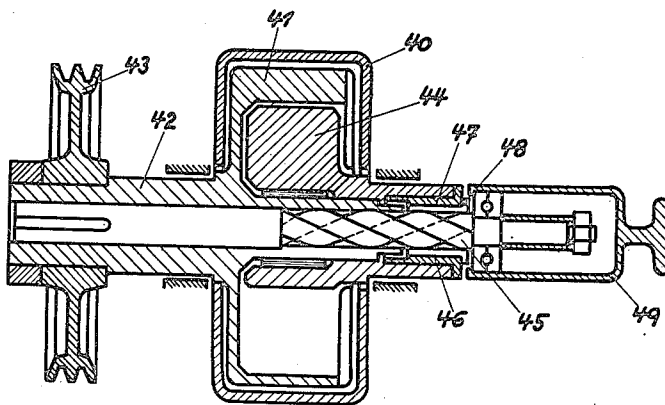


Fig. 3

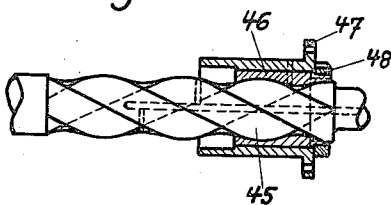


Fig. 4

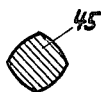
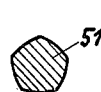


Fig. 5



Fig. 6



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UNITED STATES PATENT OFFICE

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OSCILLATING MECHANISM FOR THE OSCILLATING WIRES OR SIEVES OF PAPER MAKING AND OTHER MACHINERY

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3 Claims. (Cl. 74—61)

Our invention relates to mechanism for regulating oscillatory movements of oscillating sieves in paper making machinery. It has particular reference to mechanism comprising a pair of wheels or discs forming gyrating masses rotating in equal sense, these masses having as a rule a common centre of gravity.

It is an object of our invention to provide means whereby the relative position of the two wheels or discs with respect to their centres of gravity can be readily regulated within any desired limits and more especially at higher numbers of oscillation.

In the mechanism according to the present invention the relative angular position of the two eccentric or gyrating masses rotating together about the same axis, the wheels or discs carrying these masses are mounted on a hollow shaft and a spindle formed with a high pitch threading is arranged for axial movement within this shaft for turning the loose wheel or disc relative to the wheel or disc fixed on the shaft.

In the drawings affixed to this specification and forming part thereof, two mechanisms embodying our invention are illustrated diagrammatically by way of example.

In the drawings

Fig. 1 is an axial section of the first of these mechanisms;

Fig. 2 is an axial section of the second mechanism, while

Fig. 3 is an axial section, partly in elevation, and

Figs. 4, 5, and 6, respectively are cross sections of the spindle and accessories serving to adjust the loose wheel or disc.

Referring to the drawings and first to Fig. 1, 1 are leaf springs supporting the casing 2 and 3 are bearings mounted in this casing. 4 is the hollow shaft and 5 is the fast wheel or disc fixed on this shaft and being equipped with an eccentrically located gyrating mass 7. 8 is the loose wheel or disc mounted on shaft 4 and surrounded by the flange of disc 5. 10 is an eccentrically located gyrating mass fixed to the loose disc 8. 6 is the pulley mounted on shaft 4. 9 is the hub of the loose disc 8, this hub being extended to embrace and support the hollow shaft 4. On the right hand side of casing 2 is fixed a cylindrical extension 11, which is surrounded by a cap 12 extending into the cylinder 11 and being threaded so as to mesh with the inner thread 17 formed near the outer end of the cylinder 11. 13 is a hand wheel mounted on the cap 12 and serving to turn it, whereby the cap 12 can be displaced

axially on the cylinder 11. 14 is a spindle rotatably mounted in a bearing 15 fixed in the inner end of the cap 12 and being axially displaceable, but secured against rotation, in the hollow shaft 4. On the spindle 14 is formed a thread 16 of high pitch meshing with a similar threading in the extended portion 9 of the hub of the loose wheel or disc 8. When the cap 12 is turned by means of the hand wheel, the spindle 14 is displaced axially and being coupled with the loose disc 8 by means of the high pitch threading 16, will then impart to this disc an angular displacement relative to the fast disc 5.

In the mechanism illustrated in Figs. 2 to 6 the threaded spindle 14 forming part of the mechanism shown in Fig. 1 is replaced by a spindle, which together with the nut mounted thereon can be manufactured in a particularly simple manner and affords a particularly great mobility.

As shown in the drawings, the spindle 45 is formed as a polygonal bar with helically wound sides and edges. While the spindle shown in Fig. 4 is quadrangular, we may as well use a spindle 50 of triangular (Fig. 5) or of pentagonal section (51 in Fig. 6).

On the spindle 45 is mounted a nut 46 of corresponding inner configuration, this nut being caused to rotate on the spindle being shifted in axial direction and transmitting its rotatory movement by means of the sleeve 47 surrounding it onto the loose disc or wheel 44, the hub of which surrounds the threaded spindle 45. The nut 46 is fixed to the sleeve 47 by means of a nut 48. 41 is the fast wheel or disc, its hollow hub or shaft 42 surrounding the spindle 45 and having the pulley 43 mounted thereon. 40 is the casing enclosing the two wheels or discs. 49 is a cap embracing the outer end of spindle 45 and serving to displace same axially.

Obviously, instead of imparting axial movement to the spindle 45 and thereby turning the nut 46, we might also move the nut axially and turn the spindle.

We wish it to be understood that we do not desire to be limited to the exact details of construction shown and described for obvious modifications will occur to a person skilled in the art.

We claim:—

1. Means for angularly adjusting, in oscillating mechanism for the oscillating wires or sieves of paper making or other machinery, one gyrating mass relative to the other, comprising in combination a hollow shaft, a gyrating mass fixed to and another gyrating mass loose on said shaft, a spindle formed with high pitch threading ex-

tending in said shaft, a nut on and meshing with said spindle, one of said meshing parts being coupled with said loose mass for rotation in common, and means for axially displacing the other 5 meshing part.

2. Means for angularly adjusting, in oscillating mechanism for the oscillating wires or sieves of paper making or other machinery, one gyrating mass relative to the other, comprising in com- 10 bination a hollow shaft, a gyrating mass fixed to and another gyrating mass loose on said shaft, a spindle having the cross-section of a polygon with curved helically extending sides forming a high pitch threading extending in said shaft, a 15 nut on and meshing with said spindle, one of said meshing parts being coupled with said loose mass

for rotation in common, and means for axially displacing the other meshing part.

3. Means for angularly adjusting, in oscillating mechanism for the oscillating wires or sieves of paper making or other machinery, one gyrating mass relative to the other, comprising in combination a hollow shaft, a gyrating mass fixed to and another gyrating mass loose on said shaft, a spindle formed with high pitch threading extending in said shaft, a nut on and meshing with 10 said spindle, said nut being coupled with said loose mass for rotation in common and means for axially displacing said spindle.

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