Mar. 13, 1923. 1,448,301

W. R. HOTCHKISS

OSCILLATING CYLINDER

Filed Jan. 14, 1922

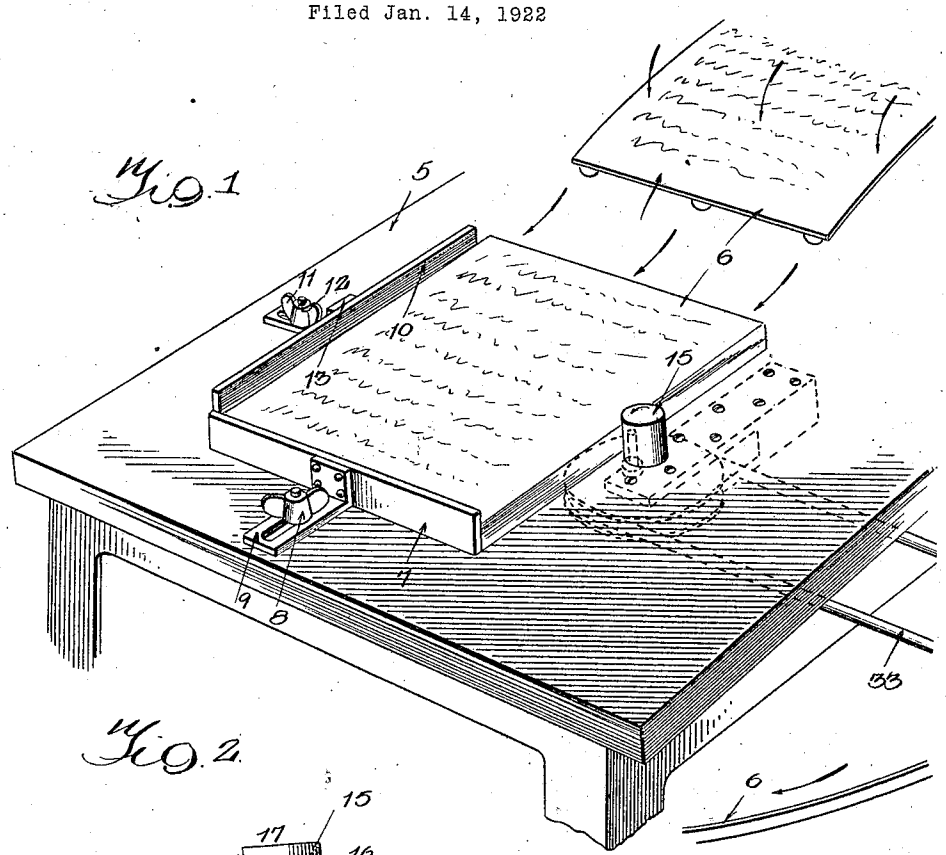


Fig. 1

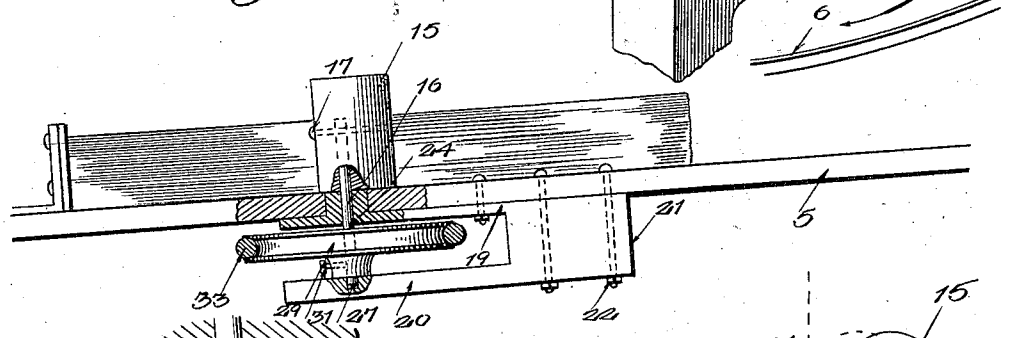


Fig. 2

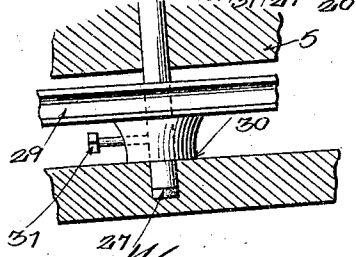


Fig. 3

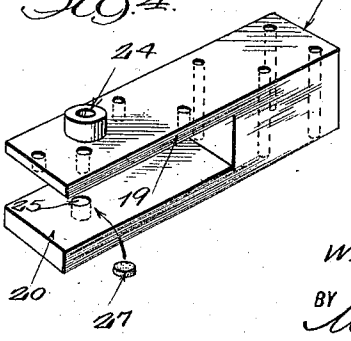


Fig. 4

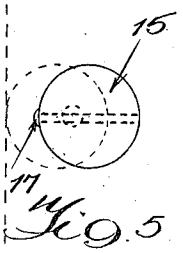


Fig. 5

WITNESSES

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UNITED STATES PATENT OFFICE.

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OSCILLATING CYLINDER.

Application filed January 14, 1922. Serial No. 529,211.

To all whom it may concern:

Be it known that I, WILLIAM R. HOTCHKISS, a citizen of the United States, and resident of St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Oscillating Cylinders, of which the following is a specification.

This invention relates to paper straightening devices especially adapted for straightening sheets of paper upon being discharged from perforating machines, ruling machines, scoring machines, bronzing machines, printing presses and the like.

An important object of this invention is to provide a paper straightening or jogging device having novel means for straightening the paper when being arranged in a pile so that the pile thus formed may be conveniently handled.

A further object of the invention is to provide a paper jogging means which is simple to operate, of highly simplified construction and cheap to manufacture.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawing forming a part of this application and in which like numerals are employed to designate like parts throughout the same,

Figure 1 is a perspective illustrating the improved jogging means in use.

Figure 2 is a vertical sectional view through a delivery table illustrating the improved jogging means.

Figure 3 is a detail sectional view through the improved jogging mechanism.

Figure 4 is a perspective of a supporting member embodied in the invention.

Figure 5 is a plan view of the jogging member or body, the view illustrating the several positions assumed by the same.

In the drawing wherein for the purpose of illustration is shown the preferred embodiment of the invention the numeral 5 designates a delivery table arranged at the discharge end of a paper perforating, ruling, scoring, bronzing or other machine, or at the discharge end of a printing press. The paper receiving table 5 is inclined downwardly from the discharge end of the machine, so that as the sheets 6 are discharged, they will move downwardly over the pile and contact with a transverse stop element 7 secured to the table by means of a fastening device 8 associated with a bracket 9.

As illustrated in Figure 1 the delivery table is also provided with a longitudinally extending guide 10 adjustably secured to the table 5 by means of a thumb nut 11 threaded on a screw 12 passed through the bracket 13. The bracket is permanently secured to the longitudinally extending guide 10 and is provided with a slot for the reception of the screw 12 so that by loosening the thumb nut 11 the guides may be conveniently adjusted on the table to conform to different widths of paper.

The invention forming the subject matter of this application resides in providing means whereby the individual sheets may be properly positioned on the pile upon being discharged from above. In carrying out the invention I provide a jogging body 15 of cylindrical formation and mount the said jogging body upon the table so that when the same is operated, the individual sheet will be moved laterally into engagement with the longitudinally extending guide. With reference to Figure 2 it will be seen that an operating shaft 16 is extended upwardly through the delivery table 5 and is extended into a socket extending longitudinally in the body 15 and arranged at a point spaced from the longitudinal center of the same. A suitable pin 17 is extended through the body 15 and the shaft 16 and forms a means to connect the body 15 to the shaft 16. By thus mounting the body 15 on the shaft 16 the body moves laterally when rotated so as to engage the extended portion of the sheet and thereby move the same laterally to assume its proper position on the pile.

The operating shaft 16 is extended through the upper and lower sides 19 and 20 respectively of a U-shaped supporting member generally designated by the numeral 21. The U-shaped supporting member 21 which may be formed of any suitable material is secured to the under side of the table by means of fastening devices 22 and the upper arm 19 is provided with an upwardly extending bearing 24 through which the shaft 16 extends. The lower arm 20 which is arranged in spaced parallel relation to the upper arm 19 is provided with a socket 25 for the reception of the lower portion of the shaft 16. A suitable wear disk 27 is ar-

ranged in the lower portion of the socket and reduces the wear on the parts to a minimum. When the wear plate 27 becomes worn, a new one may be readily inserted into the socket.

A suitable pulley 29 is mounted on the shaft and is provided with a hub 30 securely connected to the shaft by means of a set screw 31. As illustrated in Figure 1 a belt 33 or other operating means is trained about the pulley 29 and forms a means for operating the shaft and the jogging body.

In operation the belt 33 is connected to a suitable part of the machine and operates the pulley 29 so as to force the cylinder to operate. As indicated by the arrow in Figure 1 the side of the cylinder 15 adjacent the paper moves in the same direction of travel as the paper so as to urge the paper in the direction of the transverse stop element or wall 7. In carrying out the invention the cylinder is of aluminum or other light material so as to reduce vibration to a minimum.

A jogger constructed in accordance with this invention may be conveniently applied to any delivery table and in use forms a reliable means for properly positioning the individual sheets upon being discharged from the machine. Owing to the simplicity of the invention it is not easily broken or rendered inoperative and requires but a small amount of attention on the part of the operator. The improved jogging mechanism correctly piles the sheets so that the pile may be conveniently removed at the proper time.

Having thus described the invention what I claim is:—

1. A paper jogging machine comprising an eccentrically mounted body of elongated formation, and means to revolve the body constantly in one direction whereby the body moves laterally and properly positions the sheets forming a pile.

2. The combination with a delivery table having guiding means, of an eccentrically mounted body arranged on said table and adapted for engaging the individual sheets of a pile and moving the same laterally whereby to straighten the sheets, and means to operate said body, said body having a smooth surface.

3. The combination with an inclined delivery table, of longitudinal and transverse guides mounted thereon, an eccentrically mounted body arranged on said table opposite said longitudinal guide and adapted for moving the individual sheets into engagement with said longitudinal and said transverse guide, and means to operate said eccentrically mounted body whereby to move the same laterally when rotated, said body being of cylindrical formation and having a smooth surface.

4. A jogging mechanism for a delivery table comprising a shaft, a cylindrical body eccentrically connected to said shaft whereby the body moves laterally when the shaft rotates, and means to rotate said shaft, the contact surface of said cylindrical body being unbroken.

5. A jogging mechanism for a delivery table comprising a shaft, a cylindrical body eccentrically connected to said shaft whereby the body moves laterally when the shaft rotates, means to rotate said shaft, and a U-shaped support having spaced arms rotatably connected to said shaft.

6. A jogging mechanism for a delivery table comprising a U-shaped support having means whereby the same may be secured to a delivery table and being provided with upper and lower spaced parallel arms, a shaft rotatably connected to said arms, one of said arms being provided with a bearing receiving said shaft, a jogging cylinder of elongated formation having an eccentric socket receiving said shaft whereby the jogging cylinder is eccentrically mounted, means to secure said jogging cylinder to said shaft, and an operating member connected to said shaft.

7. A jogging mechanism for a delivery table comprising a support having means whereby the same may be secured to a delivery table and being provided with upper and lower spaced parallel arms, a shaft rotatably connected to said arms, one of said arms being provided with a bearing receiving said shaft, a jogging cylinder of elongated formation having an eccentric socket receiving said shaft whereby the jogging cylinder is eccentrically mounted, means to secure said jogging cylinder to said shaft, an operating member connected to said shaft between the spaced arms of said support, and a driving element connected to said member.

8. The combination with a delivery table having longitudinal and transverse guides, of a support attached to the under side of said table and inclusive of upper and lower spaced parallel arms, the upper arm being provided with a bearing member extended through said table and the lower arm being provided with a socket aligned with said bearing member, a shaft extended into said socket and passed through said bearing member, a jogging cylinder arranged opposite said longitudinal guide and having an eccentric socket receiving the upper portion of said shaft, a pin extending through said driving cylinder and through said shaft, a pulley mounted on said shaft between said upper and lower arms, and a driving means trained about said pulley, the lower end of said cylinder being in contact with said table, the side of said jogging cylinder adjacent said paper being rotatable

in the direction of travel of the paper whereby the contact of the cylinder with the paper moves the paper into engagement with the transverse and longitudinal guides.

9. The combination of a delivery table having guiding means, of a jogging cylinder associated with the guiding means and adapted to position the individual sheets forming a pile, and an operating shaft eccentrically connected to said cylinder for rotating the same constantly in one direction whereby to move the cylinder laterally into engagement with the sheet as it is supplied to the pile.

WILLIAM ROY HOTCHKISS.