May 24, 1966 W. R. PEUGNET 3,252,703

PAPER JOGGING MACHINE

Filed July 23, 1964

Fig. 1

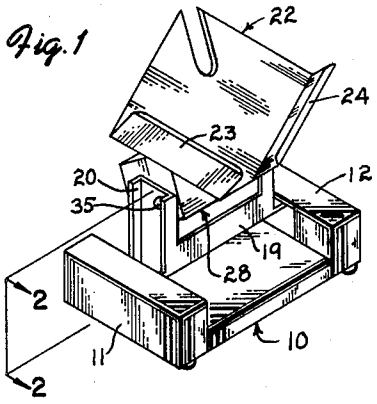


Fig. 2

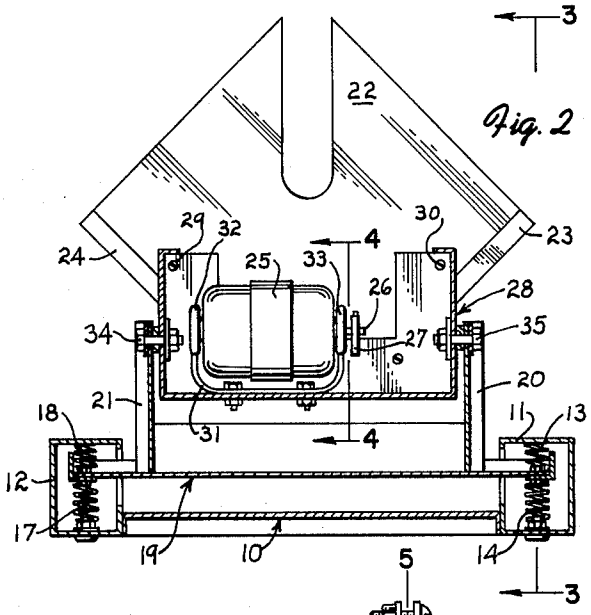


Fig. 3

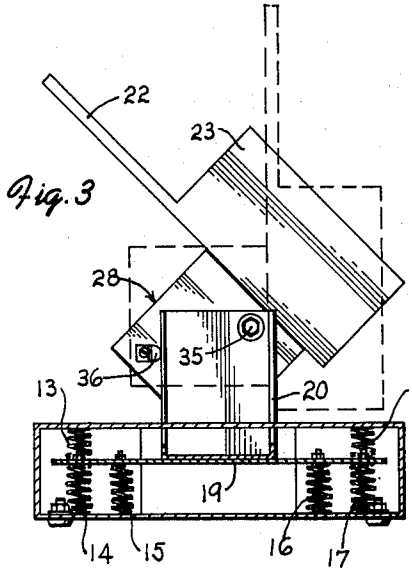


Fig. 4

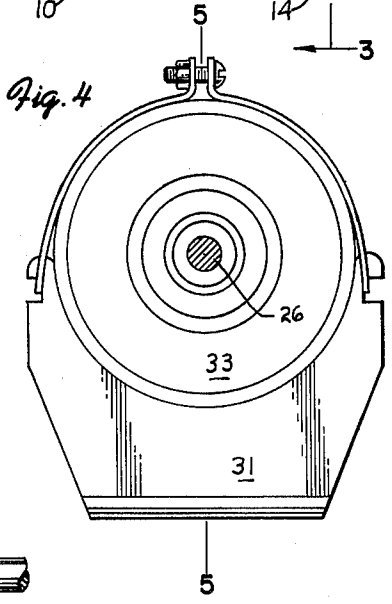
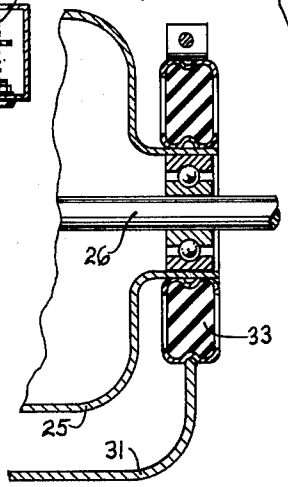


Fig. 5



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PAPER JOGGING MACHINE

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This invention relates generally to paper jogging machines and more particularly to a jogging machine which includes a paper holding tray which is resiliently suspended for vibratory motion in all directions, and power means for transmitting vibratory or jogging motion to the tray.

It is a prime object of the invention to provide a jogger in which the tray is pivotally mounted on a horizontal axis parallel to the plane of the tray so that the tray may pivot freely between a vertical plane and an inclined plane.

Another object is to provide a jogger in which the tilt axis of the tray is so located that if the tray is released to movement gravity will cause it to move to an inclined position.

An additional object is to provide a jogger in which jogging motion is imparted to the tray by a rotary jogger unit having a driven shaft on which is fixed an eccentric weight, the axis of the shaft being located parallel to the plane of the tray and substantially parallel to a diagonal of the tray, so that the shaft axis is not parallel to any edge of the paper sheets placed in the tray for alignment of their edges.

The invention will be more clearly understood when the following description is read in connection with the accompanying drawings, in which:

FIG. 1 is a ¾ front perspective view, on a reduced scale, of a jogger embodying my invention, the paper holding tray being shown in its normal, inclined paper loading position;

FIG. 2 is an enlarged transverse sectional view taken in the plane and in the direction indicated by the arrows and lines 2—2 of FIG. 1, the tray and its attached jogger unit being shown in a vertical position;

FIG. 3 is a left end view of the jogger, with parts in section, and is taken from the plane and in the direction indicated by the lines and arrows 3—3 of FIG. 2;

FIG. 4 is an enlarged end view of the jogger unit and the motor mounting for resiliently supporting it, and is taken from the plane and in the direction indicated by the lines and arrows 4—4 of FIG. 2; and

FIG. 5 is a fragmentary sectional view taken along the line 5—5 of FIG. 4, and shows details of the resilient mounting for the jogger unit motor.

Referring to the drawings, the jogger illustrated generally includes:

(1) An elongated generally rectangular and planar base **10** (FIG. 1) having parallel housings **11** and **12** along its opposite ends which serve as means for holding a plurality of springs **13** to **18** inclusive (FIGS. 2 and 3) under compression.

(2) An elongated yoke **19**, the opposite ends of which project into the respective housings **11** and **12**, and are disposed between the lower ends of the compressed upper springs **13** and **18** and the respective adjacent upper ends of the compressed lower springs **14–15** and **16–17**, as in FIG. 3, to resiliently suspend the entire yoke for limited vibratory motion in all directions. The yoke **19** rigidly carries a pair of spaced upright standards **20** and **21** (FIG. 2).

(3) A paper holding tray **22** having side rails **23** and **24** along two adjacent edges (FIGS. 1 and 2).

(4) A power driven jogger unit which in this instance includes an electric motor **25** (FIG. 2) having a driven shaft **26**, to which is secured an eccentric weight **27**.

(5) A means for resiliently supporting the jogger unit on the back or outer surface of the tray; and

(6) A means for horizontally pivoting the tray and the jogger unit as an assembly between the two upright standards **20** and **21** of yoke **19**.

The means for resiliently connecting the tray and jogger together as a unitary movable assembly consists of a rigid sheet metal or plastic jogger unit housing, designated as a whole by the numeral **28** (FIGS. 1, 2 and 3). Housing **28** is rigidly secured to the back or outer surface of tray **22** by means of a plurality of screws **29** and **30**, with a diagonal of the tray perpendicular to the bottom of the housing, and with the side rails **23** and **24** along the two adjacent lower edges of the tray, as shown in FIGS. 1 and 2.

The jogger motor **25** is resiliently suspended inside housing **28** by means of a generally U-shaped bracket **31** (FIGS. 2, 4 and 5) which is bolted to the bottom of the housing. The opposite ends of bracket **31** peripherally support a pair of rubber or other resilient annular motor mounts **32** and **33**, the central bores of which are press fitted onto the respective opposite ends of the motor, all as clearly shown in FIGS. 2, 4 and 5.

With the motor mounted as described, on the back of tray **22**, the resilient mountings afford limited relative movement between them as eccentric **27** is rotated.

The means for pivotally supporting the tray and jogger unit, as an assembly, on the yoke consists of a pair of aligned bolts **34** and **35**, passed through holes in the respective upper ends of standards **20** and **21**, and through holes in the respective adjacent ends of housing **28**. The relative positions of the pivot bolt holes in the standards and in the housing are better shown in FIG. 3. The bolt axes are positioned well forward of the center of gravity of the combined jogger unit and tray assembly. Thus when the assembly is released to free movement about its horizontal axis, gravity alone causes the tray to be tilted backward to a very desirable inclined, paper loading position, as shown in FIGS. 1 and 3. Rubber stops **36**, only one of which is visible in the drawing, are carried by each end of housing **28**, to contact adjacent edges of standards **20** and **21**, to thus limit the degree of incline of tray **22**. This is adjustable, of course.

Operation

After a normal load of loose paper has been placed in tray **22**, the operator manually moves the tray and jogger unit assembly to a substantially vertical position, as shown by the broken lines in FIG. 3, and closes the motor circuit. Eccentric weight **27**, in rotating, provides a vigorous jogging or shaking motion. This motion is resiliently transmitted through rubber motor mountings **32** and **33** to bracket **31**, thence through housing **28** to tray **22**. The compressed coil springs **13** to **18** inclusive permit free but limited movement of tray supporting yoke **19**, while at the same time substantially isolating the base **10** from such jogging or vibratory movement.

When the jogging operation has been completed the paper is removed from the tray, which automatically gravitates to its FIG. 1 inclined loading position, ready for the next load.

Having described the invention with sufficient clarity to enable those familiar with this art to construct and use it, I claim:

1. A paper jogger comprising:

a generally planar horizontally disposed base;

a generally planar yoke overlying said base in vertically spaced relation, with their respective opposite ends adjacent each other;

means resiliently suspending the yoke in such relation

for limited movement in any direction with relation to the base;

a paper holding tray;

a rotary jogger unit including a driven shaft and an eccentric weight fixed thereon;

means mounting the jogger unit on the outer or back surface of said tray with the axis of the jogger unit shaft parallel to the plane of the tray, and substantially parallel to a diagonal of the tray;

and means freely pivoting the jogger unit and tray assembly on said yoke on a horizontal pivot axis which is generally parallel to the shaft axis of the jogger unit and to a diagonal of the tray, and which is located forward of the center of gravity of the jogger unit and tray combined, so that gravity will normally pivot the tray from a vertical to an inclined position.

2. The jogger described in claim **1** in which the means resiliently suspending the tray above the base are a plurality of coil springs arranged with their axes perpendicular to the plane of the yoke, some bearing against the lower surface of said yoke, and some bearing downward against the upper surface thereof.

3. The jogger described in claim **1** in which the means mounting the jogger unit on the back surface of the tray includes resilient rubber or the like interposed between the two to at least partially absorb vibrations transmitted from the jogger unit to the tray.

References Cited by the Examiner

UNITED STATES PATENTS

1,411,964	4/1922	Gammeter	271—89
2,629,592	2/1953	Line	271—89
2,650,109	8/1953	Johnson	271—89 X
2,883,191	4/1959	Peugnet	271—89
3,222,060	12/1965	Svantesson	271—89

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