H. C. GAMMETER.

JOGGING MACHINE.

APPLICATION FILED NOV. 13, 1920.

1,411,964. **Patented Apr. 4, 1922.**

2 SHEETS—SHEET 1.

FIG. 1

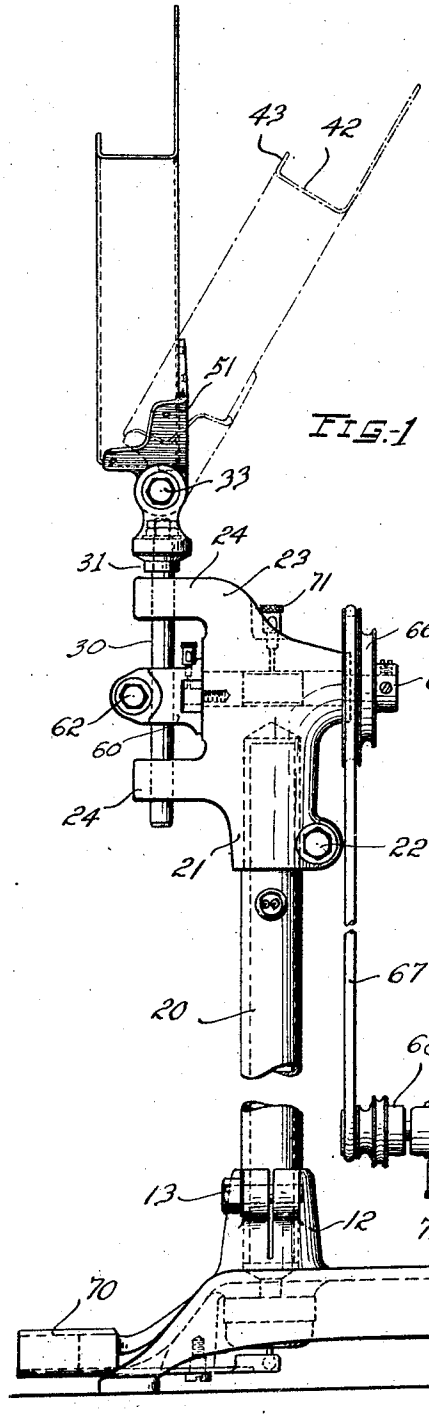
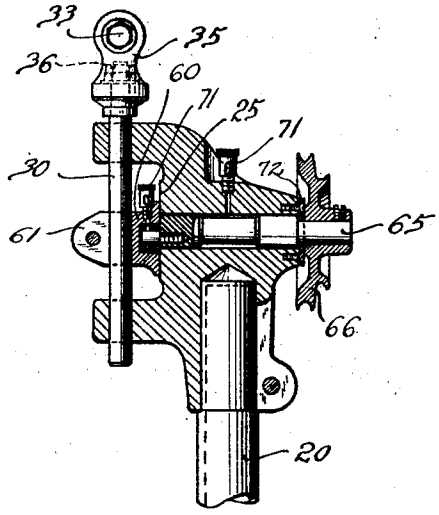


FIG. 3



Inventor

Harry C. Gammeter,

By Baker & Macklin,

Attorneys.

H. C. GAMMETER.

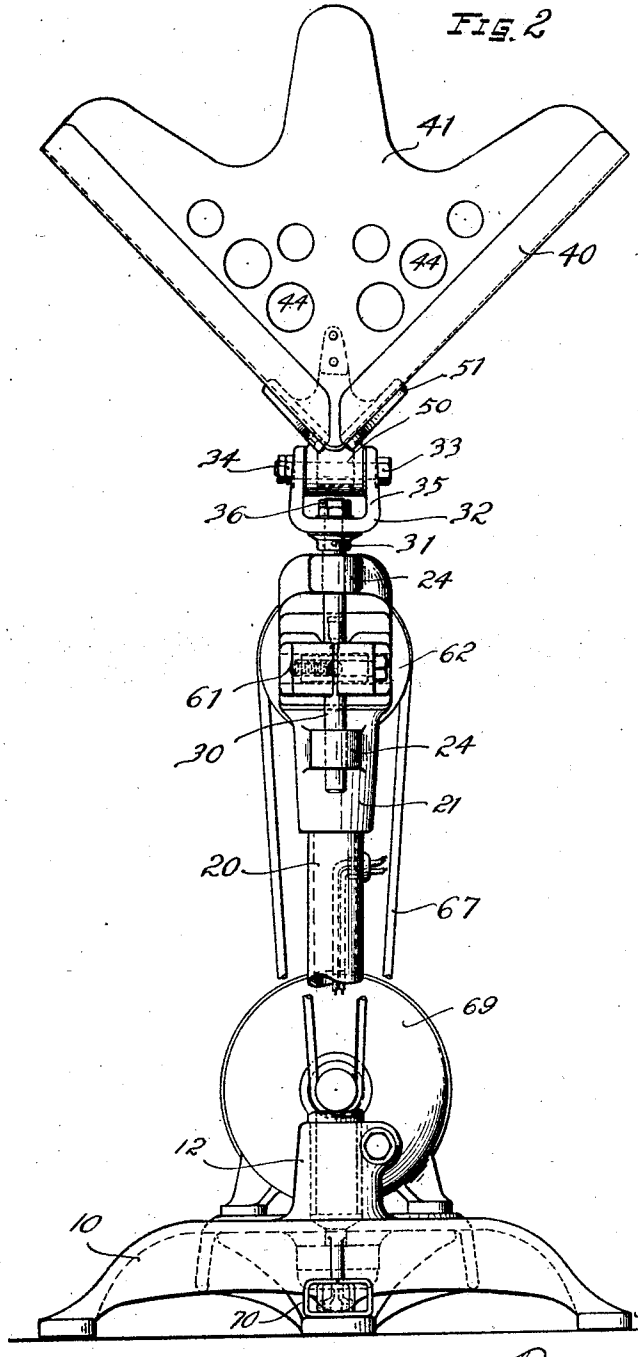
JOGGING MACHINE.

APPLICATION FILED NOV. 13, 1920.

1,411,964. Patented Apr. 4, 1922.

2 SHEETS—SHEET 2.

FIG. 2



Inventor

Harry C. Gammeter,

By Paul Macklin,

Attorneys.

UNITED STATES PATENT OFFICE.

HARRY C. GAMMETER, OF CLEVELAND HEIGHTS, OHIO, ASSIGNOR TO THE AMERICAN MULTIGRAPH COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

JOGGING MACHINE.

1,411,964. Specification of Letters Patent. Patented Apr. 4, 1922.

Application filed November 13, 1920. Serial No. 423,772.

To all whom it may concern:

Be it known that I, HARRY C. GAMMETER, a citizen of the United States, residing at Cleveland Heights, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Jogging Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

My invention relates to a machine for jogging paper sheets or like material, so that the sheets will be separated and aligned along two edges by the reciprocating motion of the carrier. One object of the invention is to provide a jogging device which shall be silent in operation.

Another object is the provision of such a device having paper holding means readily adjustable to various positions so as to most efficiently jog paper of different thicknesses and material.

Another object is the provision of a device capable of ready adjustment, so as to be readily accessible from various positions without moving the frame.

Another object is to mount the sheet carrier in position so that the jogging motion shall occur somewhat transversely of the face of the sheets, so that there is a tendency for the sheets to separate as the upward motion changes to a downward motion, whereby the alignment of the sheets is materially assisted.

Further advantages will be evident as the description progresses.

Referring to the drawings which illustrate a preferred embodiment of my invention, Fig. 1 is a side view of a jogger embodying my invention; Fig. 2 is a rear view of the same; Fig. 3 is a fragmentary longitudinal section through the upper portion of the frame.

Referring to the parts by numerals, the frame comprises the stand or lower frame member 10, to which the tube or standard 20 may be adjustably clamped by means of the split boss 12 and clamping bolt 13. The upper end of the standard 20 is adapted to similarly project into and have clamped thereon by means of the bolt 22, the split boss 21 of the upper frame member 23, which allows adjustment of frame 23 towards and from stand 10, and also pivotally about standard 20 as an axis.

Slidably mounted in the spaced arms 24 of this frame member 23 is the rod 30, carrying at its upper end the collar 31 pinned or otherwise fastened thereto. A U-shaped member 32, having the upright ears 35, is swiveled on the upper end of this rod, and rests upon the collar 31. The nuts 36 upon the upper end of the rod serve to retain the member 32 thereon. The paper carrier 40 is mounted for pivotal motion about a horizontally extending bolt 33, by means of the boss 50, which extends between the ears 35, the nut 34 serving to clamp the ears and boss together and thereby hold the carrier in adjusted position. The carrier 40 is shown as comprising a V-shaped back wall 41, having the walls 42 at right angles thereto, and the flange 43, which may be conveniently formed from sheet metal. To this member the bracket 51 on which the boss 50 is formed may be attached in any suitable manner as by riveting.

In operation the carrier is adapted to be rapidly oscillated or jogged in vertical direction. The sheets of paper to be aligned placed with their faces parallel to the back wall 41, so that the walls 42 serve to position their edges, the openings 44 in the rear plate 41 permitting the access of air to the sheets so as to allow them to move readily over one another. The carrier 40 should be adjusted about the pivot 33 to the correct position for the most expeditious alignment of the sheets being used. This position may be readily determined by moving the carrier toward vertical position until the sheets begin to bow or bend. The carrier should then be moved or inclined slightly more, so that the bowing action shall not take place. This adjustment is particularly useful where very thin sheets such as thin onion sheets are to be aligned. As a result of the oscillation of the carrier vertically and therefore somewhat transversely of the back plate 41, the sheets tend to separate slightly as the carrier after reaching its upper position begins to move downwardly. This tendency assists in allowing the sheets to slide on one another into proper edge alignment.

In order to jog the carrier, the block 60 is clamped to rod 30 by suitable means such as the split ears 61 and bolt 62. The face 63 of block 60 should be accurately machined in order to fit nicely against the machined face 25 of the frame, so as to provide smooth

and noiseless relative motion of these parts. Projecting into an opening of block 60 is the crank pin 64, carried by the crank shaft 65, journaled in the frame. A collar 72, bearing between a shoulder on the shaft 65 and the pulley 66, serves to hold the shaft in position so as to allow free movement of the block 60 and prevent any binding action. The shaft may be driven in any suitable manner. The device illustrated for this purpose comprises a pulley wheel 66 mounted on the shaft and driven by means of the belt 67, which derives its power from the pulley 68 of the motor 69, this motor being shown as mounted on the frame 10.

A convenient arrangement of the wires for delivering power to the motor is illustrated, and comprises the passing of these wires through the hollow standard 20. A foot switch 70 may be employed, providing convenient means for switching the power off and on to the motor.

It will be noticed that the pulley 68 has three belt receiving portions of different diameters, and that the upper pulley 66 is shown as having two different portions. By this means six different speeds of operation of the machine may be attained, with the same speed of the motor. Since exact alignment of the belt carrying portion of the two pulley wheels is not necessary, it will be unnecessary to shift the pulley wheels. Furthermore, the frame member 23 may be adjusted to various angular positions by loosening either the bolt 13 or 22, and similarly the upper frame member may be adjusted towards and away from the lower frame 10, after loosening either of these bolts. Suitable lubricating devices 71 have been shown for furnishing lubricant to the various bearings.

Having thus described my invention, I claim:

1. In a sheet jogging machine, a sheet carrier having a rearwardly inclined back arranged to receive the sheets parallel thereto and walls at right angles thereto, said walls being adapted to position the edges of the sheets, and means for vibrating said carrier at an angle to the faces of the sheets being positioned.

2. In a sheet jogging machine, a sheet carrier having a rearwardly inclined back for receiving sheets with their faces parallel thereto, an edge aligning member on said carrier, and means for vibrating said carrier vertically whereby the faces of said sheets tend to be separated periodically.

3. In a sheet jogging machine, a sheet carrier having an inclined back for receiving sheets with their faces parallel thereto, an edge aligning member on said carrier, and means for vibrating said carrier at an angle to said back, and means whereby the inclination of the carrier may be varied.

4. In a sheet jogging machine, the combination of a frame, a sheet carrier slidably mounted and means for moving said carrier, at an angle to the faces of the sheets held therein.

5. In a sheet jogging machine, a frame, a rod slidably carried thereby, a sheet carrier swiveled on said rod, and means for reciprocating said rod.

6. In a sheet jogging machine, a frame, a rod slidably carried thereby, a sheet carrier, means for universally connecting said rod and carrier, and means for recpirocating said rod.

7. In a sheet jogging machine, a frame, a rod slidably carried thereby, a member swiveled on said rod and carrying a pin extending transversely of said rod, and a sheet carrier pivoted on said pin, means for clamping said carrier against rotation thereon, and means for reciprocating said rod.

8. In a sheet jogging machine, a frame having spaced arms, and a machined surface therebetween, a sheet carrier having a rod slidably carried by said frame, the head being provided with a machined surface sliding on said first named surface, and means carried by the frame for reciprocating said head.

9. In a sheet jogging machine, a frame, a member slidably and pivotally adjustable on said frame, a sheet carrier slidably mounted thereon, and means for reciprocating said carrier.

10. In a sheet jogging machine, a frame, a standard adjustably clamped thereon, a member carried by the upper end of said standard, a sheet carrier slidably mounted thereon, and means for reciprocating said carrier.

11. In a sheet jogging machine, a frame, a standard carried thereby, a member slidably and pivotally adjustable on said standard, a sheet carrier reciprocably mounted on said member, and means for reciprocating said carrier.

12. In a sheet jogging machine, a sheet carrier having a back inclined to the vertical for receiving sheets with their faces parallel thereto, an edge aligning member, and means for vibrating said carrier vertically.

In testimony whereof, I hereunto affix my signature.

HARRY C. GAMMETER.