March 6, 1934. W. G. SCHREIBER ET AL 1,949,764

JOGGING MACHINE FOR SHEET MATERIAL

Filed Nov. 7, 1930 3 Sheets-Sheet 1

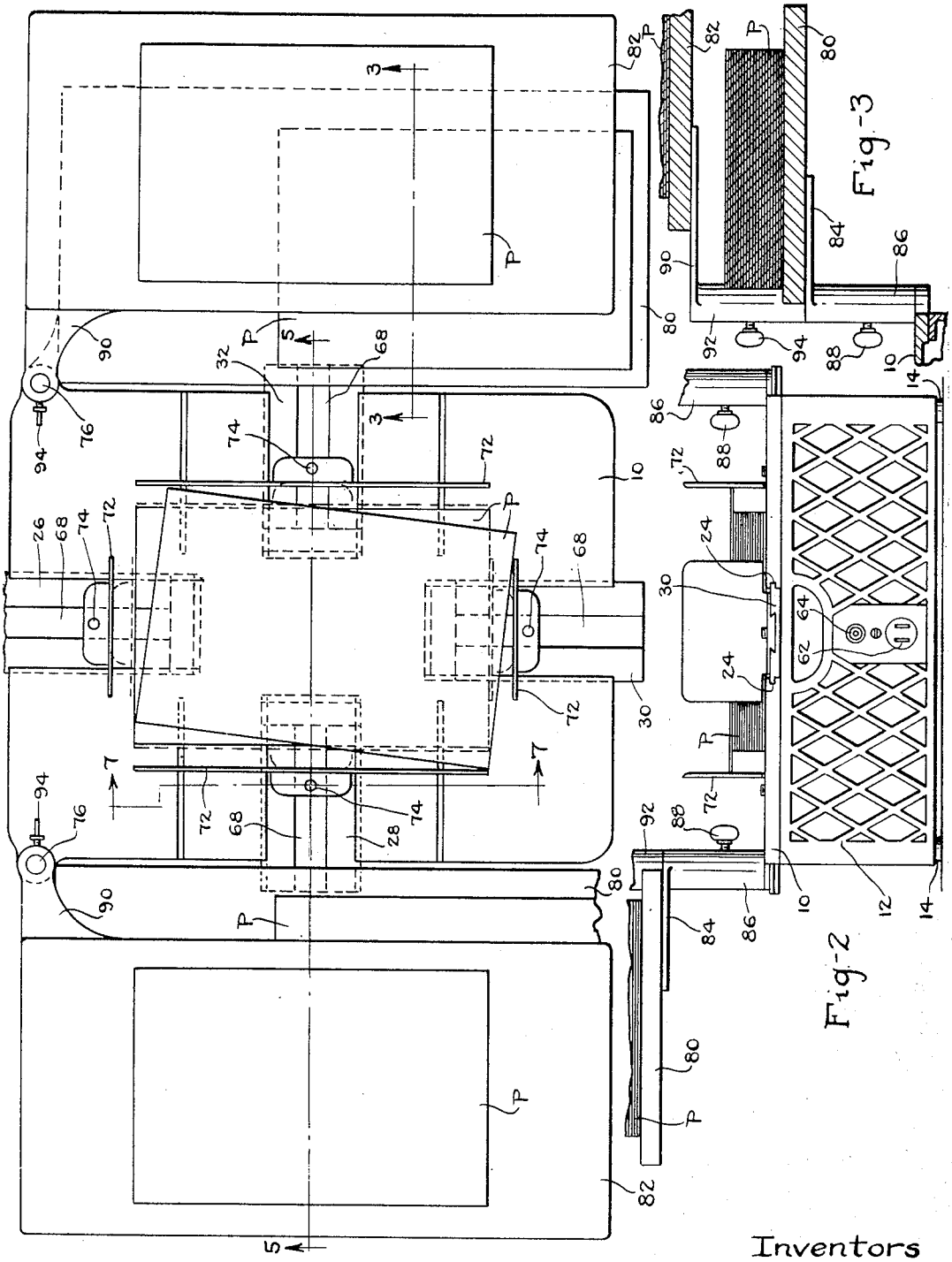


Fig-1

Fig-3

Fig-2

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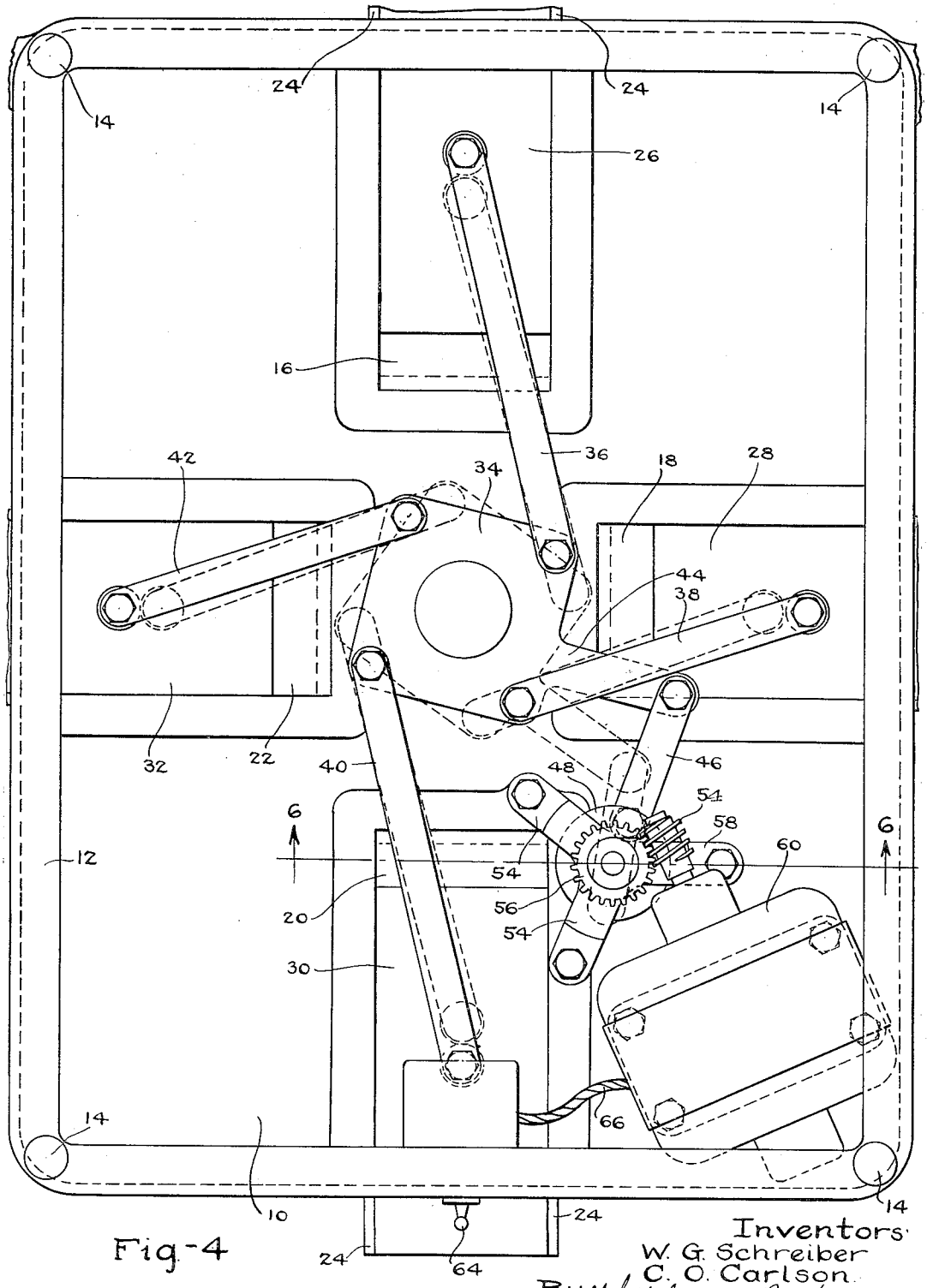


Fig-4

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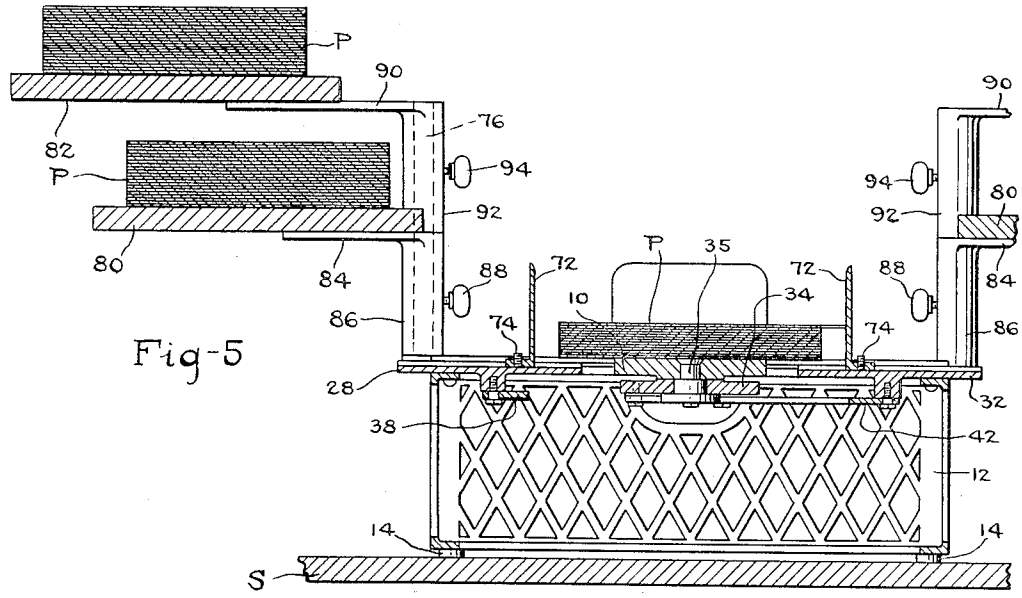


Fig-5

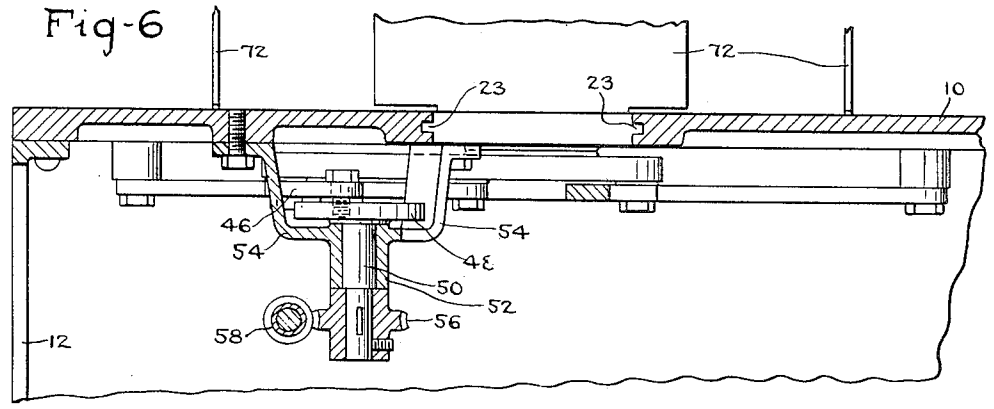


Fig-6

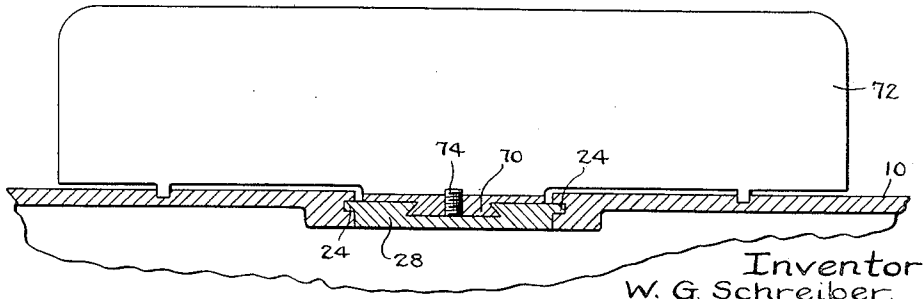


Fig-7

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UNITED STATES PATENT OFFICE

1,949,764

JOGGING MACHINE FOR SHEET MATERIAL

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Application November 7, 1930, Serial No. 493,983

1 Claim. (Cl. 271—89)

Our invention relates to jogging machines for sheet material. An object of the invention is to provide a machine by means of which sheet material such as paper sheets may be accurately piled up or superposed sheet on sheet. In carrying out our invention we provide a table having associated therewith jogging plates which are simultaneously reciprocated in such manner that when they have their inward position, the space between them is just sufficient to hold the sheets which are being piled up and when the jogging plates are in their outward position, the space between them is enlarged to such an extent that it is an easy matter to deposit the sheets in such space, it being understood that the sheets are successively delivered into this space and then brought into exact superposed relation by the inward movement of the jogging plates. A particular object is to provide a machine of this character which is efficient in operation and economical to manufacture.

The full objects and advantages of our invention will appear in connection with the detailed description thereof, and the novel features of our inventive idea will be particularly pointed out in the claim.

In the accompanying drawings which illustrate a practical embodiment of our invention,—Fig. 1 is a top plan view of the machine. Fig. 2 is a front elevational view showing the upper portion broken away. Fig. 3 is a view in vertical section on the line 3—3 of Fig. 1. Fig. 4 is a bottom plan view on an enlarged scale. Fig. 5 is a view in vertical section on the line 5—5 of Fig. 1. Fig. 6 is a view in vertical section on the line 6—6 of Fig. 4 but turned right side up. Fig. 7 is a view in vertical section on the line 7—7 of Fig. 1.

Referring to the construction shown in the drawings, the numeral 10 designates a table which is secured to the top of a base 12 which as shown in Figs. 2 and 3 has lattice work sides, the four corners of this base being provided with feet 14 adapted to rest upon any suitable support S. As will be understood from Figs. 4, 6, and 7, the four sides of the table are provided with slots 16, 18, 20 and 22 respectively, the sides of these slots containing grooves 23 for receiving tongues 24 formed on the edges of slides 26, 28, 30 and 32. As shown in Figs. 4 and 5, a rocker plate 34 is pivotally mounted at the center of the table 10 by means of a pivot 35 so as to be positioned at the underside of the table. In the form shown, the plate 34 is square in outline and the four corners thereof are pivotally connected by links 36, 38, 40 and 42 with the slides respectively. An arm 44 as shown in Fig. 4 projects rigidly from one side of the plate 34, the outer end of this arm being pivotally connected by a crank arm 46 and crank pin to a disk 48. The disk 48 as shown in Fig. 6 is integral with the upper end of a short shaft 50, this shaft being mounted in a bearing 52 carried by a bracket support 54 extending down from the table 10. A worm wheel 56 secured to the lower end of the shaft 50 meshes with a worm 58 secured to the shaft of an electric motor 60 mounted underneath the table as shown in Fig. 4. The front of the base 12 is provided with a socket 62 and a switch 64 while a cable 66 leads from the switch to the motor so that the latter may be operated from any convenient source of electrical energy.

As will be understood from Figs. 1, 4 and 7, the upper sides or faces of the slides are formed with dovetail grooves 68 for receiving dovetail projections 70 formed on the lower ends of vertically extending plates 72 which constitute what will be referred to as jogging plates. In the embodiment shown, the front and rear plates are shorter than the two side plates in order that rectangular sheets of paper may be stacked lengthwise of the machine. In order that plates 72 may be set for different sizes of sheets, the projections 70 are held adjustably in the grooves 68 by set screws 74. Cylindrical standards 76 extend up from the two rear corners of the table as will be understood from Figs. 1 and 5. These standards serve to support shelves for carrying the sheets which are to be placed between the jogging plates 72. In the form shown, each standard carries a lower shelf 80 and an upper shelf 82. Lower shelf 80 is attached by a short arm 84 to a sleeve 86 adapted to be placed over the standard 76 and secured in adjusted position by a set screw 88. The upper shelf 82 is attached by a comparatively long arm 90 to a sleeve 92 adapted to be placed over the standard 76 above the sleeve 86 and secured in adjusted position by a set screw 94. Due to the fact that the arms 90 are longer than the arms 84, the upper shelves 82 are offset outwardly from the lower shelves 80. This offset arrangement enables the operator to readily pick the paper or other sheets P from the lower shelves without being interfered with by the upper shelves as will be understood from Fig. 1.

The operation and advantages of our invention will be readily understood from the foregoing description. The jogging plates are caused to reciprocate by the crank arm and the link connections which have previously been described in

detail. The jogging plates are of course set so that when they have their inward position as shown in Fig. 1, the space between them is just sufficient to hold the sheets which are being assembled. The machine as shown is adapted for making up articles such as order books which contain in alternation sheets of four different colors, it being understood that sheets of one particular color are provided on each of the four shelves. The operator takes one sheet at a time in succession from the shelves and puts it in the space between the jogging plates, this operation being continued until the desired number of sheets have been piled up between the jogging plates. As will be understood from Fig. 1, the operator places one sheet at a time between said plates when they are in outward position. As said plates move inwardly, the sheet which has just been deposited is caused to be superposed exactly upon the underlying sheets. It will be understood that any desired number of shelves may be used and that if desired some other means may be provided for supplying the sheets which are to be jogged. It will also be understood that other material besides differently colored sheets may be accurately superposed by the use of the machine.

We claim:

A jogging machine for sheet material comprising a table having slots extending outwardly from the central portion thereof, slides mounted in said slots, jogging plates extending upwardly from said slides, a rocker plate underneath said table pivotally mounted at the center thereof, links connecting said rocker plate and said slides, an arm rigid with said rocker plate and projecting therefrom, a vertical shaft rotatably mounted underneath said table, a crank disc secured to the upper end of said shaft, a crank arm connecting said disc with said rigid arm, a worm wheel secured to said vertical shaft, a worm meshing with said worm wheel, a horizontal shaft to which said worm is secured, and a motor for driving said horizontal shaft continuously in one direction.

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