Sept. 20, 1971 J. S. DUDLEY 3,606,546

PHOTOCOPIER

Filed May 13, 1969 4 Sheets-Sheet 1

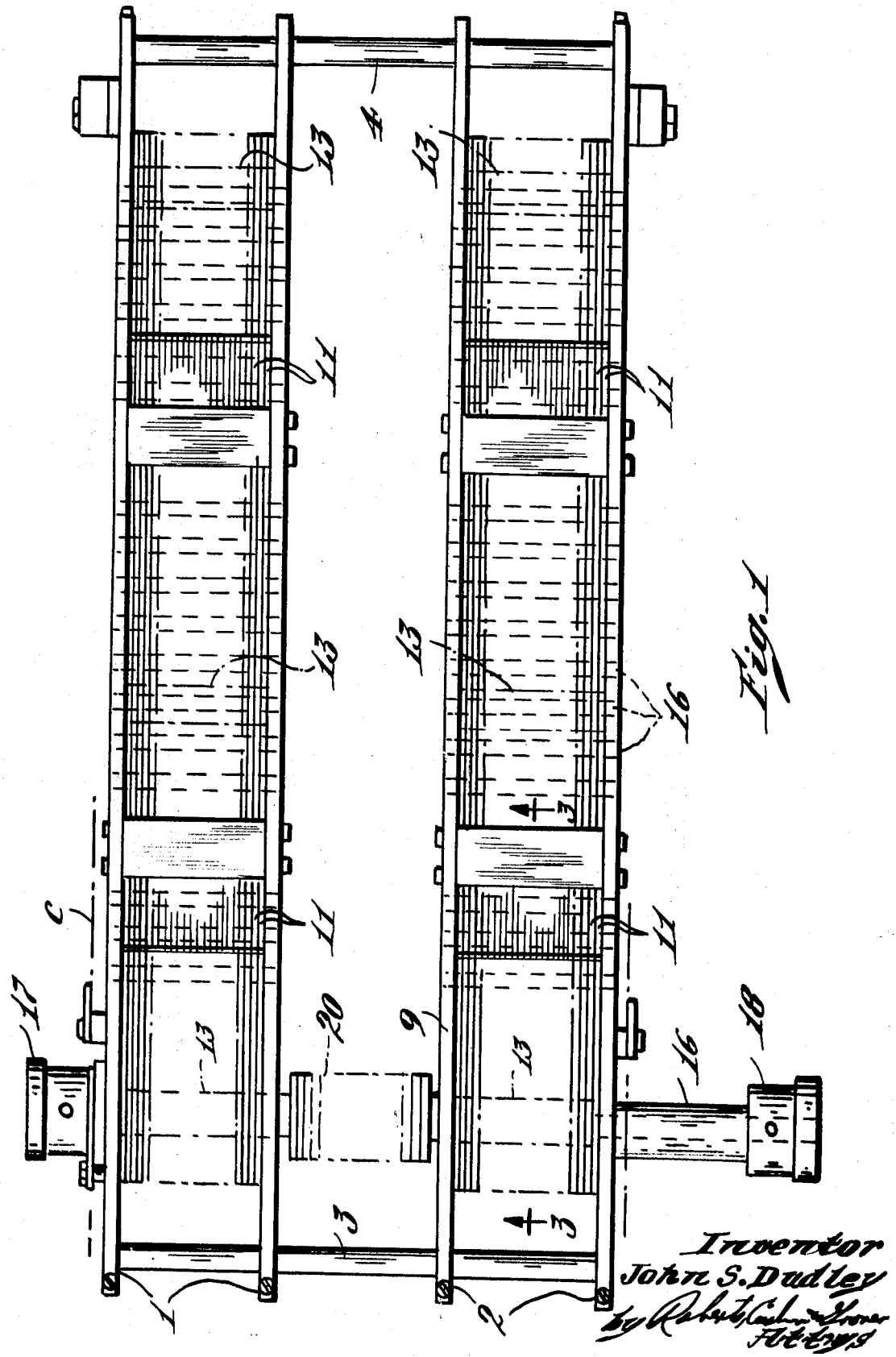


Fig. 1

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PHOTOCOPIER

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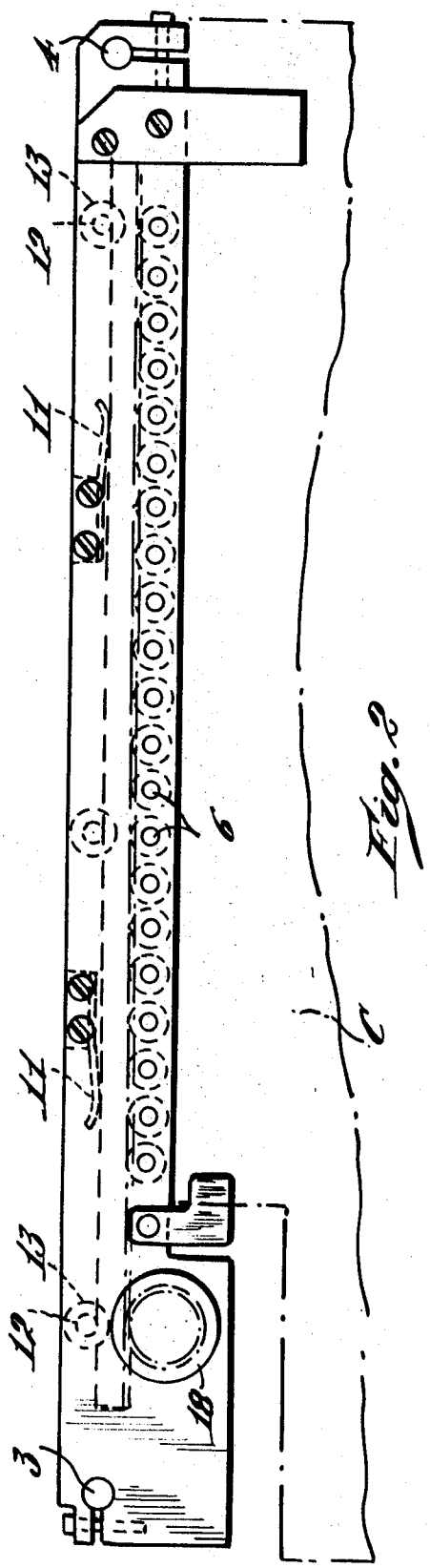


Fig. 2

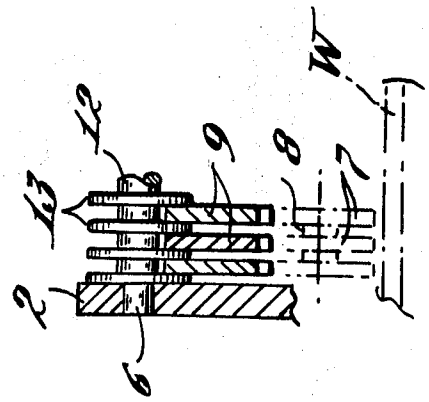


Fig. 4

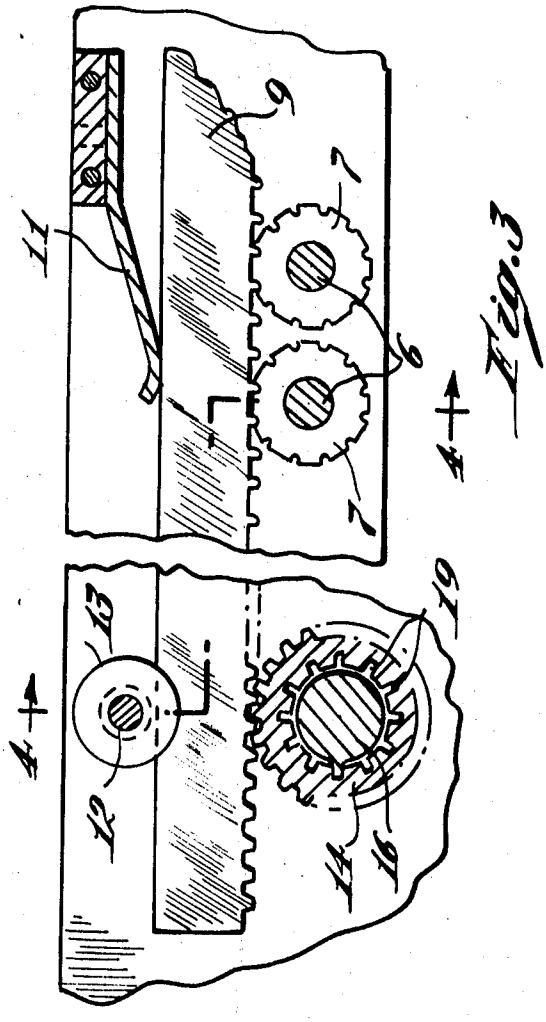


Fig. 3

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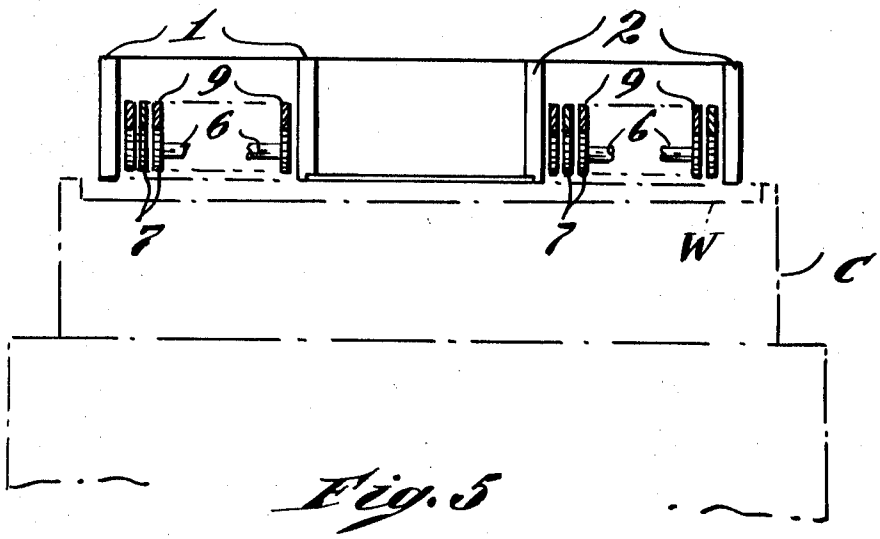


Fig. 5

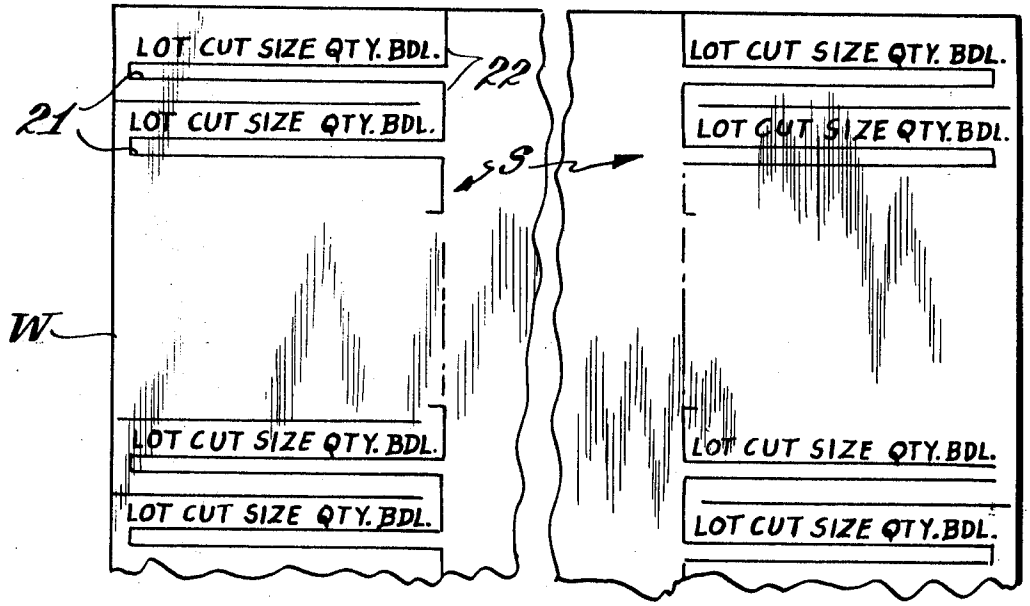


Fig. 6

PHOTOCOPIER

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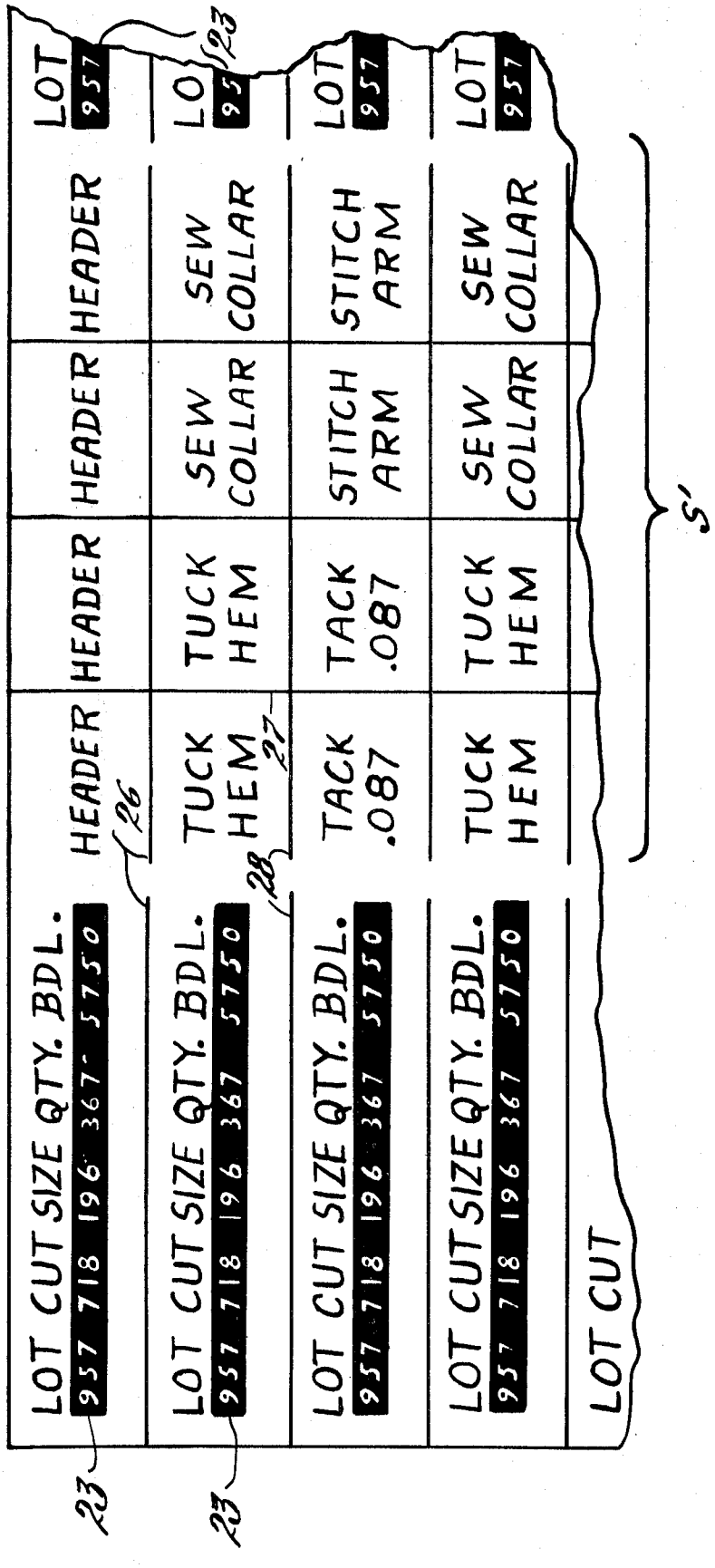


Fig. 7

United States Patent Office 3,606,546 Patented Sept. 20, 1971

3,606,546

PHOTOCOPIER

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Int. Cl. G03b 27/62
U.S. Cl. 355—40 7 Claims

ABSTRACT OF THE DISCLOSURE

A photocopier for simultaneously copying printed matter and indicia side by side to make articles such as piece-rate tags having severable sections corresponding to the operations performed by successive operators, each section indicating the nature of the operation and the characteristics of the article operated on, each operator tearing off the section corresponding to his operations for use in collecting his piece-work payments. The different operations are copied from a printed sheet and the characteristics of the article operated on are copied from wheels carrying indicia on their peripheries.

The object of the invention is to provide a copier with which the article characteristics may be set quickly and easily.

According to this invention the photocopier comprises the usual exposure window, means for holding a copy sheet over a first portion of the window, the sheet having lines of printing extending cross-wise thereof, the lines being distributed lengthwise thereof and, disposed over a second portion of the window at one side of said first portion, wheels carrying peripheral indicia corresponding to each other, the wheels being disposed in a row extending lengthwise of said sheet and being spaced the same as said lines, and means interconnecting the wheels for conjointly setting the wheels to present corresponding indicia to the window. Preferably said means comprises a rack meshing with said indicia. In the preferred embodiment the copier comprises a plurality of said rows of wheels and racks and means for selectively actuating the racks, means for yieldingly pressing the racks against the wheels, and a row of wheels and a rack over a third portion of the window on the other side of said first portion. Preferably the wheels are light absorptive and the indicia are light reflecting.

For the purpose of illustration a typical embodiment is shown in the accompanying drawings in which

FIG. 1 is a plan view;

FIG. 2 is a side view from the bottom of FIG. 1;

FIG. 3 is a section on line 3—3 of FIG. 1;

FIG. 4 is a section on line 4—4 of FIG. 3;

FIG. 5 is a front view;

FIG. 6 is a plan view of a plate which is laid on the exposure window of the copier under the aforesaid indicia wheels; and

FIG. 7 is a plan view of a copy produced according to this invention.

According to this invention the apparatus comprises any suitable copier such as shown at C in FIG. 1, as for example an electrostatic copier such as shown in any of the Pats. 3,272,066, 3,425,777 and 3,427,106. Resting on the exposure window W of the copier is a frame comprising two pairs of bars **1** and **2**, each pair being interconnected at the ends by rods **3** and **4**. Bridging each pair of bars are rods **6** carrying indicia wheels **7** which have numerals **0** to **9** or other indicia on their peripheries (FIGS. 3, 4 and 5). Any desired number of wheels may be mounted on the respective shafts. As shown in FIG. 4 the wheels are spaced apart by washers **8** so that the wheels on the different shafts are disposed in rows extending longitudinally of the bars **1** and **2**. Extending lengthwise of the bars over each row of wheels is a rack **9** having teeth extending into the recess between the indicia on the wheels. The racks are held against the wheels by springs **11** and the racks are held in spaced relationship by shafts **12** having flanges **13** fitting between the racks (FIGS. 2, 3 and 4). Meshing with each rack is a pinion **14** on a shaft **16** slidable lengthwise and actuated by knob **17** or knob **18**. Fast to the shaft are teeth **19** for actuating any one of the pinions **14**. By sliding the shaft lengthwise the teeth **19** may be brought into mesh with any one of the pinions **14**. Thus each row of indicia wheels may be set independently. There are two sets of teeth **19**, one between the bars **1** and one between the bars **2**, so that corresponding rows of wheels on the two sides of the apparatus are set the same way at the same time. Surrounding shaft **16** between the two sides of the apparatus is a group **20** of indicator dials which are set like the wheels **7** to indicate how each row of wheels is set.

Printed on the exposure window W under the wheel **7** are any suitable indicia such as shown in FIG. 6. These indicia are printed in rows extending transversely of the window with clear spaces **21** between the rows. The indicia preferably are printed in black and the areas between the clear spaces preferably are coated with translucent materials so that the parts above these areas will not be exposed. As shown in FIG. 6 corresponding indicia is printed along each side of the window with a space S therebetween for a sheet of indicia laid on the window between the two side groups of indicia.

FIG. 7 shows a typical print made with the aforesaid apparatus. The indicia on the wheels is printed at **23** through the clear spaces **21** of FIG. 6. The sheet laid in the space S of FIG. 6 is printed at S' on the copy. The particular example chosen for illustration is intended to be used as piece-rate tags corresponding to successive operations performed on a garment by different operators. The first operation in the example is a tuck hem operation and after the first operator has performed this operation he tears off the section bounded by the lines **26**, **27** and **28** for use in collecting his pay for the operation, and then delivers the garment and tag sheet to the next operator and so on.

I claim:

1. A photocopier comprising

an exposure window;

means for holding a copy sheet over said exposure window, said copy sheet having lines of printing extending cross-wise and being distributed lengthwise thereof;

a row of wheels extending lengthwise of said sheet, the wheels in said row being spaced in a manner substantially corresponding to the spacing of said distributed lines and intermediate at least a portion thereof, said wheels carrying peripheral indicia; and

means interconnecting the wheels in said row for conjointly setting the peripheral indicia thereof so as to present the corresponding indicia in said row to said exposure window.

2. A photocopier comprising

an exposure window;

means for holding a copy sheet over said exposure window, said copy sheet having lines of printing extending cross-wise and being distributed lengthwise thereof;

a plurality of rows of wheels extending lengthwise of said sheet, said rows being substantially parallel with each other and the wheels in any said row being spaced therein in a manner substantially corresponding to the spacing of said distributed lines and inter-

mediate at least a portion thereof, said wheels in any said row carrying peripheral indicia; and

means interconnecting the wheels in each said row for conjointly setting the peripheral indicia of said wheels so as to present corresponding indicia in each said row to said exposure window.

3. A photocopier in accordance with claim 2 wherein said interconnecting means includes a plurality of racks meshing with said wheels in said plurality of rows; and means for selectively actuating said racks.

4. A photocopier in accordance with claim 3 and further including means for yieldingly pressing said racks against said wheels.

5. A photocopier in accordance with claim 2 wherein said wheels are light absorptive and said indicia are light reflecting.

6. A photocopier in accordance with claim 2 wherein a first portion of said plurality of rows and racks are positioned at one side of said window and a second portion of said plurality of rows of wheels and racks are positioned on the other side of said window.

7. A photocopier in accordance with claim 1 and further including a plurality of indicator dials for indicating the indicia presented in each said row of wheels.

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JOHN M. HORAN, Primary Examiner

U.S. Cl. X.R.

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