

March 26, 1940.

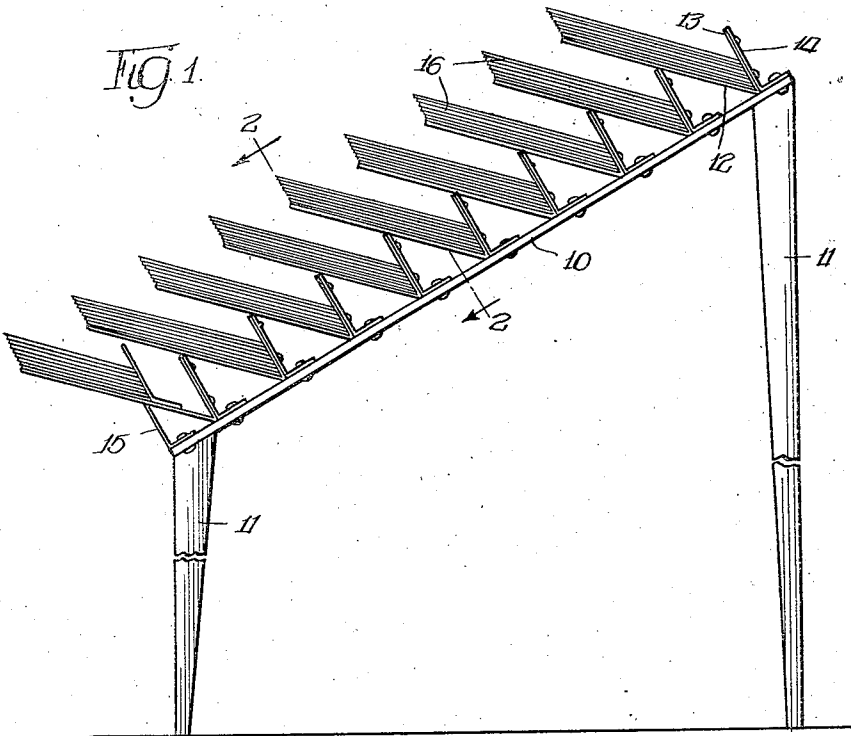
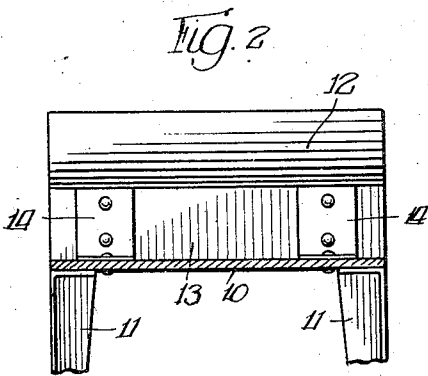
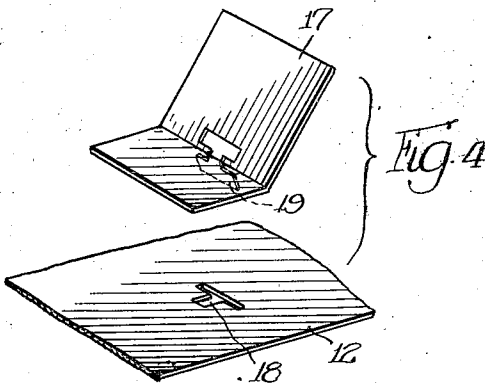
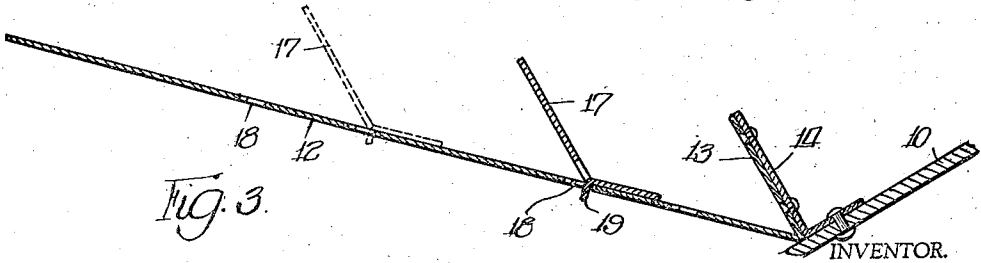
J. M. LOW

2,194,802

GATHERING TABLE

Filed Sept. 6, 1938

2 Sheets-Sheet 1



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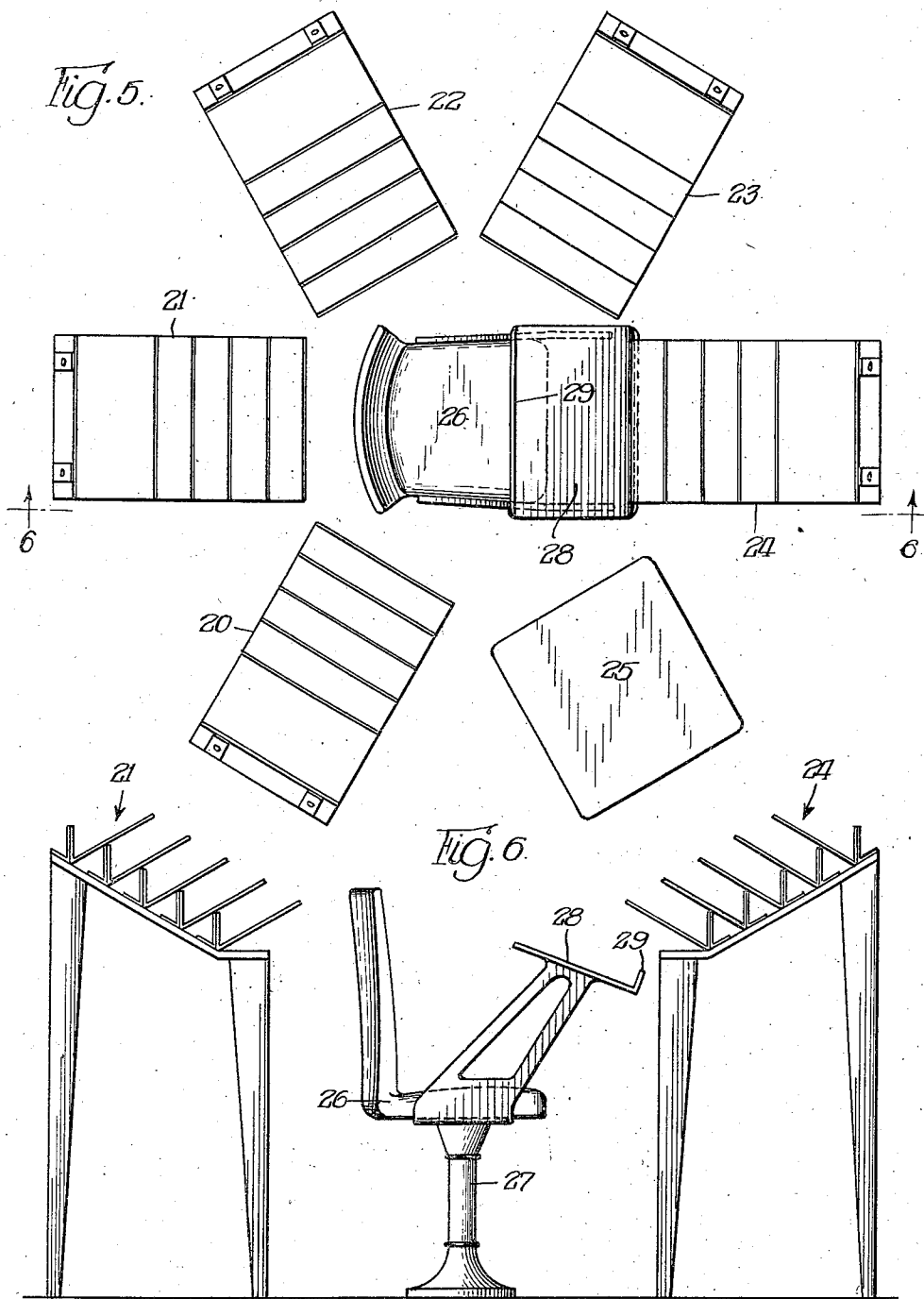
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2,194,802

GATHERING TABLE

Filed Sept. 6, 1938

2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

2,194,802

GATHERING TABLE

John M. Low, Evanston, Ill.

Application September 6, 1938, Serial No. 228,505

4 Claims. (Cl. 211—128)

My invention relates to apparatus for gathering copies of printed or other matter.

In printing and reproducing establishments, it is customary to produce separate sheets of printed matter that may go to make up a complete job, such as a pamphlet, advertising matter, etc., each sheet being printed in the requisite number of copies. Thereafter it is necessary to assemble the respective pages for binding and this is a laborious and rather expensive piece of work. It has been customary to arrange stacks of the printed sheets in succession on a long table, the operator walking the length of the table successively picking up one sheet from each pile. In other cases, automatic gathering machinery has been devised and has been successful where the amount of such work warrants the relatively great capital expenditure representing the cost of the machine. However, in smaller establishments that have occasion to gather pieces of work comprising anywhere up to one hundred pages, no apparatus is available that would render such work less fatiguing or expensive and it is an object of my invention to provide simple apparatus in which manual labor is utilized as distinguished from automatic machinery, the apparatus being arranged to facilitate economy, both in time and in physical effort. Several different forms of apparatus are disclosed, provision being made both for extreme simplicity and for more elaborate apparatus as different needs are found.

The invention will be more readily understood by reference to the accompanying drawings, in which:

Fig. 1 is a side elevation of apparatus of extreme simplicity, but in which I utilize the novel bins or paper receptacles of my invention;

Fig. 2 is a sectional view on the line 2—2 of Fig. 1;

Fig. 3 is an enlarged fragmentary section illustrating an adaptation to accomplish sheets of different sizes;

Fig. 4 is a composite view showing the method of attachment of a supplemental vertical wall;

Fig. 5 is a plan view of more elaborate apparatus comprising a plurality of stacks of bins combined with a rotatable chair; and,

Fig. 6 is an elevation taken on the line 6—6 of Fig. 5.

In the drawings and referring particularly to Figs. 1 and 2, I have illustrated an inclined support 10 having legs 11 which may be relatively long in order that an operator may stand while

gathering, or that may be short to adapt the rack to rest on a desk or table.

Erected on the support 10 are bins constructed, in this case, by providing a section of metal and bending one end of it at an acute angle to provide the inclined portion 12 and the substantially vertical portion 13. Angle pieces 14 acting as attaching means are riveted to the support 10 and to the vertical portion.

The parts are so proportioned that the upper ends of the portions 13 and the angle pieces 14 underlie and support the inclined portions 12 at a point substantially midway between their ends. At the extreme lower end a brace 15 accomplishes this purpose. Stacks of paper indicated at 16 are shown in the respective bins, this illustrating the fact that because of the V-shaped lower ends of the bins, the stacks of paper are "feathered" at their free edges, thus facilitating the gathering and simplifying the removal of the top sheets from the stacks.

It is desirable that the outer or exposed edges of the stacks of paper should be in the relation to the bins as shown on Fig. 1, and this will not occur where sheets of different sizes are to be assembled. In order to bring this about, I provide, as shown at the extreme lower end of the stack in Fig. 1, as well as in Figs. 3 and 4, a supplemental wall 17, and adapt such wall for ready attachment and removal in the manner indicated; that is to say, the inclined wall 12 has a series of T-shaped notches 18 therein, adapted to be engaged by a lug 19 struck out from the material of the plate 17. Thus the wall 17 may be readily placed in any one of the notches in order to accommodate sheets of different widths.

In the construction shown in Figs. 5 and 6, the stacks of bins may be similar to the stack shown in Fig. 1. However, I provide a plurality thereof, in this case five of such stacks, 20, 21, 22, 23, 24, arranged symmetrically about a center point, a table 25 for receiving the gathered stock being located as shown. While the apparatus shown in Fig. 5 may be utilized by an operator merely standing in one spot, I have considered it preferable to provide a seat 26 rotatable on a pedestal 27 and carrying as a part of the seat structure a table 28. This table is preferable slightly inclined and provided with a vertical flange 29 at its inner end. Thus the operator may drop onto the table the sheets collected from each of the stacks, discharging the sheets so collected onto the table 25 where they will be removed by an attendant. The attendant will likewise keep the bins filled. In operation the workman sitting in

the chair can easily reach the topmost bin, quickly withdrawing a sheet from each of the five sections. As the sheets are dropped into the table 28 the operator turns his chair slightly with his foot, repeating the operation for successive stacks. Thus an operator may by the use of the apparatus shown, gather 25 pages without moving from the same spot, the operation being almost effortless, the speed of operation being entirely under the control of the workman.

It is not intended in the apparatus shown to attempt to illustrate all the different forms that might be devised for accomplishing the result and I do not wish to be limited except as indicated in the appended claims.

I claim:

1. A gathering system comprising in combination a plurality of stacks of bins, each stack providing a stepped arrangement of the bins whereby each bin is arranged within convenient arm's reach of an operator when in sitting position, said bins being arranged circularly around a central point, a support for an operator located at said central point and a tray movable with the operator.

2. A gathering system comprising in combination a plurality of stacks of bins, each stack providing a stepped arrangement of the bins whereby each bin is arranged within convenient arm's reach of an operator when in sitting position, said bins being arranged circularly around a central point, a support for an operator located at said central point and a tray movable with the operator, each of said stacks and said table being readily movable whereby to expand or contract the size of the gathering unit to correspond

to the number of sheets composing the matter to be gathered.

3. In a gathering system adaptable for the gathering of varying numbers of sequential sheets, the combination of a plurality of stacks of bins, each stack comprising a plurality of overlying, inclined, stepped receptacles composing said bins, each adapted to receive a plurality of duplicate sheets of the matter to be gathered, the bins of each stack being arranged to be within convenient reach without substantial body movement of an operator, said stacks of bins being arranged substantially equal distances from a central point, a receiving tray adapted to be movable with the operator, a receiving table located in a position substantially corresponding to that of one of the stacks.

4. In a gathering system adaptable for the gathering of varying numbers of sequential sheets, the combination of a plurality of stacks of bins, each stack comprising a plurality of overlying, inclined, stepped receptacles composing said bins, each adapted to receive a plurality of duplicate sheets of the matter to be gathered, the bins of each stack being arranged to be within convenient reach without substantial body movement of an operator, said stacks of bins being arranged substantially equal distances from a central point, a receiving tray adapted to be movable with the operator, a receiving table located in a position substantially corresponding to that of one of the stacks, each of said stacks and said table being readily movable whereby to expand or contract the size of the gathering unit to correspond to the number of sheets composing the matter to be gathered.

JOHN M. LOW.