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COLLATING RACK

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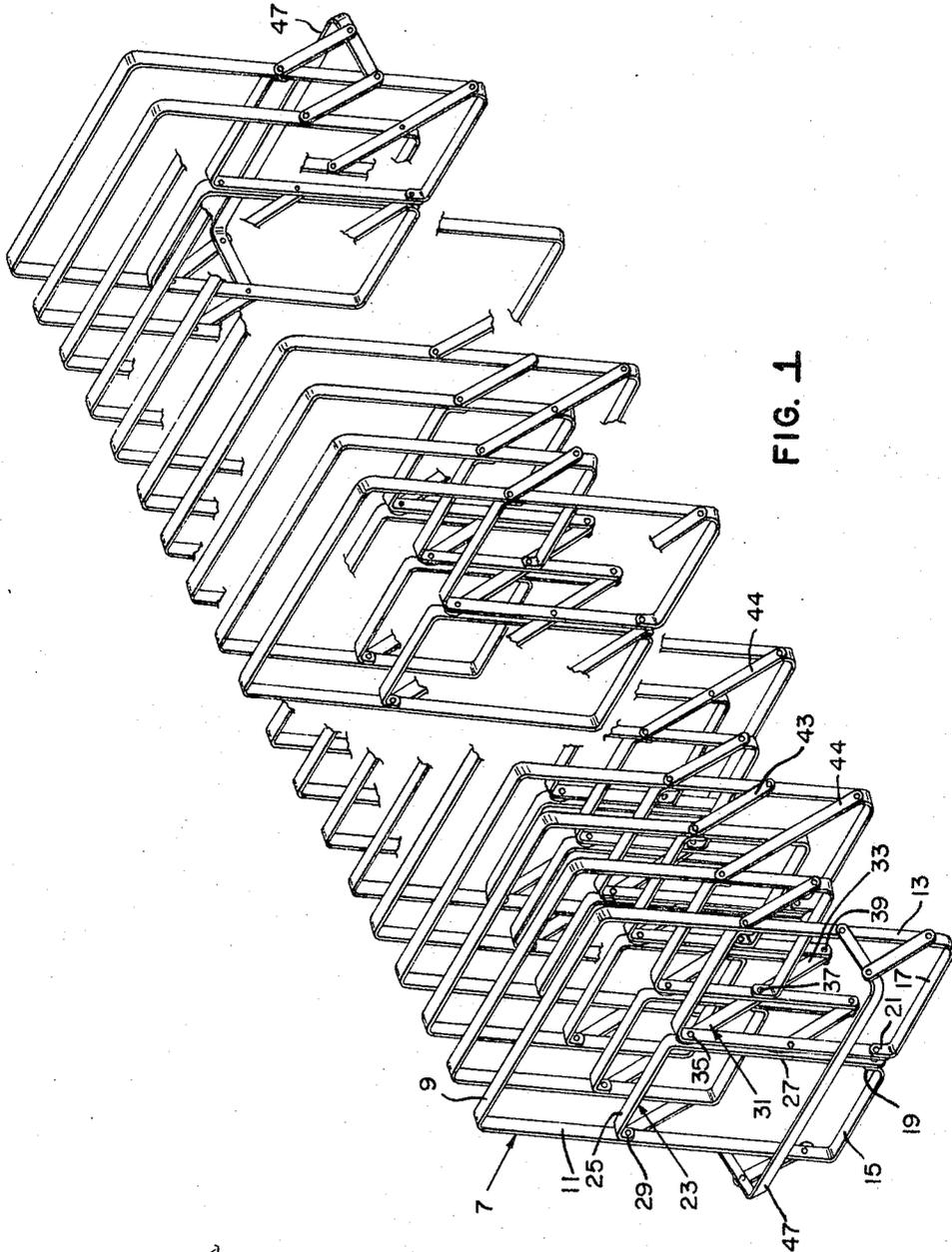


FIG. 1

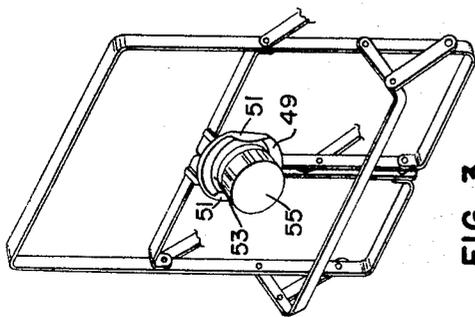


FIG. 3

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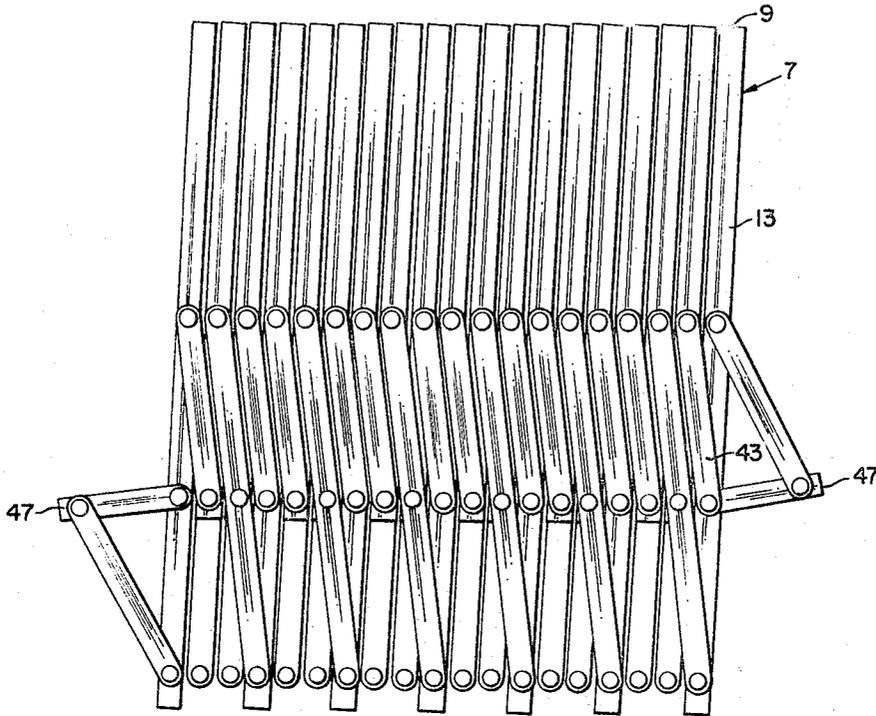


FIG. 2

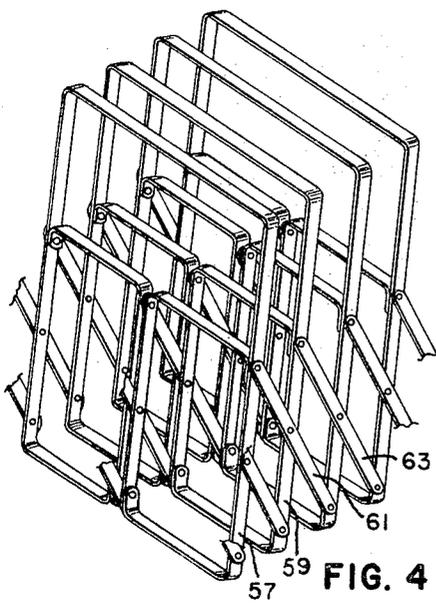


FIG. 4

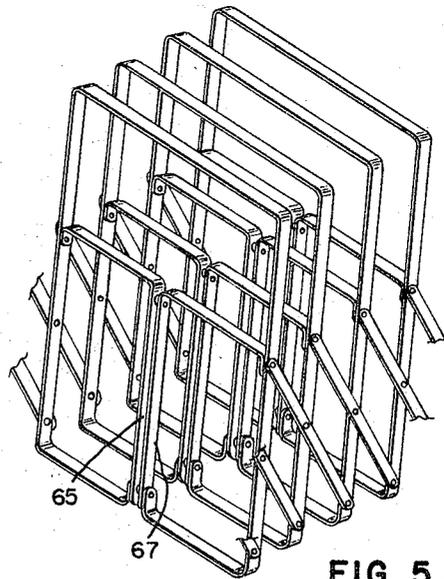


FIG. 5

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COLLATING RACK

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4 Claims. (Cl. 211—50)

This invention relates to a gathering rack and more particularly relates to a heavy-duty gathering rack.

Gathering racks for collating groups of papers have been long known, but they are not fully satisfactory. For one thing, such racks are frequently of flimsy construction, so that they break if they are given any bending stress. For another thing, such gathering racks ordinarily have relatively large wicket members so that they are not suitable for use if small papers or cards are to be collated.

In accordance with the present invention, a heavy-duty gathering rack is provided of strong structure which will withstand bending stresses.

Another object of this invention is to provide a gathering rack having an intermediate sheet holding member, whereby small cards and the like as well as large sheets may be collated in the same rack.

Another object of this invention is to provide a gathering rack wherein all of the wicket members are held together by cross members to provide a sturdy structure.

In accordance with a preferred embodiment of the invention a rack is provided having a single, center lazy tongs structure which prevents bending as the rack is opened or closed.

Other objects will be apparent from the balance of the specification.

FIGURE 1 is a perspective view of a preferred embodiment of the present invention.

FIGURE 2 is a side view of the device shown in FIGURE 1, showing the rack in a folded position.

FIGURE 3 is a detailed end view of a rack embodying the present invention showing a holder for a container of a moistener.

FIGURE 4 is a partial view of a rack showing a modification of the structure.

FIGURE 5 is a view similar to FIGURE 4 showing another modification.

Referring now to the drawings by reference characters, there is shown a gathering rack having a series of generally rectangular upright members generally designated 7, each of which may be formed from a single piece of metal thus providing a top 9, sides 11 and 13 and bottom members 15 and 17 with the terminal ends turned upright to form stubs 19 and 21. Interior members generally designated 23 are formed of L-shaped members having a top 25 and a side 27, the top 25 terminating in a small, down-turned stub 29. A companion interior member generally designated 31 is employed, the member 31 being a mirror image of the member 23.

In order to properly space and hold the members, a lazy tongs structure is preferably provided at the center of the rack by means of a flat member 33 which is placed as shown. The member 33 is joined by a rivet 35 between the members 23 and 31, is joined at the center by a rivet 37 to the center portion of the members corresponding to 23 and 31 of the next adjacent section, while the bottom of the member 33 is joined to the terminal ends of the next adjacent members 31 and 23 by the rivets 39. It will thus be seen that the lazy tongs structure is provided by the vertical runs of the members 23 and 31, i.e., member 27 and its mate, while the opposite leg of the lazy tongs structure is formed by the member 33, all as is shown in FIGURE 1.

Additional bracing action is provided by the short, flat

members 43 and alternate long members 44 which link the bottoms of members 11 and 13 with the next adjacent section. In the embodiment shown in FIGURE 1, only alternate side members 11 and 13 extend to the base, so that there is a leg for each section of the collating rack.

The structure having the single lazy tongs at the center is particularly advantageous since it yields a strong, yet flexible structure. Racks having lazy tongs at each side have a tendency to bind, particularly if they are pulled slightly off center, while a rack having a single lazy tong at the center will bend somewhat and not bind.

In the structures shown in FIGURES 1 and 2, not all of the side members extend to the base and in FIGURE 4 another embodiment of the invention is shown wherein all of the side members do extend to the base. Thus instead of using the alternate long and short side members, adjacent side members 57 and 59 are of the same length so that each section of the rack extends to the base and is individually supported by the surface on which the rack is placed. In addition, instead of using the alternate short and long members 43 and 44 as linkage members, all of the linkage members as at 61 and as at 63 are of equal length and thus form the lazy tongs structures at each side of the rack. With lazy tongs structures at each side of the rack, some weight can be eliminated by eliminating the central lazy tong structure and this embodiment of the invention is illustrated in FIGURE 5. Here the center uprights 65 and 67 are not connected to the next adjacent section but the lazy tong action is that provided by the side members as previously described in conjunction with FIGURE 4.

Handles 47 can be provided at each end of the rack for ease in extending or compressing it.

In a preferred embodiment of the invention, the front of the rack is provided with a holder formed by a plate 49 having in-turned angular grips 51 which are adapted to grasp the rim 53 of a container for a moistener so that this will be handy when using the collating rack.

It will be seen that the interior L-shaped members 23 and 31 form holders for smaller papers so that the device can be used for collating small cards and the like as well as large sheets. Although the interior members preferably form a part of the lazy tongs structure, they can be provided in other manners. Thus they can be formed of sheet metal, wires or the like which are riveted, welded or otherwise fastened to the upright members.

Although the upright members preferably include the top portion 9, it is apparent that the top is not essential for stability and can be eliminated, so that the upright members 11 and 13 would not be connected at their tops.

It is believed apparent from the foregoing that we have provided a collating rack of sturdy structure and one which can be used to collate both large sheets and small cards interchangeably.

We claim:

1. A gathering rack structure comprising a plurality of generally upright members, said upright members having side members and in-turned bottom members, said in-turned bottom members being riveted together, a plurality of interior members, each of said interior members comprising a pair of L-shaped structures having top and side members, said side members being riveted together near the centers of said side members and said L-shaped structures being turned outwardly with respect to each other and being riveted to each other near the top and bottom positions, and a plurality of intermediate members each pivotally connected to three consecutive L-shaped structures whereby said intermediate members and said L-shaped structures form a lazy tongs structure and wherein said intermediate members retain small sheets inserted in said upright members.

2. A gathering rack structure comprising a plurality

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of generally rectangular upright members, said upright members having side and top end members and in-turned bottom members, said inturned bottom members being riveted together, a plurality of interior members, each of said interior members comprising a pair of L-shaped structures having top and side members, said side members being riveted together near the centers of said side members and said L-shaped structures being turned outwardly with respect to each other and being riveted to each other near the top and bottom positions, and a plurality of intermediate members each pivotally connected to three L-shaped structures whereby said intermediate structures and said L-shaped members form a lazy tongs structure and wherein said intermediate members retain small sheets inserted in said upright members.

3. The structure of claim 1 having lazy tongs struc-

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tures at each side thereof comprising a plurality of elongated elements each pivotally connected to three consecutive side members of said upright members.

4. The structure of claim 1 wherein one of the end members of the gathering rack includes a bracket for retaining a moistener.

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