M. C. HARRIS.

CHASE RACK FOR PRINTERS.

APPLICATION FILED MAY 17, 1920.

1,433,274. Patented Oct. 24, 1922.

Fig. 1.

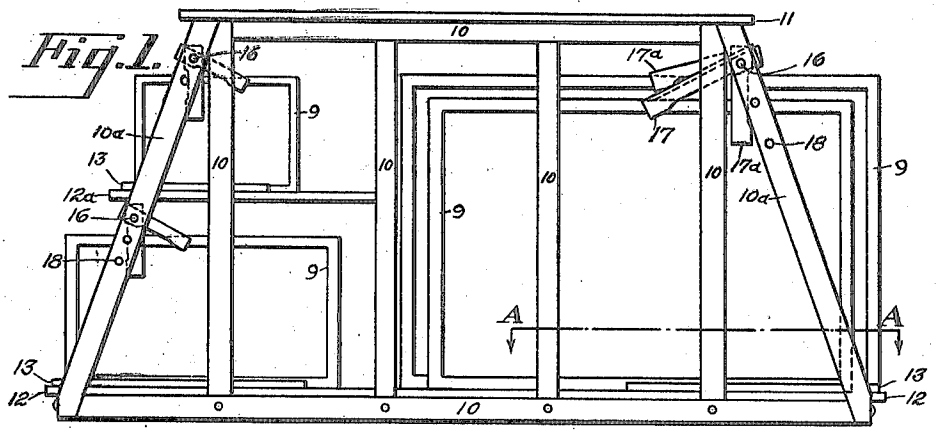


Fig. 2.

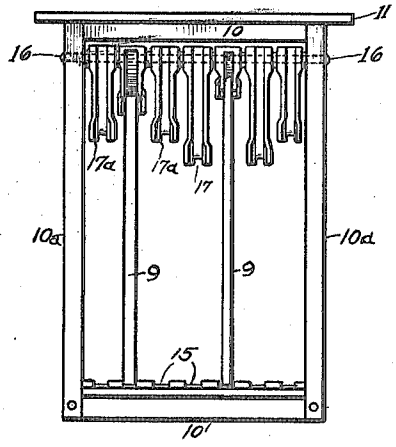


Fig. 3.

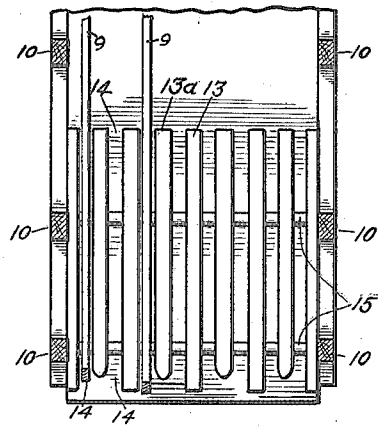


Fig. 4.

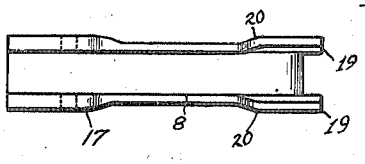


Fig. 5.

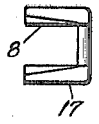
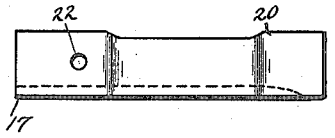


Fig. 6.



Inventor

Morris C Harris

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UNITED STATES PATENT OFFICE.

MORRIS C. HARRIS, OF SAN JOSE, CALIFORNIA.

CHASE RACK FOR PRINTERS.

Application filed May 17, 1920. Serial No. 382,140.

To all whom it may concern:

Be it known that I, MORRIS C. HARRIS, residing at San Jose, in the county of Santa Clara and State of California, have invented certain new and useful Improvement in Chase Racks for Printers, of which the following is a specification.

The objects of the present invention are to provide a chase rack that will accommodate different widths and lengths of chases with equal facility without adjustment of any kind.

To provide a chase rack that will accommodate the maximum number of chases with a minimum floor space without unduly increasing its height, and in which forms can be easily and quickly placed in and withdrawn from said rack without danger or possibility of injuring or marring the next adjacent forms by rubbing or scraping.

To provide a chase rack simple in construction that will satisfactorily and economically take care of live and dead forms and at the same time provide stone room for live or dead type or galleys on top of said rack.

Further objects and advantages will appear from the following description, it being understood that various forms, proportions and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings:

Figure 1 is a side view of my self adjusting chase rack, showing a plurality of chases in place in the rack.

Figure 2 is an end view of Figure 1, from the right.

Figure 3 is a broken horizontal section of Fig. 1 through A—A.

Figure 4 is a plan view of a self adjusting shoe and guide for supporting and holding a chase in a vertical position in the rack.

Figure 5 is an end view of Figure 4 from the bottom or lower end.

Figure 6 is a side view of Figure 4.

My self adjusting chase rack, the subject matter of the present invention, consists of a substantial and rigid framework 10 of the required dimensions, having two of its opposed sides at right angles with the top and bottom thereof and one or both of its other two sides or ends slanting or pitching downward and outward at an angle, as shown at 10^a in Figure 1. The top 11 is flat and is covered with a substantial layer of finished hard wood or other suitable material securely fastened to the end and side-rails of the framework to give strength and rigidity, and may be utilized as a bank or dead stone. A substantial bottom or floor 12 extends the full length of the framework. When it is desired to make all or part of the rack two stories high, a second floor may be added, as shown at 12^a in Figure 1. Strips of hardwood 13—13^a of the proper size are securely attached lengthwise to the floor or bottom of the framework, a proper distance apart to permit a chase 9 being easily inserted between adjacent strips. Alternate strips 13 are set flush or nearly flush with the end of the framework; intermediate strips 13^a having rounded or pointed ends, are uniformly set back a distance from the front of the framework, and parallel with adjacent strips 13 as shown in Figure 3. This causes the compartments or runs 14 to recess back from the front of the rack in pairs, with the exterior dividing guide-strip 13 of adjacent runways 14 extending forward to the front of the rack. This causes a wide opening in front of each pair of runs, and permits a chase 9 to be easily inserted in the runways 14. Rotatable rollers 15 countersunk in the runways 14 aid in handling large chases and heavy forms.

Immediately over and in line with the run-ways 14, at a proper height from the floor, threaded or pivoted on a rod 16 of proper size, attached to the framework 10^a, at the sides of the rack, is a series or plurality of shoes or guides 17—17^a adapted to receive and hold a chase 9 in a vertical position in the rack 10. The shoes or guides 17—17^a consists of a rectangular piece of metal rabbeted out to permit the end or side of a standard chase to be comfortably inserted in the rabbet 8. For a little distance, at the bottom or lower end of the shoe 17 the rabbet 8 is widened out, causing the shoe 17 to be wider at the bottom or lower end than at its other part. The outer sides of the shoe 17 are chamfered or cut away along its middle part. This causes the upper and lower portion or ends of the shoe 17 to be wider than its middle part, and also causes the flange of the shoe to be of uniform thickness, except at the top or upper end of the shoe, where the flange is

left wide and heavy. At the top or upper end of the shoe 17, about the center of its wide part, a round opening or hole 22 is made crosswise of the shoe in both flanges, so that it may be pivoted or suspended on a rod or axis 16. The back of the shoe 17—17ª at its lower end, is slightly cut away, forming downward projecting lugs 19. Slight projections or lugs 20 extend outward from the flange at the widened or flared part of the shoe at its lower or free end.

The shoes or guides 17—17ª are of two lengths and are alternately suspended or pivoted on a rod or axis 16 passing through openings or holes 22 in the upper end of the shoe. This brings the bottom of the shoes a distance below the rod or axis on which they are pivoted, and adapts them to care for different widths chases. A plurality of apertures 18 are provided in spaced relation in the frame 10ª for engaging the ends of rods 16 whereby said rods 16 may be secured at different levels, as described.

The rabbeted side 8 of the shoe 17—17ª is faced outward, and suitable washers hold the shoes a distance apart. The wide end of the long shoe 17 extends below the wide end of the short shoe 17ª. This gives room for clearance and eliminates any danger of a shoe 17 coming in contact with and raising its adjacent members when a chase 9 is being inserted in the run 10. The wide part at the bottom of the shoe 17 permits the end or side of a chase 9 being easily inserted in the shoe. The projecting lugs 19—20 increases the depth of the shoe 17—17ª and gives the shoe a better hold or grip on the chase 9. The thick flanges at the upper end of the shoe 17 gives the shoe a good bearing surface on the rod or axis 16 on which it is pivoted or suspended. The guides or shoes 17—17ª may be raised or lowered in the rack by moving the rod or axis 16 on which they are suspended to corresponding openings 18 in the frame-work 10ª.

In practice, the lower edge of a chase 9 is placed between extending strips 13 forming the outer guides of adjacent pairs of runs 14; the chase 9 is then shunted or moved against one of the projecting strips 13, which causes it to rest or lay directly in front of and in line with the run or compartment 14 in which it is to be placed, and also in line with one of the shoes or guides 17—17ª suspended above it from the rod 16. The chase 9 is then moved backward between adjacent strips 13 and 13ª and entered in the corresponding shoe or guide 17—17ª. The chase 9 is then raised to a horizontal position and moved backward in the run 14. The pressure of the chase 9 against the shoe 17 causes the shoe to swing upward and backward on the rod 16 and ride on the top edge of the chase. The chase 9 is then pushed backward in the run until the outer end clears the rounded or pointed end of intermediate strips 13ª. This permits a second chase 9 to be similarly entered in the companion run 14. The shoe 17 and its projecting lugs 19—20 hold the chase in a vertical position in the rack.

The downward and outward pitch or slant of the ends of the chase rack permits the chase 9 to be handily reached at the top or upper side, even though the bottom or lower side is out of sight. This construction also permits the floor 12 of the rack 10 to be extended out beyond the line of the suspended shoes 17—17ª and permits the lower or bottom side of the chase 9 to be entered or fitted in the run 14 before the top side is in position to enter the shoe or guide 17—17ª. A further object sought in making the ends of my chase rack with a downward and outward pitch or slant is: if it is desired to add a second story or tier for additional chases it can be done on the same general plan as the first or lower tier of runs, as shown at 12ª in Figure 1.

What I claim and desire to secure by Letters Patent is:

1. In a chase rack, a plurality of lower guides in spaced relation forming chase runs; a like plurality of guide-shoes pivotally mounted at the upper ends thereof above and in line with said chase runs, each guide shoe being provided with a rabbetted face forming a groove arranged to engage the back end of a chase when said chase is inserted in the corresponding run; and also arranged to maintain continuous engagement in turn with the back end, the upper rearward corner, and the upper edge of said chase as said shoe is swung rearwardly about its pivot mounting when said chase is being pushed home in its run; adapted to continuously hold said chase in a vertical position in said rack.

2. In a chase rack, a plurality of lower guides in spaced relation forming chase runs; a like plurality of shoes or guides pivotally mounted at the upper ends thereof above and in line with said chase runs, each shoe or guide being provided with a rabbetted face widened and forked at the free end thereof to facilitate the introduction of a chase therein and to hold said chase in a vertical position; and also arranged to maintain continuous engagement in turn with the back end, the upper rearward corner, and the upper edge of said chase as said shoe is swung rearwardly about its pivot mounting when said chase is being pushed home in its run, adapted to continuously hold said chase in a vertical position in said rack; and means for adjusting the height of the pivot supporting rod to accommodate large or small chases.

3. In a chase rack, a plurality of lower

guides in spaced relation forming chase runs, said guides alternately recessed or set back from a common line at their forward ends, causing the runs to form in pairs or twos, with the exterior runs of adjacent chase compartments extending forward to the front of the rack, adapted to cause a wide mouth or opening to each pair of chase compartments and adapted to facilitate the entering of chases therein; a like plurality of shoes or guides pivotally mounted at the upper ends thereof above and in line with said chase runs, each shoe or guide being provided with a rabbetted face, widened and forked at the free end thereof to facilitate the introduction of a chase therein and to hold said chase in a vertical position; and also arranged to maintain continuous engagement in turn with the back end, the upper rearward corner, and the upper edge of said chase as said shoe is swung rearwardly about its pivot mounting when said chase is being pushed home in its run and adapted to continuously hold said chase in a vertical position in said rack.

4. In a chase rack, a plurality of lower guides forming chase runs; a like plurality of guide shoes pivotally mounted above and in line with said chase runs, said guide-shoes having their forward faces rabbetted to form grooves arranged to receive the back end of a chase presented to the corresponding run; said groove being provided to maintain engagement in turn with the back end, the upper rearward corner, and the upper edge of said chase to retain the same in a vertical position when being inserted into its run; said shoes having forked ends formed upon the free ends thereof, said forked ends being widened to facilitate engagement with a chase presented thereto; said shoes being of alternately greater and lesser lengths to permit the widened forked ends of the short shoe to swing clear of the widened forked ends of adjacent shoes when said shoe is raised by the insertion of a chase into the adjacent run and the forked ends thereof engage the upper edge of said chase to retain same in a vertical position in said rack.

5. In a chase rack, rearwardly inclined end supports, adapted to permit the chase runs to extend forward beyond the top line of said rack; a guide supporting rod supported between said end supports and means for raising or lowering said supporting rod to accommodate large or small chases; a like plurality of shoes or guides pivotally mounted at the upper ends thereof above and in line with said chase runs, each shoe or guide being provided with a rabbetted face widened and forked at the free end thereof to facilitate the introduction of a chase therein and to hold said chase in a vertical position and also arranged to maintain continuous engagement in turn with the back end, the upper rearward corner, and the upper edge of said chase as said shoe is swung rearwardly about its pivot mounting when said chase is being pushed home in its run; adapted to continuously hold said chase in a vertical position in said rack.

6. In a chase rack, the combination of a plurality of lower guides in spaced relation forming chase runs; rotatable rollers mounted in said chase runs, adapted to facilitate entering chases therein; a like plurality of shoe or guides pivotally mounted at the upper ends thereof above and in line with said chase runs, each shoe or guide being provided with a rabbetted face widened and forked at the free end thereof to facilitate the introduction of a chase therein and adapted to continuously hold in turn the back end, the upper rearward corner, and the upper edge of a chase as said shoe is swung rearwardly about its pivot mounting when said chase is being pushed home in its run, and adapted to continuously hold said chase in a vertical position in said rack; and means for adjusting the height of said guide supporting rod to accommodate large or small chases.

MORRIS C. HARRIS.