No. 864,761. PATENTED AUG. 27, 1907.

C. H. ERICKSON.

PILING BOX OR TRAY.

APPLICATION FILED JULY 19, 1906.

Fig. 1.

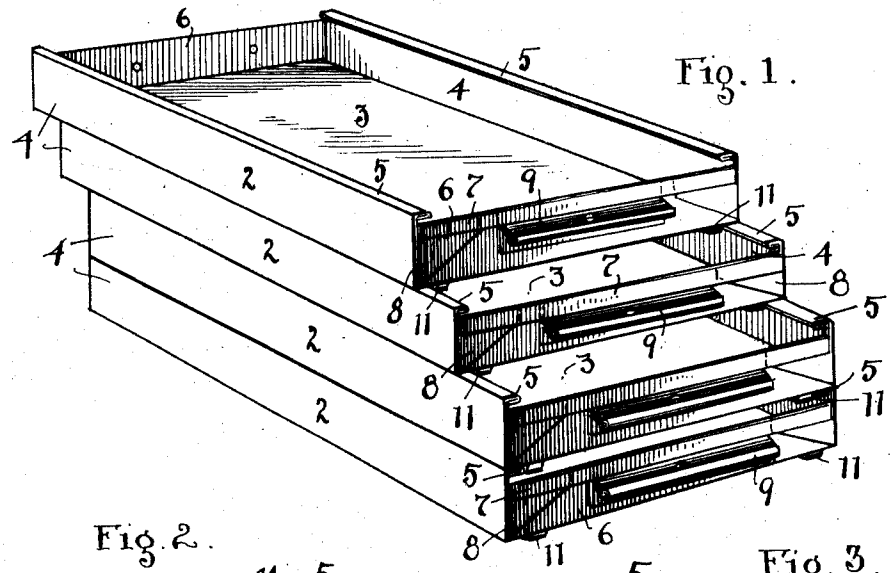


Fig. 2.

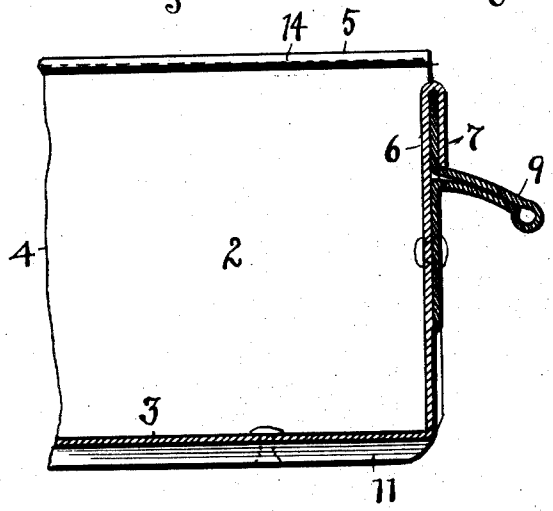


Fig. 3.

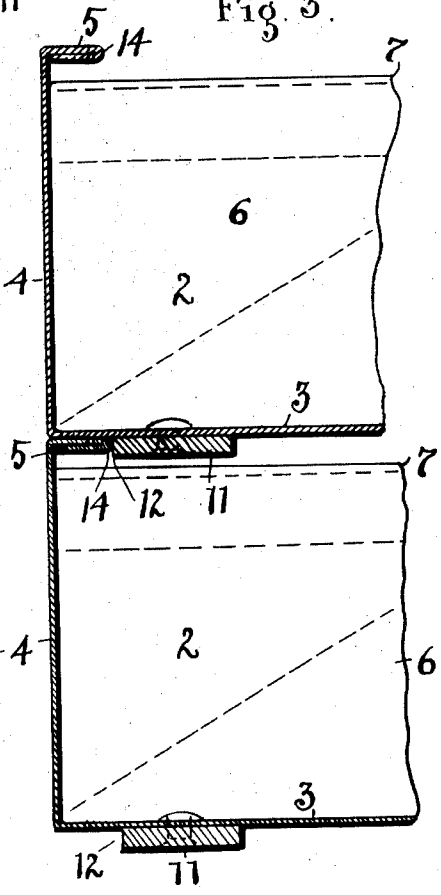
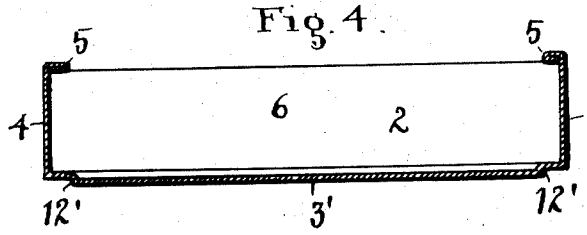


Fig. 4.



ATTEST.

C. A. Bell

INVENTOR

Charles H. Erickson

BY A. J. Fisher ATTY

UNITED STATES PATENT OFFICE.

CHARLES H. ERICKSON, OF CLEVELAND, OHIO, ASSIGNOR TO THE CLEVELAND WIRE SPRING CO., OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

PILING BOX OR TRAY.

No. 864,761. Specification of Letters Patent. Patented Aug. 27, 1907.

Application filed July 19, 1906. Serial No. 326,875.

To all whom it may concern:

Be it known that I, CHARLES H. ERICKSON, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Piling Boxes or Trays; and do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to piling boxes or trays, and the invention is an improvement in that class of boxes or trays formed of sheet metal and adapted to receive and hold various products, such as screws, bolts and other machined articles.

The object of my invention is to provide for a perfect alinement between all the boxes when piled one upon the other and to connect them with each other in this relation, as well as to slidably support them upon each other. A perfect alinement and rigid connection between the boxes is necessary, as otherwise there is always danger of the pile toppling to one side or the other, and this danger is especially increased when the floor of the factory is uneven, as is often the case, and because, as a rule, the floor is also under constant vibration by reason of the machines in operation thereon.

In the accompanying drawings Figure 1 is a perspective view of four of my improved boxes mounted one upon the other as in use. Fig. 2 is a sectional view of one end of a box, and Fig. 3 is a cross section of a portion of two boxes one mounted upon the other. Fig. 4 is a cross section of a modified form of box showing the bottom dished to provide shoulders, as hereinafter more particularly set forth.

Although a series of boxes are used in combination with each other all are alike in their detailed construction. Thus, each box 2 has a flat bottom 3 with right angled sides 4 which are inturned at their upper edge to form a shoulder or flange 5 running the full length of the box and which is preferably doubled upon itself. Flange 5 serves a double purpose in that it strengthens the sides of the box as against lateral pressure from within the box and also in that a shouldered support is provided for the other boxes as they are piled one upon the other. It will be noted that each end 6 of the box extends upward from the bottom at right angles thereto but stops at a point lower than flange 5. Sides 4 are bent around the ends at the corners of the box and lie flush upon the outer face of the ends, and hem 7 at the top edge of end 6 laps over the side extensions 8 to hold them in place and to make a rigid corner. A hand grip 9 formed of flat sheet metal and having considerable width is fastened or riveted upon the outer face of the ends and is also overlapped by hem 7 thereby making a very rigid end sufficiently strong to sustain the load within the box when the box is carried by said handles 9.

These boxes or trays are made in various sizes and when the larger size of boxes are completely filled their weight is considerable, and it is a customary practice in the shops to slide them along on the floor. This soon wears out their bottoms and I therefore rivet a pair of flat runners 11 upon the bottom throughout its full length and round said runners 11 at the ends of the box. Being flat, said runners will slide freely without injury to the floor. Runners 11 are arranged parallel with the sides of the box but are retired therefrom a distance equal to the width of the flanges 5, and whereby the outer edge 12 of each of the runners is adapted to engage the inner rounded portion 14 of flange 5, see Fig. 3.

Again referring to Fig. 3, it will be seen that the bottom of one box rests at its side edge directly upon the top of inturned flange 5 with rummer 12 engaged therewith at one side to prevent lateral movement of the boxes in respect to each other. As flange 5 is at a higher elevation than the top edge of ends 6 it is at once apparent that runner 11 is free to pass over hem 7 to slide one box upon the other. The advantage of having this slidable arrangement is made apparent in Fig. 1 where two boxes are shown as slid back in a relatively staggered position to disclose the contents within the respective bottom boxes. Thus the contents of any single box in the tier may be examined without lifting any one of the boxes from its place.

I show a modified form of box in Fig. 4 wherein bottom 3′ is dished to provide shoulders 12′. Otherwise the box is constructed as hereinbefore described.

When piled in tiers all the boxes are flush vertically at their sides and a flat continuous surface is produced which will permit the banking of successive tiers side by side without waste of room.

What I claim is:—

1. A piling box or tray having side and end walls, the said side walls projecting above the end walls of the box and inturned at right angles to provide a support for other boxes, and shoulders lengthwise on the bottom of said box adapted to provide runners to slide the box on the floor and bear against the inturned side walls of other boxes when piled one upon the other.

2. The combination of a series of piling boxes or trays adapted to slidably interlock with each other, each box or tray comprising a bottom and side and end walls having overlapping corner portions and a hem on the end walls overlapping said corner portions, said side walls projecting above the top of said ends and bent inward to provide a stiffening flange for the box and a support for other boxes, and a shouldered bottom portion arranged parallel with the side walls adapted to engage with the flanges of the supporting box immediately beneath.

In testimony whereof I sign this specification in the presence of two witnesses.

CHARLES H. ERICKSON.

Witnesses:
R. B. MOSER,
C. A. SELL.