

April 30, 1929.

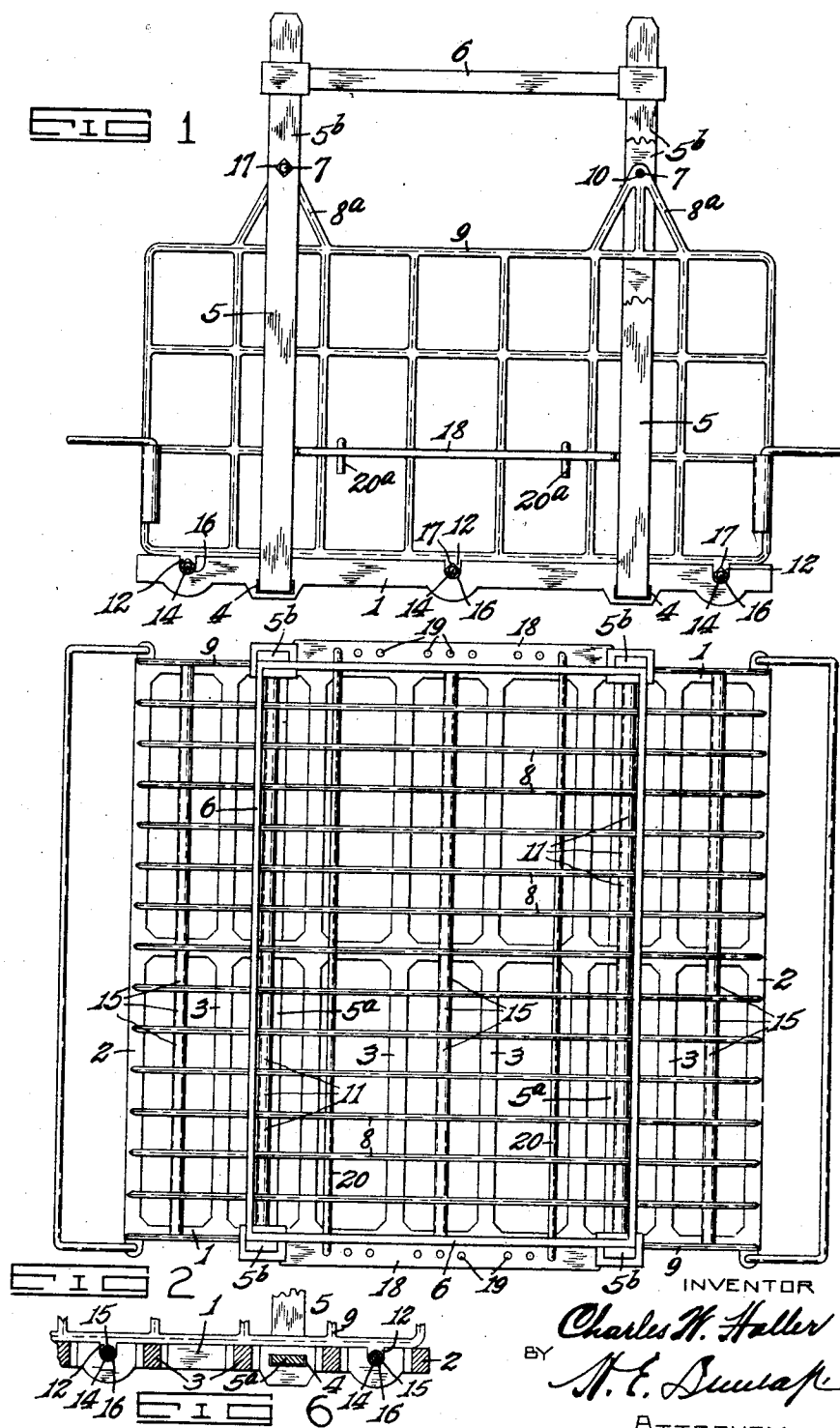
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1,711,054

PICKLING CRATE

Filed Sept. 27, 1928

2 Sheets-Sheet 1



UNITED STATES PATENT OFFICE.

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PICKLING CRATE.

Application filed September 27, 1928. Serial No. 308,782.

This invention relates broadly to pickling crates, and it has for its primary object to provide a crate for the pickling of metal plates and sheets wherein a plurality of individual and readily separable and replaceable partitions constitute the separators or division walls between adjacent pack-receiving compartments.

A further object is to provide a crate of the character mentioned composed of numerous parts which are rigidly secured in place in such manner that but few threaded parts are presented, and in which such threaded parts as are used are so located that they are not likely to become corroded so as to require frequent renewals.

A still further object is to provide a pickling crate in which the parts most likely to be injuriously affected by the acids of the pickling bath are readily renewable at relatively small cost and without weakening the crate structure.

Other important objects will hereinafter be made apparent.

In describing the invention in detail, reference is herein had to the accompanying drawings, in which—

Figure 1 is a side elevation of the invention;

Figure 2 is a top plan view of the same;

Figure 3 is an end elevation;

Figure 4 is a side elevation of a grid, detached;

Figure 5 is an end elevation of the same;

Figure 6 is a section on line 6—6, Fig. 3; and—

Figure 7 is an enlarged detail view, partly in section, showing the spacers between the upper ends of the grids.

Referring to said drawings, 1 designates the side members, 2 the end members, and 3 the cross members of a cast metal base which is preferably made in a single piece. Provided at appropriate points in each of the side members 1 below the level of the under sides of the cross members 3, or between the ends of adjacent cross members, is a plurality of openings 4, two such openings having rectangular form being herein shown. Said openings 4 have received therein the opposite end portions of the transversely disposed connecting members 5^a of two substantially U-shaped lifting bars 5. Said bars, which are substantially rectangular in cross sec-

tion, have their parallel members 5^b rising vertically to a suitable height and carrying at or adjacent to their upper ends a suitable bracing structure 6, the latter being herein shown as rectangular in form.

Parallel transverse rods 7 have their ends mounted in the parallel members 5^b of the lifting bars, and mounted on said rods are the suspension members 8^a of a plurality of grids 8 and 9 which constitute partition walls or separators whereby the crate is divided into a plurality of parallel compartments, such compartments being designed for the reception of packs or bundles of sheets or plates which are to be pickled. Eyes 10 provided in the suspension members 8^a receive the rods 7 therein, while tubular spacers 11 mounted on said rods between adjacent grids serve to maintain the latter in spaced relation.

Formed on the lower edge of each grid 8 and 9 is a plurality of suitably located depending lugs 12 having therein eyes 13 through which are directed transverse rods 14, the lugs of adjacent grids being maintained on said rods in spaced relation by means of tubular spacers 15 similar to the spacers 11. The lugs 12 of the opposite outermost grids are snugly seated in recesses or seats 16 provided therefor in the top surfaces of the side members 1 of the base. Nuts 17 on the ends of the rods maintain the parts in their proper relations.

Each of the outermost grids 9 has formed thereon, preferably as an integral part thereof, a horizontally disposed outwardly projecting ledge 18 provided with a plurality of suitably arranged holes 19 designed for the reception of the downturned ends 20^a of two transverse rods 20 whereby is limited the extent to which sheets or packs may be introduced within the compartments of the crates from the opposite ends.

It is to be noted that the grids are removable, thereby to facilitate the removal and replacement of any grid or grids which may become damaged. Further, it will be noted that any of the various parts of the structure, as the lifting bars 5, the rods 7 and 14, the spacers 10 and 14, and the bracing structure 6 may be readily replaced as required. This is particularly desirable in view of the fact that the parts, particularly those which are exposed alternately to the air and to the

acid of the pickling bath rapidly deteriorate, requiring occasional renewals.

What is claimed is—

- 5 1. A pickling crate comprising a base having side members, lifting arms of approximately U-shape disposed in supporting relation to said base, transverse rods connecting the parallel members of said arms adjacent to the upper ends of the latter, a plurality of grids having their upper portions mounted on said rods, rods upon which the lower edge portions of said grids are mounted, and means carried by each of said rods whereby the grids are maintained in spaced relation.
- 15 2. A pickling crate comprising a base having side members, said members being provided with seats, lifting arms disposed in supporting relation to said base, transverse rods connecting the parallel members of said arms adjacent to their upper ends, a plurality of grids suspended from said rods, apertured lugs formed on the lower edge portions of said grids, transverse rods received in the apertures of said lugs, and means carried by said rods whereby said grids are maintained in spaced relation, the lugs of the outermost grids being received by the seats of the base.
- 20 3. A pickling crate comprising a base having side members, said members being provided with seats, lifting arms disposed in supporting relation to said base, transverse rods connecting the parallel members of said arms adjacent to their upper ends, a plurality of grids suspended from said rods, apertured lugs formed on the lower edge portions of said grids, transverse rods received in the

apertures of said lugs, and tubular members carried by each of said rods for maintaining said grids in spaced relation, the outermost grids having the lugs thereof resting on the seats of the side members of the base. 40

4. A pickling crate comprising a base having side members, lifting arms of approximately U-shape disposed in supporting relation to said base, transverse rods connecting the parallel members of said arms adjacent to the upper ends of the latter, a plurality of grids suspended from said rods, transverse rods connecting the lower portions of said grids, means carried both by the upper and lower rods for maintaining said grids in spaced relation, and lugs formed on the lower portions of the outermost grids for engaging the seat on the side members of the base. 45 50 55

5. A pickling crate comprising a base having side members, lifting arms of approximately U-shape disposed in supporting relation to said base, transverse rods connecting the parallel members of said arms adjacent to the upper ends of the latter, a plurality of grids suspended from said rods, transverse rods connecting the lower portions of said grids, means carried both by the upper and lower rods for maintaining said grids in spaced relation, lugs formed on the lower portions of the outermost grids for engaging the seat on the side members of the base, and a frame structure carried by the upper end portions of said lifting arms whereby the latter are rigidly braced. 60 65 70

In testimony whereof, I affix my signature.

CHARLES W. HALLER.