March 31, 1942. A. J. HAVLIS 2,278,390

TUMBLER RACK

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Fig. 1.

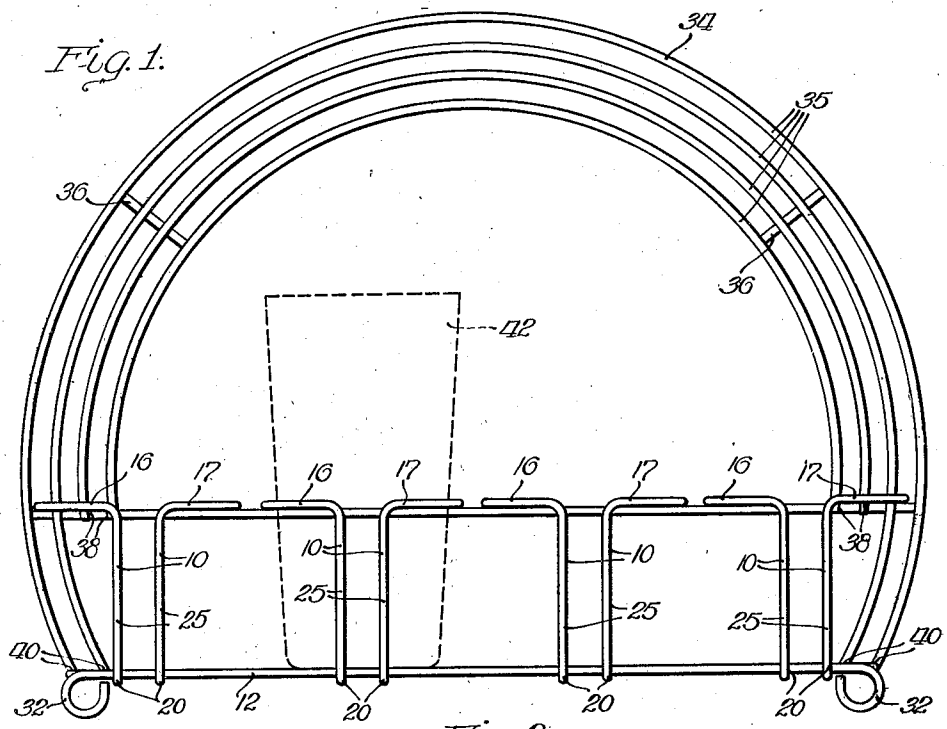
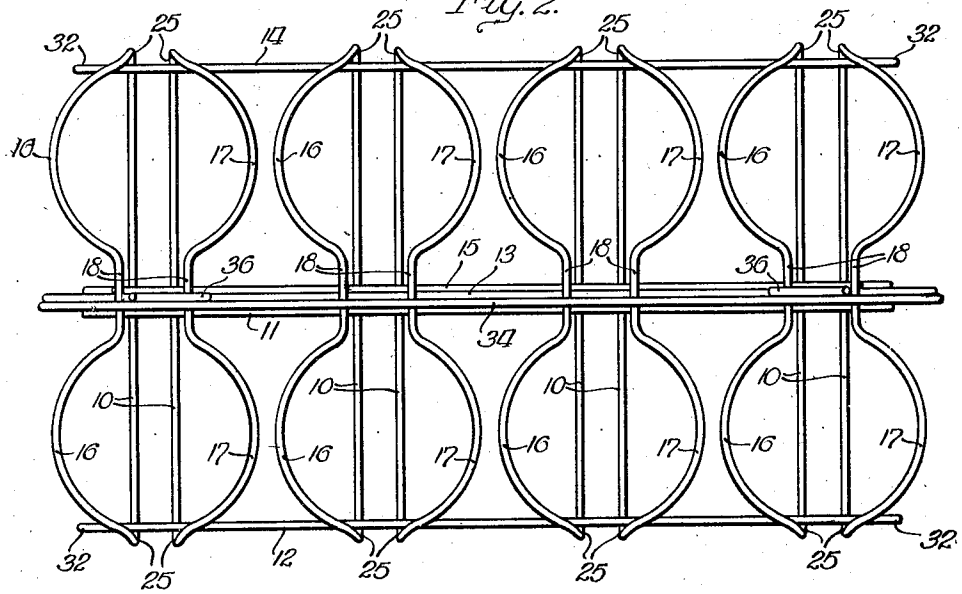


Fig. 2.



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Fig. 3.

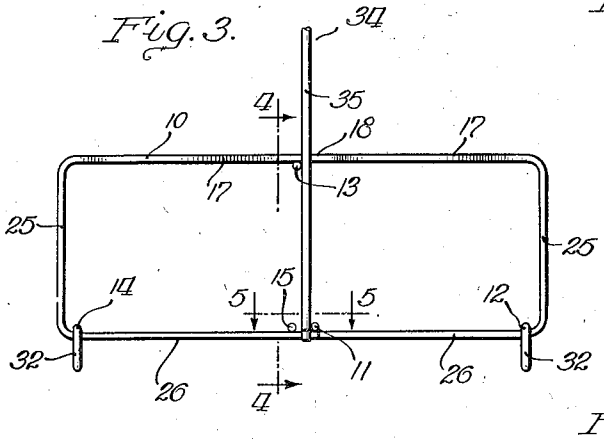


Fig. 4.

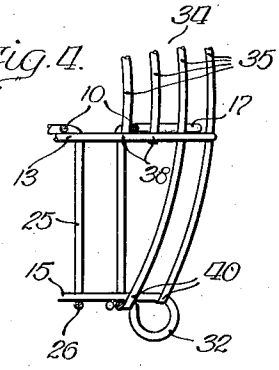


Fig. 5.

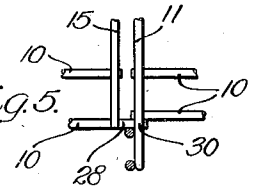
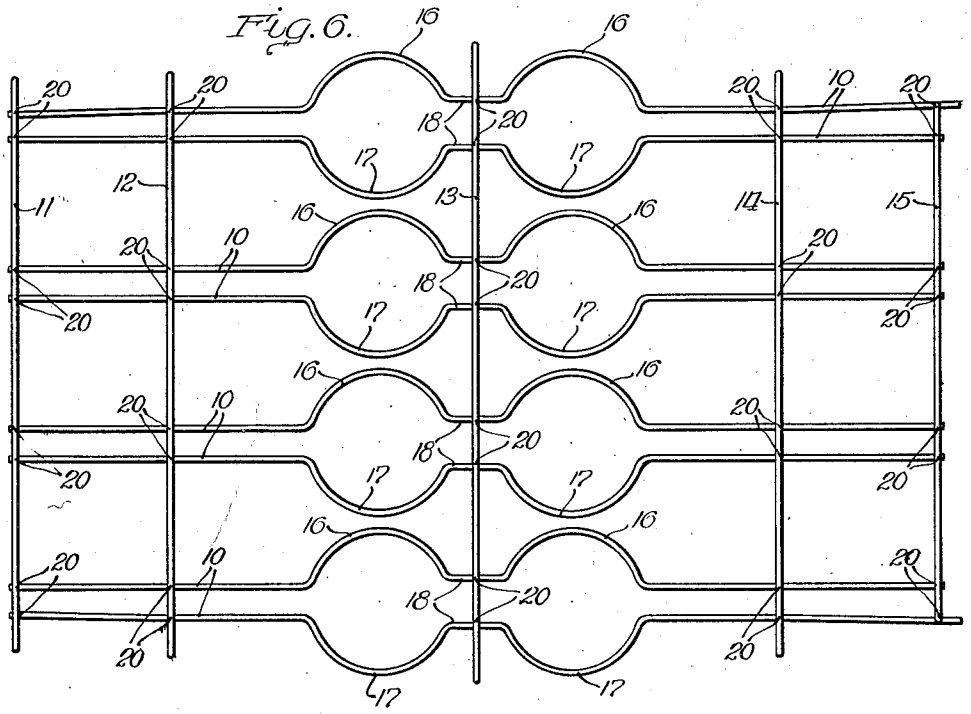


Fig. 6.



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UNITED STATES PATENT OFFICE

2,278,390

TUMBLER RACK

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Application January 22, 1941, Serial No. 375,486

7 Claims. (Cl. 211—74)

This invention relates to tumbler racks and similar articles, and has to do particularly with improvements in the construction of wire tumbler racks.

One of the main objects of the invention is to provide a tumbler rack of simple and inexpensive construction, and of pleasing appearance; also, a rack composed of relatively few parts adapted for convenient assembly, and an improved method of making racks of the character described.

Another and more specific object of the invention is to provide a rack in which the tumbler receiving portions and the other parts of the rack are all joined together in the flat, and a rack which is then folded or bent to form in a simple and convenient manner and without individually folding and bending to form the tumbler receiving portions of the rack.

Another object of the invention is to provide an improved form of tumbler rack in which the tumbler or glass receiving and holding portions are adapted individually to hold the glass or tumbler in separated and individual relation and in which the wires having the tumbler or glass receiving portions are effectively tied together to maintain the tumbler receiving portions in the desired relation to each other.

Another object of the invention is to provide an improved tumbler rack having transverse wires arranged in pairs and with complementary tumbler receiving portions in each pair of said wires, the tumbler receiving portion of one wire of each pair of said wires cooperating with the complementary tumbler receiving portion of the other wire to receive and hold the tumbler.

Further objects and advantages of the invention will appear from the following detailed description taken in connection with the accompanying drawings, in which:

Figure 1 is a front view of a tumbler rack embodying the present invention;

Figure 2 is a top plan view of the rack shown in Figure 1;

Figure 3 is an end view of the rack, with the handle partially broken away;

Figure 4 is a fragmentary detail section taken on the line 4—4 of Figure 3, and showing the manner in which the handle is attached to the rack;

Figure 5 is a fragmentary detail section taken on the line 5—5 of Figure 3, and showing the manner in which the inturned ends of the transverse wires are joined at the bottom of the rack; and

Figure 6 is a bottom plan view showing, in the flat, how the transverse and longitudinal wires are arranged and secured together before bending the transverse wires on opposite sides of the tumbler receiving portions downwardly and inwardly in completing the rack.

Referring now in detail to the drawings, the rack selected for illustration comprises a plurality of pairs of transverse wires 10 and a plurality of generally longitudinal wires, such, for example, as the longitudinal wires 11, 12, 13, 14, and 15.

One wire of each pair of transverse wires is shown as having a pair of tumbler receiving portions 16, 16, and the other wire of each pair of transverse wires has a pair of tumbler receiving portions 17, 17 which are complementary with respect to the tumbler receiving portions 16, 16; that is, each tumbler receiving portion 16 of one wire cooperates with the complementary tumbler receiving portion 17 of the other wire individually and separately to receive and hold the tumbler or glass indicated in dotted lines at 42 in Figure 1. The tumbler receiving portions 16, 17 may be formed on a die in a press, or otherwise as desired. The tumbler receiving portions 16, 17 are shown as of generally semicircular form, but this may vary within the scope of the present invention, it being understood that where, in the appended claims, I refer to the generally semicircular form of the tumbler receiving portions, I intend, by such statement, to cover all similar or equivalent shapes of the tumbler receiving portions.

In forming the rack, the transverse wires 10 are placed, for example, in a jig in parallel spaced relation and with the tumbler receiving portions 16, 17 of each pair of wires 10 in complementary relation as shown in Figure 6. The jig is preferably grooved or formed to receive and hold the transverse wires 10 in place, as shown, while welding or securing the longitudinal wires 11, 12, 13, 14, and 15 thereto. The jig is also preferably grooved or formed to receive and hold in place the longitudinal wires 11, 12, 13, 14, and 15 which are placed across the transverse wires 10, as shown in Figure 6. The longitudinal wires 11 and 15 are disposed longitudinally across the ends of the transverse wires 10, and the wire 13 is disposed longitudinally across the contracted intermediate portions 18 of the wires 10. The longitudinal wires 12 and 14 are disposed longitudinally across the transverse wires 10, one on each of the opposite sides of the complementary tumbler receiving portions and

between these complementary tumbler receiving portions and the longitudinal wires 11 and 15, respectively.

Then, with all of the longitudinal wires in position across the transverse wires as shown in Figure 6, the longitudinal wires are welded or secured to the transverse wires at 20. The welding of the longitudinal wires to the transverse wires at 20 is preferably accomplished by a single welding operation. The ends of the longitudinal wire 15 are shown as terminating substantially at the transverse wires 10 at the opposite ends of the assembly, whereas the ends of the longitudinal wires 11, 12, 13 and 14 are shown as projecting endwise beyond the transverse wires 10 at the opposite ends of the assembly for purposes which will presently appear.

The assembly, with the transverse wires joined together and effectively held in place along the desired portions thereof, by the longitudinal wires 11, 12, 13, 14 and 15, is then placed, for example, on blocks, and the transverse wires on opposite sides of the complementary tumbler receiving portions are folded or bent downwardly at 25 to form the opposite sides of the rack, and inwardly along the bottom at 26 to form the bottom of the rack, as particularly shown in Figure 3. The free ends of the inturned bottom portions 26 are preferably brought into close proximity so that the projecting ends 28 (Figure 5) of the transverse wires 10 at the opposite ends of the rack extend across the longitudinal wire 11 at the adjacent end of the opposite inturned bottom portion, and these projecting ends 28 are welded to the wire 11 at 30 (Figure 5).

The ends of the wires 12 and 14 which project beyond the transverse wires 10 at opposite ends of the rack are bent or rolled to form supporting feet 32 for the rack, one of these feet 32 being disposed at each of the respective corners of the rack. A handle 34 is welded to the projecting ends of the wire 11. The spot welding of the handle 34 to the wire 11 may be done in the same operation in which the end wires 10 are welded to the longitudinal wire 11 at 30.

The form of the handle 34 may vary widely within the scope of the present invention. The particular handle 34, shown for purposes of illustration, comprises a plurality of concentrically arranged and partially circular wires 35 joined together by short cross wires 36 welded thereto. The opposite ends of the inner two wires 35 of the handle terminate at the longitudinal wire 13 disposed centrally at the top of the rack, and are welded thereto at 38 preferably on opposite sides of the intermediate contracted portions 18 of the transverse wires 10 at the opposite ends of the rack. The ends of the outer two wires 35 of the handle 34 extend on downwardly and terminate at the extending ends of the longitudinal wire 11, and are welded thereto as indicated at 40.

I do not intend to be limited to the precise details shown or described.

I claim:

1. A tumbler rack comprising a plurality of pairs of wires extending transversely across the top of the rack and having downturned portions at opposite sides of the rack and inturned portions extending inwardly in a transverse direction at the bottom of the rack, each pair of transverse wires having at the top of the rack a pair of complementary tumbler receiving portions adapted to receive tumblers and individually to hold the same and contracted between said tumbler receiving portions, a wire extending longitudinally along the top of the rack between the pairs of complementary tumbler receiving portions of said transverse wires and secured to the contracted portions of said transverse wires, a wire extending longitudinally along the bottom of the rack substantially intermediate the sides thereof and joining certain of the free ends of the inturned portions of said transverse wires at the bottom of the rack, and means connecting said last mentioned longitudinal wire to the other free end portions.

2. A tumbler rack comprising a plurality of pairs of wires extending transversely across the top of the rack and having downturned portions at opposite sides of the rack and inturned portions extending inwardly in a transverse direction at the bottom of the rack, each pair of transverse wires having at the top of the rack complementary tumbler receiving portions adapted to receive tumblers and individually to hold the same and contracted between said tumbler receiving portions, a wire extending longitudinally along the bottom of the rack and substantially intermediate the sides thereof and joining certain of the free ends of the inturned portions of said transverse wires at the bottom of the rack, and means connecting said last mentioned longitudinal wire to the other free end portions.

3. A tumbler rack comprising a plurality of pairs of wires extending transversely across the top of the rack and having downturned portions at opposite sides of the rack and inturned portions extending inwardly in a transverse direction at the bottom of the rack, each pair of transverse wires having at the top of the rack a pair of complementary tumbler receiving portions adapted to receive tumblers and individually to hold the same and contracted between said tumbler receiving portions, a wire extending longitudinally along the top of the rack between the pairs of complementary tumbler receiving portions of said transverse wires and secured to the contracted portions of said transverse wires, a wire extending longitudinally along the bottom of the rack substantially intermediate the sides thereof and joining certain of the free ends of the inturned portions of said transverse wires at the bottom of the rack, means connecting said last mentioned longitudinal wire to the other free end portions, and wires one extending longitudinally at each side of the rack along the lower ends of the downturned portions of said transverse wires and secured to said transverse wires, the ends of said last mentioned wires being bent to form supports for the rack.

4. A tumbler rack comprising a plurality of pairs of wires extending transversely across the top of the rack and having downturned portions at opposite sides of the rack and inturned portions extending inwardly in a transverse direction at the bottom of the rack, each pair of transverse wires having at the top of the rack a pair of generally semicircular and complementary tumbler receiving portions adapted to receive tumblers and individually to hold the same and contracted between said tumbler receiving portions, a wire extending longitudinally along the top of the rack between the pairs of complementary tumbler receiving portions of said transverse wires and secured to the contracted portions of said transverse wires, and wires extending longitudinally along the bottom of the rack substantially intermediate the sides thereof

and secured to the free ends of the inturned portions of said transverse wires at the bottom of the rack.

5. A tumbler rack comprising a plurality of pairs of wires extending transversely across the top of the rack and having downturned portions at opposite sides of the rack and inturned portions extending inwardly in a transverse direction at the bottom of the rack, each pair of transverse wires having at the top of the rack a pair of generally semicircular and complementary tumbler receiving portions adapted to receive tumblers and individually to hold the same and contracted between said tumbler receiving portions, a wire extending longitudinally along the top of the rack between the pairs of complementary tumbler receiving portions of said transverse wires and secured to the contracted portions of said transverse wires, a wire extending longitudinally along the bottom of the rack substantially intermediate the sides thereof and joining certain of the free ends of the inturned portions of said transverse wires at the bottom of the rack, and means connecting said last mentioned longitudinal wire to the other free end portions, the ends of said last mentioned longitudinally extending wire projecting beyond the ends of the rack, and a handle secured to the projecting ends of said last mentioned longitudinally extending wire.

6. A tumbler rack comprising a plurality of pairs of wires extending transversely across the top of the rack and having downturned portions at opposite sides of the rack and inturned portions extending inwardly in a transverse direction at the bottom of the rack, each pair of transverse wires having at the top of the rack a pair of generally semicircular and complementary tumbler receiving portions adapted to receive tumblers and individually to hold the same and contracted between said tumbler receiving portions, a wire extending longitudinally along the top of the rack between the pairs of complementary tumbler receiving portions of said transverse wires and secured to the contracted portions of said transverse wires, wires extending longitudinally along the bottom of the rack substantially intermediate the sides thereof and joining the free ends of the inturned portions of said transverse wires at the bottom of the rack, and wires one extending longitudinally at each side of the rack along the lower ends of the downturned portions of said transverse wires and secured to said transverse wires, the ends of said last mentioned wires being bent to form supports for the rack.

7. A tumbler rack comprising a plurality of pairs of wires extending transversely across the rack and having integral upright portions at opposite sides of the rack and integral inturned portions extending inwardly in a transverse direction, each pair of transverse wires having at the top of the rack complementary tumbler receiving portions adapted to receive tumblers and individually to hold the same, and contracted between said tumbler receiving portions, a wire extending longitudinally along the rack and substantially intermediate the sides thereof and joining certain of the free ends of the inturned portions of said transverse wires of the rack, and means connecting said last mentioned longitudinal wire to the other free end portions.

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