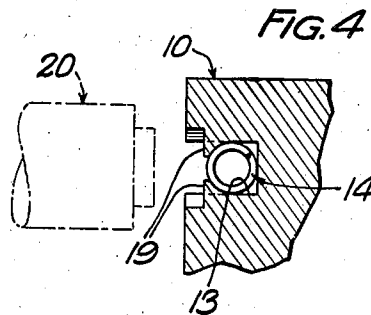
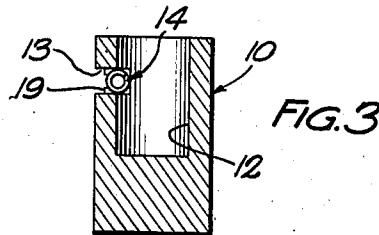
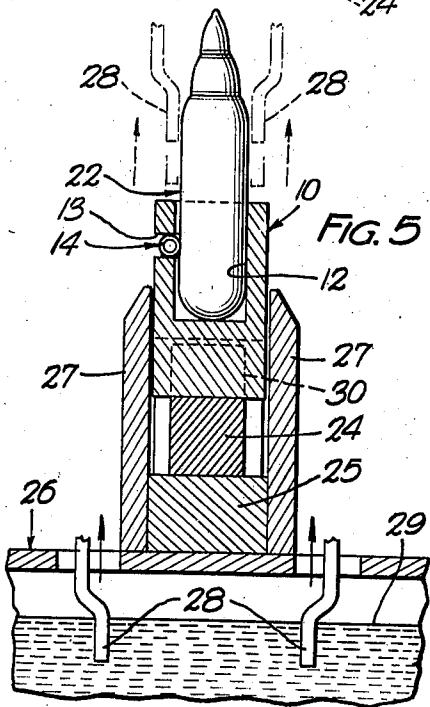
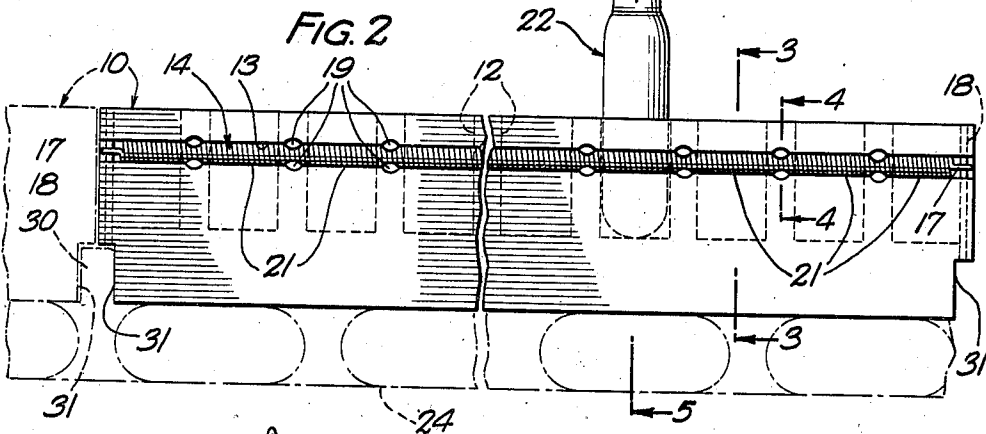
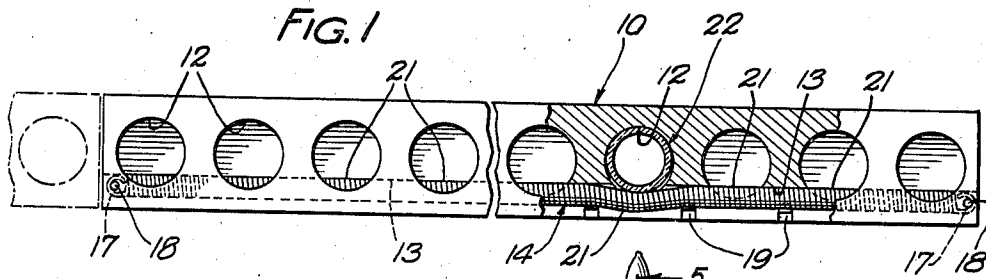


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G. J. ZETHMAYR
ARTICLE HOLDING FIXTURES

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ARTICLE HOLDING FIXTURE

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4 Claims. (Cl. 211—120)

This invention relates to article holding fixtures and particularly to a tray having a plurality of individual article receiving and retaining sockets.

An object of this invention is to provide a simple and efficient article carrying tray having a plurality of article receiving sockets each individually adapted to yieldingly retain an article.

In attaining this object in one embodiment of the invention, as applied to the handling of switchboard lamp shells on a lamp assembling machine, there is provided a tray for movement with a conveyor of the machine comprising a base or bar having a row of sockets in one face for receiving lamp shells and a slot in another face intersecting each of the sockets at a side thereof. Entered in the slot is a coiled tension spring which extends into each of the sockets, the spring being held under tension and attached at each end and at points intermediate each socket to the bar, thus producing individual spring portions therealong effective in each socket to yieldingly retain the lamp shell inserted therein between the socket wall and the spring portion with sufficient force to prevent accidental removal during treating and assembling operations and while being carried in various positions on the conveyor.

Other objects and advantages of this invention will more fully appear from the following detailed description taken in conjunction with the accompanying drawing, in which

Fig. 1 is a plan view, partly in section, of one embodiment of the article carrying tray of this invention;

Fig. 2 is a side view thereof;

Fig. 3 is a vertical cross section taken on the line 3—3 of Fig. 2;

Fig. 4 is an enlarged fragmentary view taken on the line 4—4 of Fig. 2, showing the method of securing the spring to the base or bar intermediate the article receiving sockets of the bar; and

Fig. 5 is a fragmentary vertical section of a switchboard lamp assembling machine showing the tray mounted on a conveyor thereof.

In the drawing, the novel features of the invention are embodied in a lamp shell carrying tray 10 for use on a switchboard lamp assembling machine. Referring to Figs. 1 and 2, the tray 10 comprises a bar or base of suitable material, in the present instance steel, of the desired length and cross sectional dimensions, and is provided with a row of circular flat bottomed sockets 12 in its top face, the diameter of the

sockets being such that articles of circular cross section may be freely received therein. Formed throughout the length of the bar 10 in a face thereof disposed 90° to its top face is a slot 13, which intersects each of the sockets 12 a suitable distance below their upper open ends and at one side thereof (Figs. 1 and 3). Carried in the slot 13 is a helically coiled spring 14 formed with eyes 17 at each end. The spring 14, while under some tension in the slot 13, is attached at opposite ends to the bar 10 by pins 18 entered in apertures provided in shouldered ends of the bar and the eyes 17 of the spring. Intermediate each socket 12, the spring 14 is attached to the bar 10 by swaging the material of the bar (Fig. 2) at opposite sides of the slot, as indicated at 19, against the spring by means of a circular shouldered punch or tool 20, shown in broken outline in Fig. 4. The material is preferably swaged against the spring 14 to firmly hold the spring at the points 19 but at the same time it is such that the spring, after the removal of the pins 18, may be longitudinally withdrawn from the slot 13 for replacement purposes. After assembly of the tray 10, it is preferably given a zinc finish.

The attachment of the tensioned spring 14 at the points 19, it will be apparent, produces individual tensioned spring portions 21 extending across each of the sockets 12 at one side thereof (Fig. 1) which are effective to yieldingly retain an article inserted therein between the socket wall and the spring portion 21 with sufficient force to prevent accidental removal or displacement therefrom.

Referring particularly to Fig. 5, in which a portion of a switchboard lamp assembling machine is illustrated, the tray 10 is shown mounted on a conveyor chain 24, also shown in broken outline in Fig. 2. The chain 24, at the point illustrated, rides on a rail 25 fixed to a paste container 26, which also supports vertical guides 27 for laterally guiding the chain. At this point in the assembling of the lamps, a pair of tensioned paste applying fingers 28 move upwardly from the paste supply indicated at 29 in the container 26 along an irregular path and wipe over opposite sides of a lamp shell 22 to apply paste thereto. Immediately thereafter, terminal strips (not shown) are applied to the pasted sides of the lamp shell 22 while still carried in the tray 10. The tension of the fingers 28 in withdrawing from the lamp shell 22 is such that if the shell was not positively held in its socket 12, it would, at times, be withdrawn therefrom by the tensioned

fingers. The trays 10 are positively advanced with the conveyor chain 24 by means of vertical lugs 30 (Figs. 2 and 5) on the chain which are received in shouldered recesses 31 formed in opposite ends of the tray, the arrangement being such that the trays are advanced in abutting end to end relation.

From the foregoing description, it will be apparent that a simple and efficient tray is provided for carrying and yieldingly retaining articles in individual sockets during treating and assembling operations, while mounted on a conveyor.

While the features of this invention have been described in a structure or tray for carrying particular articles, it should be understood that modifications can be made and it is capable of other applications.

What is claimed is:

1. In an article holding tray, a base having sockets in a face for receiving articles and a slot in another face intersecting each of said sockets at a side thereof, and an elastic member in said slot extending into each of said sockets, said member being held at opposite ends and at points intermediate each socket to said base to produce individual elastic portions therealong in each socket to yieldingly retain an article inserted therein between the socket wall and said elastic member portion.

2. In an article holding tray, a base having a row of sockets in a face for receiving articles and a slot in another face intersecting each of said sockets at a side thereof, and a coiled tension spring in said slot extending into each of said sockets, said spring being pinned at opposite ends

to said base and at points intermediate each socket by a swaging of the material of the base at opposite sides of the slot against said spring to produce individual tensioned flexible spring portions thereof in each socket to yieldingly retain an article inserted therein between the socket wall and said spring portion.

3. In an article holding tray, a base having a row of sockets in one face for receiving articles and a slot in and extending the entire length of another face disposed at right angles to said first face and intersecting each of said sockets at a side thereof adjacent its orifice, and an elastic member in said slot extending into each of said sockets, said member being held under tension at opposite ends and at points intermediate each socket to said base to produce individual elastic portions therealong in each socket to yieldingly retain an article inserted therein between the socket wall and said elastic member portion.

4. In an article holding tray, a base having a row of circular sockets in one face for receiving articles and a slot in another face at an angle to said first face and intersecting each of said sockets at a side thereof, and a coiled tension spring in said slot passing through each of said sockets, said spring being held under tension at opposite ends and at points intermediate each socket by a swaging of the material of the base at opposite sides of the slot against said spring to produce individual tensioned flexible spring portions thereof in each socket to yieldingly retain an article inserted therein between the socket wall and said spring portion.

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