## American Society of Baking

Victor E. Marx, Secretary

## REPORT ON QUESTIONNAIRE NO. 1 - MOTOR AND WAGON BOXES <br> By Victor E. Marx, Secretary <br> Copyright 1924 by the American Society of Bakery Engineers

As a result of sending out Questionnaire No. 1, we received 70 filled out forms. This means a return of about $30 \%$. There is a great deal of information contained in. the returned sheets and some of the important points are brought out in the summary given below.

Question No. 1. Do you think bread should be loaded directly into Truck or Wagons or should a Box or Tray be used to save extra handling?

$$
\begin{aligned}
& \text { No anwer . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . } 9 \\
& \text { Trays . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . } 43 \\
& \text { Truck direct . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . } 14 \\
& \text { Small goods in trays, 1-lb. and } 11 / 2 \mathrm{lb} \text {. truck . . . . . . . . . . . . . . . . . . . . . . . . . . } 1 \\
& \text { City delivery in truck-country in boxes . . . . . . . . . . . . . . . . . . . . . . . . . . . . } 1 \\
& \text { Either-boxes require hauling dead weight . . ................................. } 1 \\
& \text { Use box direct to wagon.......................................................... } 1 \text {. } 70
\end{aligned}
$$

Question No. 2. What kind of material do you prefer a Box or Tray to be made of?

| No anwer | 11 |
| :---: | :---: |
| Wood | 50 |
| Wood and wire | 3 |
| Steel | 2 |
| Wire | 1 |
| Tin | 1 |
| Pulp board | 1 |
| Galvanized iron | 170 |

Practically all kinds of wood were mentioned. The following comments show the variety of opinion: wood veneer material; white pine; ash; odorless wood as spruce or cottonwood; light wood; tin; yellow pine; poplar; willow; wood; basketwood; elm; Oregon pine; gumwood; maple; 3-ply built up wood; absorbing non-heat conducting material well painted; galvanized iron; wire woven reinforced with metal; soft wood that will not split or splinter easily; wood permits washing and easy repairing.

Question No. 3. What kind of material is employed in container you are now using?
No anwer ..... 16
Not using any ..... 8
Wood ..... 36
Pulp board ..... 5
Wood and wire ..... 4
Iron ..... 170

Among the notations made are: cherry; white pine; spruce; cardboard; poplar; willow; white or boxwood; Oregon pine; basketwood; galvanized iron; pulp; and elm.

Question No. 4. Should container be as deep as the loaf is long or twice as deep?

$$
\begin{aligned}
& \text { No anwer . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . } 19
\end{aligned}
$$

The balance had many suggestions some of which were: as deep as the loaf is long plus clearance for runners; $1-\mathrm{lb}$. loaf twice as deep, $1 \%-\mathrm{lb}$. loaf as deep; 2 to 3 inches deeper; for wagons as deep as loaf, for shipping twice as deep; at least-as deep; $1 \%$ times as deep preferable; as deep as one loaf standing and one laying; depends how large loaf is; for hot bread as deep as loaf, for cold bread twice as deep; as deep as loaf or use middle boards; $\%$ as deep as loaf; $1 y_{2}$ times as deep; depends on consistency of bread; twice as deep on account of going behind grocer's counter the narrow container is better; for pan bread as deep as loaf, for hearth bread as deep as longest loaf.

Question No. 5. Do you prefer a container with opening on the bottom or a solid bottom?

The rest were made up of the following remarks; solid except hand holes at end; with openings like egg crates of slats notched on corners for stacking in trucks, bottoms of corner parts protrude and fit into lower crate; solid bottom open sides and ends; slat bottom almost solid.

Question No. 6. Do you prefer a ventilated or non-ventilated container?


The others remarked as follows: non-ventilated if loaf is cold enough packed; ventilated lined with paper; ventilated, though in very cold weather non-ventilated might preserve bread better; cardboard cases; depends on kind of bread.

Question No. 7. Do you prefer temporary storage of bread on bread rack shallow trays or boxes? State reason for your preference.


A great many reasons were given, most of which are listed below: racks to cool uniformly; containers to help keep moisture in; racks to cool properly which improves flavor; containers, wrappers from sliding on iron shelves; trays, a loaf on the rack 24 hours is as hard as a loaf in a tray 48 hours; trays save handling; trays facilitate checking; racks, bread does not get squeezed in containers; racks for proper ventilation; save handling, prevent crushing; racks, allowing to stand on racks till cool prevents breakage; ventilation; boxes save handling and keep bread from drying out; neither if bread is cooled before wrapping; boxes stack to save space; racks in summer, boxes if bread stands more than 1 hour before wrapping; boxes give better condition of bread; trays avoid handling and loaves from coming unwrapped; do not believe in packing bread before 2 hours out of oven; racks to allow bread to get maximum firmness before loading trucks.

Question No. 8. What size container do you use? This question was an eye opener. There were hardly two answers alike.

| No answer | 26 |
| :---: | :---: |
| None | 6 |
| Built to fit wagons | 4 |

The rest were given in the following terms: 48 22-oz. loaves; 30 loaves; 151 1⁄2 lb . loaves; 40, 24, 161 1⁄2 lb . loaves; 801 lb . loaves; $321 \frac{1}{2} \mathrm{lb}$. loaves; $271 \frac{1}{2} \mathrm{lb}$. loaves; 30 loaves scaled at $20 \mathrm{oz} . ; 5$ and $8 \mathrm{bu} . ; 1$ peck to 6 bu.; $11 / 2$ to 5 bu.; 3 bu.; discarded cartons from grocery stores; racks 18 " wide with 10 shelves high holding 250 loaves; 28x20x18; 38x22x12; 20x45; 32x23x10; 12x36x24; 22x14 1/2x11 7/8; 22x24x36; $15 \times 36 x 12 ; 9$ 'x3'x1'; 22x33x20; 21x28x9; 19x19x18 1/4; 13x23; 18x20x28; 19x15x171⁄2; 18x28x5; $21 / 2 x 3$ $1 / 2$.

Question No. 9. What kind of Box or Tray are you now using?


The kind used was made up of the following: cherry wood tray to fit wagon; wooden shipping case without lid; wire woven wooden slatted; Backus; folding boxes; Hubbard wired sewed folding box; hardwood veneer box; different sizes white pine; American; non-collapsible non-ventilated full bottom; wooden bread box; Anderson; tin box; card board; bread hamper; discarded grocery cartons; special shelves; pulp containers; solid wood; Lewis; collapsible wooden box.

The results of this questionnaire can be summed up by saying that the percent of bakers loading in trucks direct is about $20 \%$ as compared with about $61 \%$ loading in trays or boxes. The chief kind of box used and preferred is a wooden box. The depth of the boxes compared with the length of the loaf is a matter of personal opinion being nearly $50 / 50$ on once or twice as deep as the loaf is long. By far the majority prefer a solid bottom, ventilated box. The question of temporary storage is also far from definitely settled. All sizes and shapes of boxes are being used at terrific cost to the baker. Is it possible to standardize on a few definite sizes so that the box manufacturer and truck manufacturer can build standard boxes and bodies? What are your objections to standard
size boxes? Let us hear from you. We shall be glad to publish your opinions. These questionnaires will be filed and you may look them over any time you call at the office of the Secretary.

Is this information valuable? Do you want more questionnaires? If so, along what lines? Will you co-operate by sending in your properly filled out blank? This is your Society. What do you want? We will get it for you.

We are hoping that the box manufacturer and body manufacturer will now give us their angle on this question. We are sure it will help all of us to cut down on the tremendous number of sizes and kinds of boxes.

