The table above shows the lowest temperatures at which growth and/or toxin production have been reported by the more common types of food poisoning bacteria.

Note that except for Cl. botulinum type E, we could safely store all goods at slightly below 44° F. Type E is a relatively rare organism. Like the other botulism strains, it requires the absence of air and absence of competing spoilage organisms, and needs a neutral food to grow.

But unlike the other strains, it also seems to prefer fish products, and most important of all, it is rather easily killed by heat. The latter fact probably accounts for its rarity.

In any case, at adequately low chill temperatures foods do not become dangerous to eat. Any frozen-thawed food that has some ice in it would certainly not have become unsafe.

NOT HAZARDOUS

Frozen fruits and vegetables are not potentially hazardous no matter what temperatures they are held at after they thaw, because they either will not support growth of such bacteria, or they will become putrid from spoilage organisms before the dangerous bacteria have a chance.

Raw meat is known to be a source of food poisoning bacteria, but cooking makes it safe.

The precooked, moist, bland foods may be of potential danger to health, but only if they are held in the danger zone, say 50° to 110° F. for several hours, for food poisoning bacteria can survive freezing and grow in such products after thawing.

But the record of frozen foods is very good. Although the "do not refreeze" label implies otherwise, there is nothing about freezing or even refreezing foods that introduces any special hazard. In fact, the opposite is nearer the truth, because of the inability of these bacteria to grow at low temperatures and the tendency of many of them to die off to some extent in frozen storage.

Dr. MEHREN. I would like to add another observation on this general subject. Thawing and refreezing food products is standard commercial practice in producing many items. Seasonal products such as turkeys, orange juice, green beans, peas, red tart cherries, and cranberries are first frozen and stored in bulk containers. At a later date, processors of these products use them in preparing the final consumer item such as turkey pie or dinner, blended fruit juice, mixed vegetables, cherry pie, or cranberry cocktail. The final consumer item is then either refrozen or canned and distributed for retail sale.

CONTINENTAL BAKING CO. CASE

The Defense Supply Agency did not notify USDA that it had rejected 18,563 precooked frozen meals awarded under a DSA contract on October 12, 1966. We did not learn of this particular rejection until your current inquiry on rejected products was started. USDA inspectors stationed at this plant have no record or recollection of this product.

Since receiving your letter of March 20 requesting the Department's comments at this hearing, we have asked the Continental Baking Co. for information about these frozen dinners.

We are informed that there were 25,000 dinners in the original contract, DSA accepted over 6,000 of the dinners, and that 18,563 were rejected. Continental informs us that 18,293 of these dinners are still in storage at their plant. Therefore, only 265 of them have been utilized—practically all of which were used for laboratory testing. A few were sold last fall to employees in the company's thrift store.

Continental informs us that none were sold which, according to their tests, contained high bacteria counts. Continental assured us that they