

of the glass is removed, leaving behind a "skeleton." By further heat treatment this skeleton shrinks down to a volume which is 35 per cent. smaller than the original size. The acid treatment removes 36 per cent. of the body of the glass and leaves 64 per cent. behind. At this stage the glass dish feels rough to the touch, but does not feel porous. Actually at this stage it is filled with sub-microscopic air spaces. By final heat treatment the glass body shrinks just a bit more to a transparent, homogeneous state in which it is practically 96 per cent. pure silica. In this completed state it can be heated red hot and then dipped in ice water without cracking.

For all practical purposes the new low-expansion glass is equal to fused quartz and fused silica in its resistance to thermal shock. Fused quartz is costly because it is extremely difficult to fabricate, requiring a very high temperature for melting. Further difficulties arise from lack of suitable refractory materials in which to melt it and from the fact that the melting and vaporization points are close together. The new glass surmounts these difficulties. To give an idea of contrast between the old and the new glass, the following comparative figures for expansions are given: ordinary window glass 80, Pyrex baking glassware 32, and the new glass only 8. The goal is zero expansion. The new glass, it can be seen, has dropped nine tenths of the way to zero.

ITEMS

ORGANIZED medicine, already on record by American Medical Association resolution as opposing the Wagner

Health Bill, expressed itself through its witnesses at Senate committee hearings as suspicious of the proposed Federal aid to states in providing more hospitals, giving compensation to those temporarily disabled by illness, and giving grants through states for medical care of those who can not pay for it themselves.

BUBONIC plague, like other forms of death in these days, has apparently taken to air travel. Not on the man-made wings of airplanes, but on the wings of hawks, owls, crows and other predatory and scavenger birds is reported by the U. S. Public Health Service. The suggestion comes from William L. Jellison, assistant parasitologist at the Rocky Mountain Laboratory of the Service. Thirty years ago, Dr. W. C. Rucker made a similar suggestion, but limited it to one species of burrowing owl that shares habitations with the ground squirrels and other rodents that carry fleas which are in turn the ultimate carriers of the plague germs. Mr. Jellison, however, greatly extends the list of suspected birds, to include two species of hawks, two of falcon, three of owl and one species each of eagle, magpie and crow. All these birds prey abundantly on the plague-carrying rodents. The scavengers, like crows, devour their catches on the spot, but predators, like hawks and owls, carry the carcasses to their nests, with the possibility of distributing the fleas either on the way or after they arrive. In several cases, these flesh-eating birds were observed in attacks on rodents dead or dying of the plague.

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