

TABLE I.

Comparison between duplicate samples of different milks.

Sample No.	Anhydrous Lactose in Milk 1 Percent	Lactose in Milk 2 Percent	Lactose in Milk 3 Percent
1	4.08	4.19	4.23
2	4.11	4.20	4.20
3	4.10	4.20	4.22

TABLE II.

Effect of the addition of lactose to 10 cc. samples of milk.

Sample No.	Sample ten times diluted, required to reduce 25 cc. of Benedict's Quantitative Solution. cc.	Anhydrous Lactose in Sample gm.	Anhydrous Lactose Added gm.	Added Lactose Recovered Percent
Milk 4				
1	16.7	0.405	None	
2	14.9	0.454	0.050	98
3	15.0	0.451	0.050	92
Milk 5				
1	16.1	0.420	None	
2	14.4	0.469	0.050	98
Milk 6				
1	16.4	0.413	None	
2	7.5	0.902	0.505	97
3	10.2	0.664	0.2525	99
4	10.1	0.670	0.2525	100.8

A FOLDING PAPER DEMONSTRATING CASE FOR BACTERIAL CULTURES—A PAPER INSET ANIMAL NECROPSY TRAY.

M. R. SMIRNOW, M D., NEW HAVEN, CONN., IN JOURNAL A. M. A.

A bacteriologist frequently finds occasion to demonstrate cultures of microorganisms, either to student classes within or near the laboratory or at meetings at some distance. In such circumstances it would be desirable to have not only some light and compact receptacle for such cultures, but also one in which the cultures could be shown to the best advantage.

It was for just such an occasion that, in looking about for a proper demonstrating case, I finally invented the form of folding paper display case shown in Fig. 1.

This case is easily made by using a No. 160 white card paper. The design is mapped out, cut and creased, as indicated in Fig. 2. The holes are punched out with a $\frac{5}{8}$ -inch die. The case is then folded, fastened and put away until it is to be used. When the cultures to be demonstrated are ready they are placed in proper order into the case, and any description desired may be written directly on the face of the case at both its upper and lower margins. All dimensions except

the length are constant for any size display case desired, the length varying with the number of tubes the case is to hold, requiring $1\frac{1}{4}$ inches for each tube. The height of the case is $6\frac{1}{4}$ inches and will hold the regulation size culture tube, the cotton plugs of which are best cut down to the mouths of the tubes and sealed with paraffin.

At several meetings where the demonstration of the cultural characteristics of bacteria was desired, I have used a number of these cases of various sizes with excellent success. The advantages of this paper demonstrating case are:

1. It is of light weight, is easily constructed, and is excellently suited to demonstrating purposes.
2. It takes up little room and may be conveyed any distance, packed in a hand bag or suit case.
3. The culture tubes are separated from one another and cannot be broken.

PAPER TRAY.

This necropsy tray is intended as a convenient piece of apparatus for laboratories in which a considerable number of animal necropsies are conducted. It is designed especially with a view of permitting the least amount of handling of the animal. Its oiled paper inset affords no opportunity for the spread of blood or other fluids, and acts as a wrapping material for the remains that are to be destroyed.

The tray proper is constructed of a single piece of sheet galvanized tin and measures 20 by 9 by $1\frac{1}{2}$ inches for rabbits and 9 by 6 by $1\frac{1}{2}$ inches for guinea pigs. The corners of the tray should be finished off by making small flaps from the ends onto the sides, riveting them in place, and soldering the seams on the inside. A double leg holder made of flat spring brass about three quarters the length of one of the ends and five-eighths inch wide is riveted to one end. The brass is made rough on the inner surface to increase its gripping power. This end of the tray is made a full quarter-inch lower than the other end or the sides of the tray in order to permit the side clamps to "ride" on the sides of the tray. The sides are somewhat lipped or flattened on their tops, measuring one-quarter inch in width. At the end farthest from the leg holder is soldered a corrugated strip of galvanized tin, about six inches in length and one-quarter inch wide, fitting exactly over this lipped surface. These corrugations, together with a spring brass clamp, are to act as leg holders for the forelegs of the animal, automatically adjusting themselves to any size animal.

This clamp is constructed of spring brass. It is made in the manner illustrated and fits loosely over the lipped edge of the side of the tray. The square portion of the clamp must be heated to permit bending, as spring brass cracks and breaks instead of bending at acute angles. The end of the clamp is so constructed that it will allow free play in its movement over the corrugations except when there is some pressure underneath the curved portions of the clamp, at which time it should catch and hold firmly.

The paper inset is best made of No. 160 oiled paper, cut to size and folded to fit the tray. All its sides are folded $1\frac{1}{2}$ inches from the edge of the paper, and the corners turned to one side or the other.

The tray is simple in construction, costs very little and can be used indefinitely,

as there is nothing that requires special attention. The only things that might possibly need replacing are the brass clamps, which can be turned out by any laboratory technician. The paper insets can be folded by hand or can be supplied in quantities at little cost by some paper box manufacturer.

Though from a sanitary standpoint no special advantage can be claimed for this tray over the ordinary piece of board, newspaper and nails, always used in bacteriologic laboratories, yet the tray described acts as a much better piece of apparatus for purposes of demonstration, and adds to the general neatness in laboratory technic.

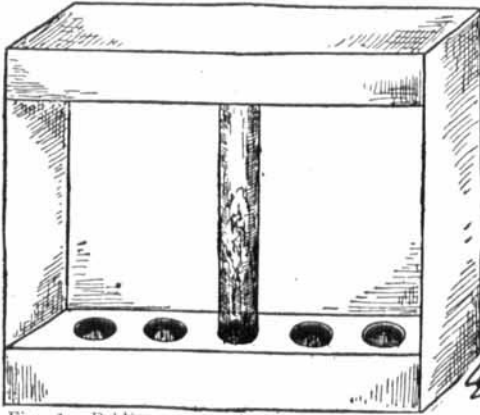


Fig. 1.—Folding paper demonstrating case for bacterial cultures

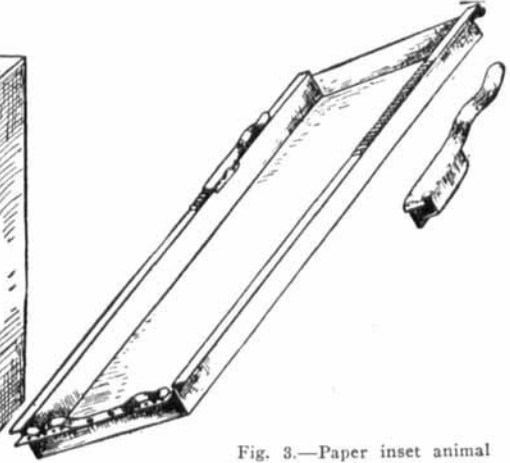


Fig. 3.—Paper inset animal necropsy tray

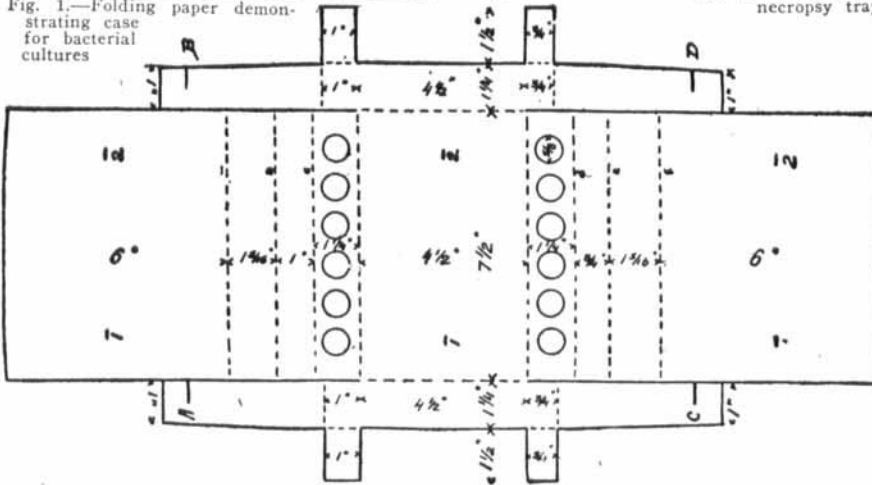


Fig. 2.—Plan of demonstrating case. A 160-pound white bristol cardboard is used. The design is mapped out according to the dimensions indicated. The cardboard is cut on all solid lines except slits marked *A*, *B*, *C* and *D*, also 1, 1 and 2, 2, which are to be done later. All dotted lines are creased with some blunt instrument, the cardboard being placed over soft wood. As many apertures as are desired are punched out, 1/4 inches for each being allowed. All creased lines are bent forward except *a*, *b*, *c*, *d*, *e* and *f*, which are to be bent backward, and are folded as in illustration. The flaps *A*, *B* and *C*, *D* should overlap; slits are cut in opposite direction, as indicated, so that they will properly lock. With a sharp instrument are cut small slits 1 and 2, which will go through three thicknesses of paper that make up the back of the case, and by which the whole is fastened with ordinary paper fasteners.