Clinical and other Notes.

A SIMPLE FORM OF "DRESSINGS DESTROYER."

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Field appliances for the destruction of waste matters may be regarded as of two types or as falling into two classes which, for the sake of distinction, are known as "Incinerators" and "Destrokers."

"Incinerators" are used for the incineration of ordinary camp or barrack refuse and similar waste matters which by their nature can be incinerated without the assistance of separate fuel. They are made in many forms according to special requirements or conditions.

"Destrokers" are used for the destruction of waste matters which, owing to their nature or condition, cannot properly be dealt with otherwise than by the combustion of fuel, and for the destruction of which an allowance of fuel is made. Destrokers of this kind must incorporate some form of fire-box or burner and must be designed to utilize the maximum possible calorific value of the fuel consumed.

The destroker in most common use is that used for the incineration of the contents of bucket latrines, a good example being the A.S.H. Fæces Destructor which has recently been developed to work satisfactorily with the Oil and Water Flash Fire, using waste sludge oil as fuel [1].

In modern conditions there is great need for a simple destroker specially adapted for the destruction of articles of a textile nature, such as "dressings" of various kinds, the contents of the "sani-bin" and similar articles. To be completely satisfactory, a destroker of this kind must comply with certain fundamental requirements which include the following:

(a) It must be simple in design and easily improvised as either a mobile or fixed unit.

(b) It must be easily managed and run, e.g., by the personnel of a women's unit.

(c) Destruction must be both rapid and complete (smouldering must be avoided).

(d) Any fumes produced must be effectively combusted.

(e) The fire must be of a type producing a large and intensely hot flame.

A destroker designed to meet these requirements, made and tested at
1. PORTABLE DRESSINGS DESTRUCTOR.

- DETACHABLE FLUE UNIT MADE FROM 2 FIVE GALLON OIL DRUMS
- DESTRUCTOR UNIT 5 GALL OIL DRUM
- LOOSE (SLIP) JOINT
- 1/2 BARS (TWO)
- 5/8 IN. DIA. PIPE

SECTIONAL ELEVATION, DETAIL OF FLASH PLATE

2. FIXED DRESSINGS DESTRUCTOR.

- FLUE TO BE LIFTED OFF FOR FILLING COMBUSTION CHAMBER
- 16 IN. (COVER PLATE)
- 5/8 OIL PIPE
- 5/8 BARS (TWO)

SECTIONAL ELEVATION

Fig. 1

Fig. 2

HALF PLAN & HALF SECTIONAL PLAN.
the Army School of Hygiene, is illustrated in figs. 1 and 2. It consists of four principal parts:—

(1) The fire-box or outer container.

(2) The inner container, in which the articles for destruction are placed.

(3) A short, tapering and detachable flue pipe 6 inches in diameter at the top and enlarged to 11 inches (the diameter of a 5 gallon drum) at the bottom.

(4) A simple Oil and Water Flash Burner [2]—of which two forms are shown—and fuel (oil and water) containers.

The inner container and flue can be made as standard units which can be fitted either into an improvised fire-box made from a 10 gallon oil drum, as shown in fig. 1, to form a light portable destructor; or into a small brickwork surround, to form a fixed or permanent destructor, as shown in fig. 2.

The flue is fitted with a stout handle by which it can be lifted from its position, leaving the destructor fully open at a height to enable the contents of any form of bin to be tipped directly into it. No handling of the contents is necessary.

The inner container is made from a 5 gallon oil drum. A 6 inch circular hole is cut in the bottom and, to this, a truncated and perforated cone, about 7 inches in height and open 6 inches in diameter at the bottom and 1 inch in diameter at the top, is fitted as shown in the drawings. Holes about 1½ inches square are cut in the lower portion of the sides of the drum and circular holes about ½ inch in diameter are cut in the cone, but no hole either in the cone or drum is less than 2 inches from the bottom.

The design ensures that articles to be destroyed are spread or opened out in the inner container—not clogged in a mass—in such a way that they are at once subjected to intense heat (a) at the bottom, (b) through the centre and (c) over the surface. The whole of the heat generated and the whole of the draught set up is made to pass under, round and through the contents of the destructor and thence to the flue. If the Oil and Water Flash Fire is properly started before the destructor is "charged," complete and rapid combustion of cotton and similar articles is ensured, no matter in what condition they may be. The ash produced is prevented from falling on to the burner plate except in insignificant quantities. In practice it is found that flame is omitted from the flue, fumes are combusted and the emission of unpleasant odours is effectively prevented. The smoke produced is negligible.

The destructor is simple to make either as a portable or fixed unit, and is easily managed by one person. It is particularly suitable for use in camps occupied by women.

The materials required are as follows:—
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Materials Required.

No. 1 Portable Destructor
Drums, oil (10 gal.), 1
Drums, oil (5 gal.), 3
Oil-water burner, 1
Bars 3 in. or 4 in. diameter, 12 in. long, 2
1 gal. petrol or other tins fitted with "chicken feed" drippers, or other suitable supply devices, e.g. taps, 2

Note.—The inner container is made from one 5 gal. drum and the flue from two similar drums.

No. 2 Fixed Destructor
Bricks, 56
Sand, 3 buckets
Lime (hydrated), 1 bucket
Concrete base, 2 ft. square
Sheet iron plate, 2 ft. 6 in. square, with circular hole 11 in. in diameter in centre, and with the edges turned down 3 in.

Note.—These are in place of the 10 gal. drum used in No. 1. Other materials are as for No. 1.

Where a larger destructor is required the destructor unit may be made from a 10 gallon drum, the other parts being constructed accordingly.

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References.


Congenital Cystic Disease of the Lung.

By Lieutenant-Colonel J. S. Richardson, M.D.Camb., M.R.C.P., Royal Army Medical Corps.

The number of case reports of congenital cystic disease of the lung is by now quite considerable; in 1937 Schench had found 387 such cases in the literature. It is felt, however, that cases may still be missed and thus a report of three cases seen in serving soldiers is justified.

These cysts appear to result from a failure in the normal process of lung budding. This budding does not develop beyond a certain point and the end of the bronchus dilates to occupy the space that the alveoli should have filled. A cystic space, containing air, is thus formed in communication with a bronchus although the opening may be minute and the bronchus extremely tortuous.

Histologically the cyst walls resemble those of the bronchial tree being lined with ciliated columnar, cubical or squamous epithelium.

At a discussion at the Royal Society of Medicine, Burton Wood (1940) divided these cases into four clinical groups: (1) Balloon cysts; (2) solitary cyst; (3) multiple cysts of the gross "Bubble" type; (4) cystic disease of the "Berry" type.