Under the floor or false bottom is a removable sliding hopper drawer with its inner bottom sloping in all directions toward one outer corner which is provided with a small drain or draw-off cock. Accordingly, all liquid discharge from the animal will pass into the hopper drawer where it is accurately and completely collected, and from which it may be completely drawn off at will. The construction material insures against corrosion and contamination of the collected fluids. (See Figs. 2 and 3.)

The legs of the cages are removable so that they may be stacked in tiers. (See Fig. 4.) Castor bases may replace the legs.

The construction and the materials of the cages make them practically indestructible, and permit of easy thorough cleansing and sterilization by disinfecting and cleansing agents, boiling water and steam. The weight of the cages permits of easy moving. The cost is surprisingly low.

By an easy modification of the foregoing construction a very inexpensive cage is provided suitable for simple storage and isolation. Full mesh panels may be used for the sides and door of the cage. The back and the top may be made of solid steel or mesh as desired, and the bottom of solid steel in place of mesh. No hopper drawer is then needed. (See Fig. 5.)

ASSAY OF GROUND FLAXSEED FOR NON-VOLATILE, ETHER-SOLUBLE EXTRACTIVE.*

BY JOSEPH L. MAYER.

The U. S. Pharmacopœia X, on page 205 states that "linseed yields not less than 30 per cent of non-volatile, ether-soluble extractive" and on page 206 directs that the assay be made "as under Non-Volatile, Ether-Soluble Extractive on page 466." The method on page 466 is as follows:

"Extract completely 2 Gm. of the prepared drug (paragraph VI) dried over sulphuric acid for not less than twelve hours by subjecting it during twenty hours, to the action of dehydrated ether (page 475) in continuous extraction apparatus. The weight of the extract, after drying in a desiccator and then at 110° C. until of constant weight, represents the non-volatile portion of the extract."

While the continuous extraction apparatus is frequently permitted to run all night and in this way the assay quickly completed, it is often a risk to follow this procedure due to fear of an accident of some sort, and therefore the work is carried on during working hours, three working days being consumed in the assay.

With the object of shortening the time required for the assay I attempted to make the analysis by the following procedure:

A.—One Gm. of ground flaxseed was placed in a 2-oz. bottle, 30 cc. of ethyl ether added and after being corked the bottle was frequently shaken from February 5th until April 9th when the liquid was decanted on a filter, the filtrate being collected in a tared glass crystallizing dish. When the liquid had run through, the residue in the bottle was spritzed on to the filter by means of ether from a wash bottle and when the liquid had run through the bottle and filter with contents repeatedly washed with 10-cc. portions of ether employing a total of about 75 cc. After evaporating the ether on the steam-bath, the material was heated to constant weight.

* Read before annual meeting of the New York State Pharmaceutical Association, June 1929.

The assay showed the presence of 30.547% non-volatile, ether-soluble extractive.

B.—Another sample of 0.500 Gm. was placed in a 100-cc. beaker, 20 cc. of ether added, the material stirred by means of a glass rod for about ten minutes, and then allowed to stand for about one hour when it was poured on a filter. The filtrate was collected in a tared glass crystallizing dish. The filter and contents were then washed with ether employing about 75 cc. in all. After evaporation of the ether, the dish and contents were weighed.

The presence of 30.600% of non-volatile, ether-soluble extractive was indicated.

In an effort to determine whether these findings, which checked closely, represented the actual amount of ether-extractive, I made two assays employing two Soxhlets, following the U. S. P. directions with reference to twenty hours continuous extraction, ether, etc.

C.—Employing a Soxhlet with a stop-cock on side, an Allihn condenser and all ground joints.

The assay indicated the presence of 37.032% of non-volatile ether-soluble extractive.

D.—Employing a Soxhlet, which did not have a glass stop-cock on side, had a Hopkin condenser and all ground joints.

The assay indicated the presence of 37.023% of non-volatile, ether-soluble extractive.

SUMMARY.

These figures clearly indicate that in order to obtain accurate results in the determination of non-volatile, ether-soluble extractive of flaxseed it is necessary to follow the method of the U. S. P. and employ some type of continuous extraction apparatus.

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AUSTRALIAN SANDALWOOD OIL COMPARED WITH THE OFFICIAL.*

BY EDWARD SWALLOW.

The various kinds of sandalwood oils, from other sources than the East Indian, or official Sandalwood Oil, which is obtained from *Santalum album*, have caused more or less confusion in the minds of both the pharmacists and government authorities in most countries of the world.

Generally speaking, most of the foreign pharmacopœias recognize only the sandalwood oil that is distilled from the wood of the *Santalum album;* therefore, it follows that in the countries where this drug is recognized as the source of the official oil, other oils obtained from other woods may not be used for the recognized product.

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* Presented to Scientific Section, A. PH. A., Portland meeting, 1928.