No. 703,897. Patented July 1, 1902.

A. W. COOKSEY.

FITTING FOR LABORATORIES OR THE LIKE.

(Application filed Apr. 25, 1902.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 2.

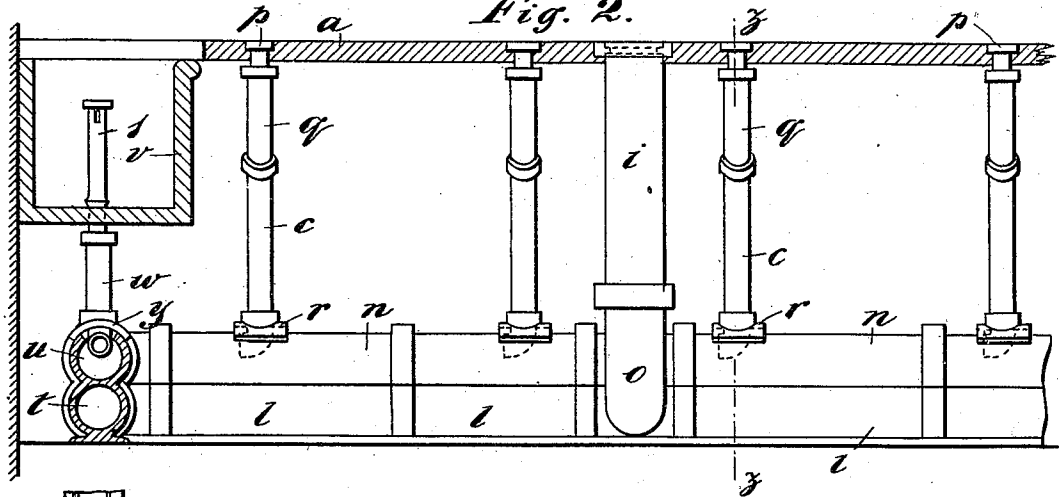
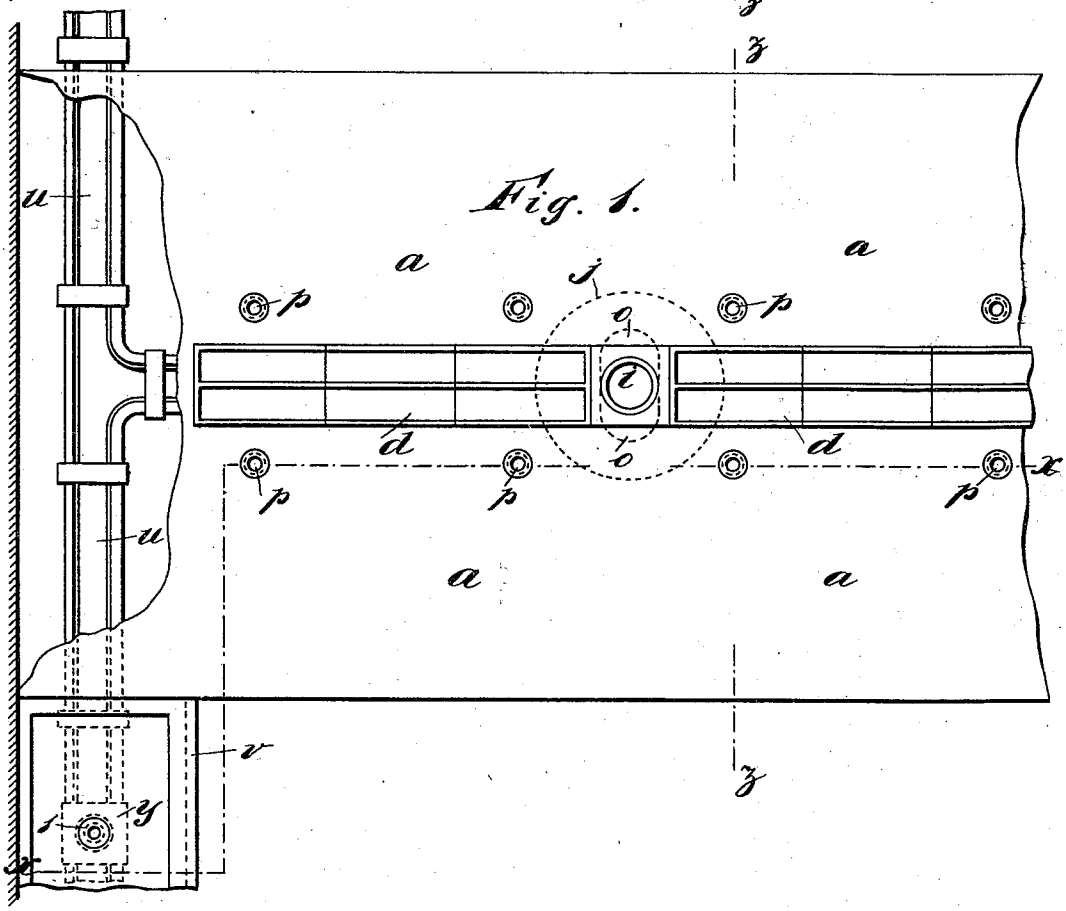


Fig. 1.



Witnesses.
Stephen Edward Gimson
William Anderson Smith

Inventor.
Arthur William Cooksey

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 703,897. Patented July 1, 1902.

A. W. COOKSEY.

FITTING FOR LABORATORIES OR THE LIKE.

(Application filed Apr. 25, 1902.)

(No Model.) 2 Sheets—Sheet 2.

Fig. 3.

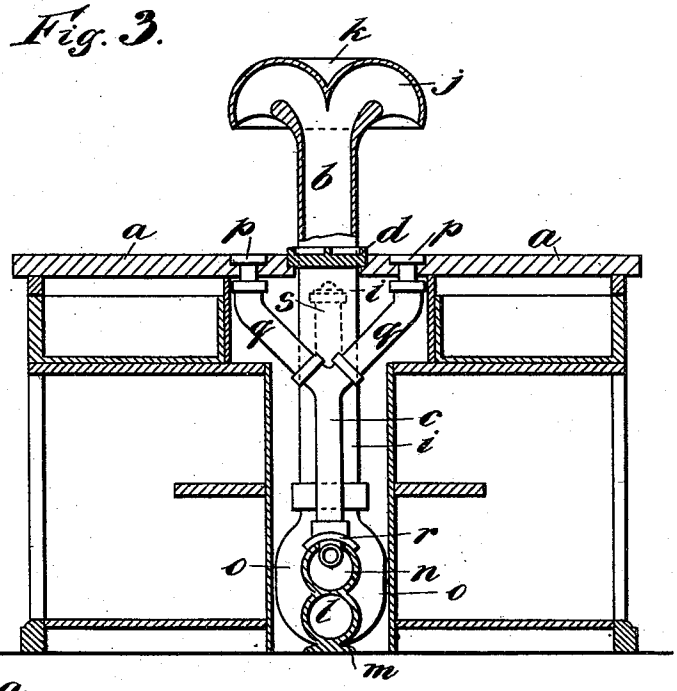
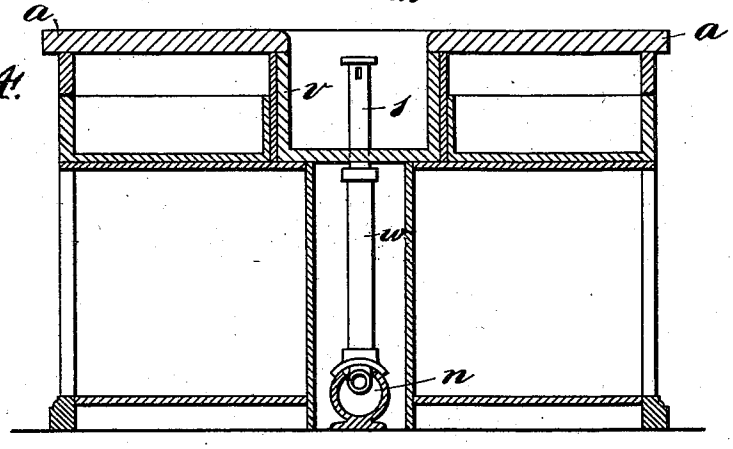


Fig. 4.



Witnesses.

Stephen Edward Gunyon

William Anderson Smith

Inventor.

Arthur William Cooksey

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ARTHUR WILLIAM COOKSEY, OF LONDON, ENGLAND.

FITTING FOR LABORATORIES OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 703,897, dated July 1, 1902.

Application filed April 25, 1902. Serial No. 104,729. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR WILLIAM COOKSEY, A. R. I. B. A., a subject of the King of Great Britain, residing at London, England, have invented certain new and useful Improvements in Fittings for Laboratories or the Like; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The special object of the present invention is to simplify the construction and working of certain of the fittings which are required for use in chemical laboratories; but parts of the invention are applicable to fittings employed in other institutions—such as hospitals or dispensaries, for example.

In the accompanying drawings, Figure 1 is a plan view of a pair of students' benches arranged and fitted in accordance with my invention. Fig. 2 is a vertical longitudinal section on line *x x* of Fig. 1. Fig. 3 is a vertical transverse section on line *z z* of Figs. 1 and 2; and Fig. 4 is a similar view to Fig. 3, but illustrating a modification thereof.

Similar letters of reference relate to like parts in all the figures of the drawings.

It will be seen on reference to Figs. 1, 2, 3, and 4 that instead of making the students' benches double in order to accommodate a given number of students on each side of one bench I divide such double benches and leave a space between each pair of adjacent single benches *a*, and in this space I fix the ventilating-hood *b*, fume-ducts *i*, and drain-pipes *c* (hereinafter more particularly referred to) in such a manner that the woodwork of each single bench *a* shall be altogether independent structurally of the system of ventilating and drain pipes. The before-mentioned space between the tops of the single benches *a* is filled in by a series of shallow trays *d*, preferably of glazed earthenware, and furnished with guide-fillets, as shown, for the purpose of keeping in place the various bottles and the like employed by the students. The trays *d* may rest in suitable rabbets or grooves provided for the purpose on the upper back edges of the benches *a*, and the surfaces of the two adjacent benches *a* and the trays *d* are thus more or less continuous. Between the trays *d* I provide ventilating fume-ducts *i*, adapted to be closed when not required by a plug or cap; but when in use I prefer to fit each of the said fume-ducts with a ventilating-hood *b*, furnished with a conducting-cap *j*, somewhat of a mushroom or umbrella shape, but with a depressed central portion *k* for the purpose of collecting the fumes from all around such fume-duct and guiding or conducting the same down the said duct in a direct manner. These vertical fume-ducts *i* are continued down below the level of the benches *a* into a horizontal fume-duct *l*, which rests on or is supported from the floor, as shown, and entirely independent of the benches *a*. The horizontal fume-duct *l* is preferably cylindrical in section, Fig. 3, with suitable flanges or feet *m*, a steady and firm base. On its upper part, Fig. 3, is formed therewith a trough or gutter *n*, preferably of more or less cylindrical section, but open at the top for, say, one-quarter of its circumference, which serves as a waste-trough. The lower parts of the before-mentioned vertical fume-ducts *i* are branched out, as shown at *o*, so as to partially surround the waste-trough *n* and enter the before-mentioned horizontal fume-duct *l* on each side thereof. Suitable orifices are provided in the tops of the benches *a*, opposite each of the students, into which fit more or less loosely funnels or drain-tubes *p*, the lower end of each of which enters below the bench-top and also more or less loosely one of the upper branches *q* of the Y-shaped vertical drain-pipe *c*, the stem of which or a prolongation thereof is furnished at or about its lower end with a bridge-piece *r*, adapted to take over and rest securely, but loosely, upon the upper longitudinal edges of the before-mentioned waste-trough *n* in such a manner that any liquid poured into the funnel or drain-tube *p* on the bench-top flows into the said waste-trough *n*, while the more or less loose connections of the various parts enable them to be readily shifted in position or renewed as and when required. In some cases I form an inspection-tube as an upward prolongation of the central stem of the Y-shaped vertical drain-pipe *c*, as shown in dotted lines at *s* in Fig. 3.

The combined horizontal fume-ducts *l* and waste-troughs *n*, running under the center of each pair of benches *a*, are connected at one end with a similarly-combined main fume-duct *t* and waste-trough *u*, running at right angles to the benches *a*, as shown in Figs. 1 and 2. This main waste-trough may also serve to collect the drainage from the sinks *v*, with which each set of benches *a* is furnished. This may be done by means of suitably-shaped waste-pipes *w*, mounted by means of similar bridge-supports *y* to those hereinbefore mentioned, the upper ends of the waste-pipes *w* being adapted to receive, more or less loosely, the ends of the overflow-pipes 1, fitted to the said sinks *v*.

In the modification illustrated in Fig. 4 the trays *d*, ventilating-pipes *b*, and fume-ducts *i* and *l* are dispensed with and in place thereof is fitted a sink *v*, with an overflow-pipe 1, connected with the waste-trough *n* by means of the pipe *w*.

I prefer to make the various parts hereinbefore described of glazed earthenware; but it will be obvious that, if desired, they may be made of other more or less suitable material—such, for example, as glass or enameled ironware.

I claim—

1. The combination in laboratory-fittings of a horizontal fume-duct *l*, side passages *o*, vertical fume-duct *i*, ventilating-hood *b* and conducting-cap *j k*, with a horizontal waste-trough *n*, bridge-piece *r*, vertical drain-pipe *c q*, drain-funnels *p*, benches *a* and trays *d*, substantially as described.

2. The combination in laboratory-fittings of a horizontal fume-duct *l*, side passages *o*, vertical fume-duct *i*, ventilating-hood *b* and conducting-cap *j k*, with a horizontal waste-trough *n*, bridge-piece *r*, and vertical drain-pipe *c*, *q*, substantially as described.

3. The combination in laboratory-fittings of a horizontal fume-duct *l*, side passages *o*, vertical fume-duct *i*, with a horizontal waste-trough *n*, bridge-piece *r* and vertical drain-pipe *c q*, substantially as described.

4. The combination in laboratory-fittings of a horizontal fume-duct *l*, side passages *o*, with a horizontal waste-trough *n*, substantially as described.

5. The combination in laboratory-fittings of a horizontal fume-duct *l* with a horizontal waste-trough *n*, substantially as described.

6. The combination in laboratory-fittings of a horizontal waste-trough *n*, bridge-piece *r* and vertical drain-pipe *w*, substantially as described.

7. In laboratory-fittings the ventilating-hood *b* and conducting-cap with a depressed central portion *k*, substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

ARTHUR WILLIAM COOKSEY.

Witnesses:
STEPHEN EDWARD GUNYON,
WILLIAM ANDERSON SMITH.