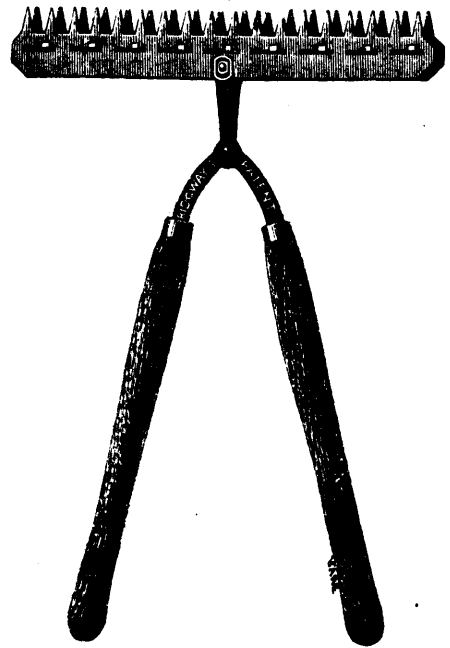
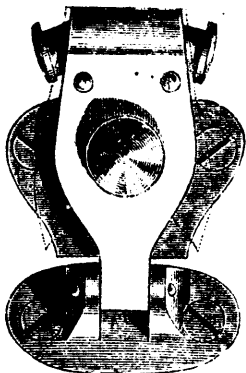


will give it, determining, at the same time, what weight should be given to the suggestion that house drain traps are likely to increase the danger of spreading contagion among the several families in the house where contagious diseases appear. We hope the commissioners will determine these points, so far as possible, from actual observation, and not by quotation from English authors. Notwithstanding the fact that for some thirty years sanitary science has been more or less carefully studied in England, plumbing as practised in this country has been, and still is, incomparably superior to that in Great Britain. There are but few absurd notions connected with house drainage which cannot be sustained by unlimited quotations from English writers of reputation. For example, a few years ago some eminent "authority" found fault with the plan of placing water closets in dwellings and suggested the desirability of cutting them off from the living and sleeping rooms. The next book which appeared carried this idea further; the next further still, until the crowning triumph of theoretical sanitary engineering was reached by an "eminent" author who seriously advocated a Parliamentary enactment requiring water-closets to be placed in towers built wholly separate from houses, and reached from the several floors by bridges with open sides. We notice the same progressive tendency among English writers dealing with this question of trapped and disconnected house drains. For some years this idea of broken connections with sewers and cesspools has been a popular one in England, and a great deal of ingenuity has been expended in developing it. The theoretical sanitarians long ago learned from practical men to distrust simple traps in house drains, and in most of the later works absolute disconnection is advocated—the house drain emptying into some kind of vessel open at the top, and this discharging to the sewer by a pipe dipping below the constant water level. Those who have studied and done good work according to the best American practice, know perfectly well that such precautions are not essential to good house drainage, and that better results are attainable by cheaper and simpler methods. While conceding the great and permanent value of English sanitary literature, we can say with confidence that the great bulk of it has very little practical value for the American specialist in the mechanics of hygiene. From a library which includes nearly all the standard and much of the current English literature of sanitary science, we could pick out very little relating to house drainage which would be of use to the intelligent American plumber seeking information as to improved methods and materials. The reading would repay the effort, but it will be found to yield on these practical topics a great deal of sack to very little bread.

ADKINS' PATENT SASH FASTENER.

A new brass sash fastener, as shown in the accompanying engraving, has been brought out by Messrs E. Bach & Co., of Coleshill street, Birmingham. It is on the automatic principle, that is to say, self-locking, very strong and effective. The fastener is closed by a simple pull-down movement of the finger, when a pair of side spring clips of beeswing shape, engage in the slots on each side of a stud or pivot, and instantaneously lock it. The fastener is as readily opened by the finger and thumb. This patent sash fastener cannot be opened with a knife or other implement from the outside, and the sash is held sufficiently tight to prevent rattling or vibration of the window. The arrangement is simplicity itself.



NEW PATENT GRASS-CUTTING MACHINE.

Mr. A. Ridgeway, patentee and manufacturer of improved horse clippers, sheep shears, &c., of Macclesfield, has recently brought out a new patent grass-cutting machine, which we here illustrate as a novelty. This is a new application of the principle of the horse and hedge clippers, and it supplies a ready and inexpensive means of cutting and trimming grass-plots and lawns, edgings, and borders, which have always been inaccessible to the revolving cutters of the ordinary lawn mowing machine. The patentee claims that his new grass-cutter is much less costly than any lawn mower; that it is simple in construction, easily worked, and not readily liable to get out of order; and when dull by long use, it may be quickly and easily sharpened by an ordinary saw file. We have submitted this new implement to some practical tests, and have found that it can be worked in places and situations where it has heretofore been impossible by the aid of any machine to cut the grass rapidly and well. It is a most valuable tool in the hands of the tidy gardener, since it can be used for trimming better and more quickly the edges of garden walks or lawns, flower beds or borders, than any instrument yet used for the purpose. On old and neglected lawns, where the grass has become rough and dead, the new cutting machine will do less rapid and effective work; and it will either leave the grass on the ground to serve as a mulch, or the implement may be used as a rake for collecting it prior to removal. The machine is sold at a low price.

SAFETY FROM DROWNING.—The *Sheffield Telegraph* says that the Rev. W. Cowell Brown, Wesleyan minister, of Sheffield, has patented an invention which appears to be a simple and practical means of lessening the number of deaths by drowning. A chemical preparation is inserted in a portion of the coat, waistcoat, or dress. It does not add to the weight or in any way alter the appearance of the garment. The preparation is inserted between the lining and the cloth; in the case of a coat, it is placed on each side of the breast and up the back. The moment a man touches the water the coat inflates and he cannot keep his head under the waves. The invention was practically tested at the swimming-bath of the Sheffield Bath Company, recently. The inventor states that his apparatus, which would simply form an additional lining inserted in a portion of the garment, would sustain a person in the water as long as he could possibly endure the exposure. For 40 or 50 hours it would be effective for its purpose. In the event of a person losing consciousness, the lining in the back would form a kind of bed, and that in the breast a pair of pillows, against which his head would rest.