The Adams inhaler : manufactured only by Peter Harrower, chemist, 136 Cowcaddens St., Glasgow.

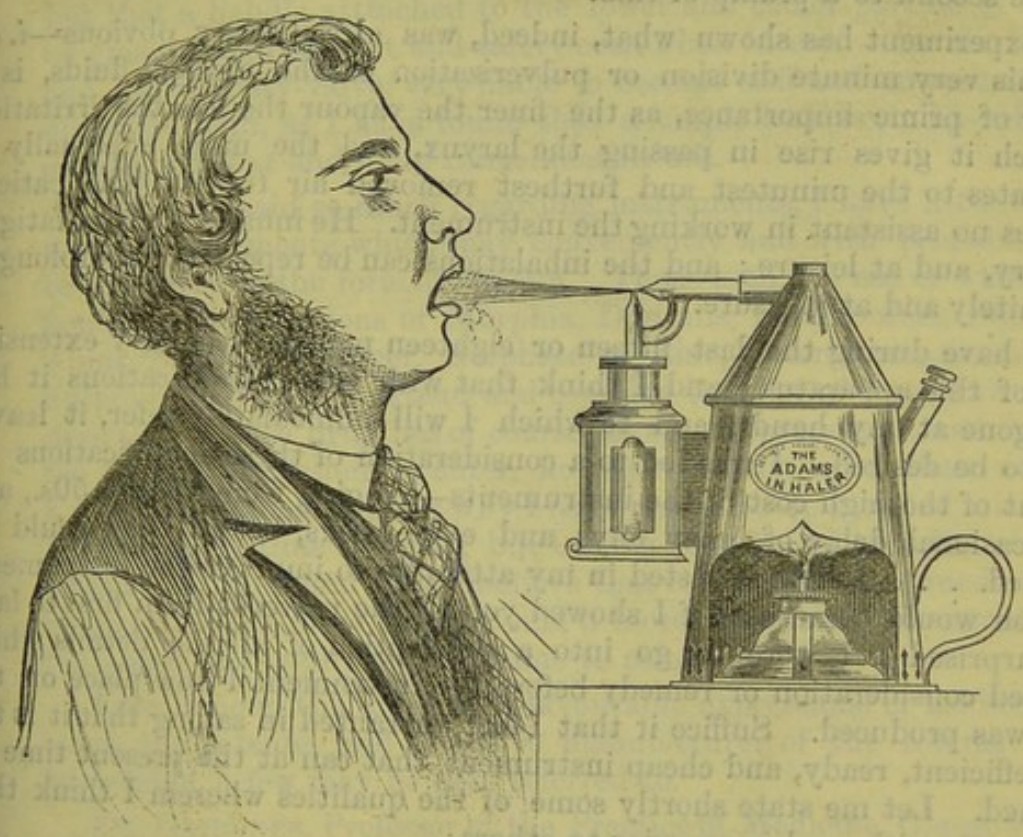
THE ADAMS INHALER,

MANUFACTURED ONLY BY

PETER HARROWER, Chemist,

136 COWCADDENS ST., GLASGOW.

TIN, 5s. EACH.



BRASS, 10s. 6d. EACH.

THE ADAMS INHALER is an improved apparatus for the production of medicated vapours employed in the Treatment of Diseases of the Lungs, Throat, and Air Passages.

The highest medical authorities recommend the inhalation of medicated vapours in the treatment of affections of the lungs and air passages; and so highly is this mode of treatment now being estimated, that Sir James Y. Simpson, in an address delivered at Edinburgh to the Graduates of that University, thinks it probable "that the day will yet come when our patients will be asked to breathe or inspire most of their drugs, instead of swallowing them."

But the inefficiency of most of the contrivances for effecting this object, and the cost of others, has had a deterring influence. Until a very recent date there has not existed a means by which medicines, however potent, could be applied to the mucous lining of the lungs, unless that these substances were either volatile in themselves, or were capable of being dissipated in the air by the action of heat artificially applied. At length, in 1858, an ingenious French physician, Sales-Giron, invented an apparatus, by means of which fluids containing dissolved medicaments, whether volatile or non-volatile, could be converted into a fine spray or mist, capable of reaching the extreme bronchial tubes when inhaled. Various modifications of this apparatus have since been tried, but a convenient and portable con-

trivance has, till the present time, been a desideratum. At length, by a combination of several instruments, and the use of steam, an instrument has been brought into use, regarding which Dr. Adams makes the following remarks in a communication read by him before the Glasgow Medico Chirurgical Society, 7th Feb., 1868 (published in the "Glasgow Medical Journal," March, 1868):—

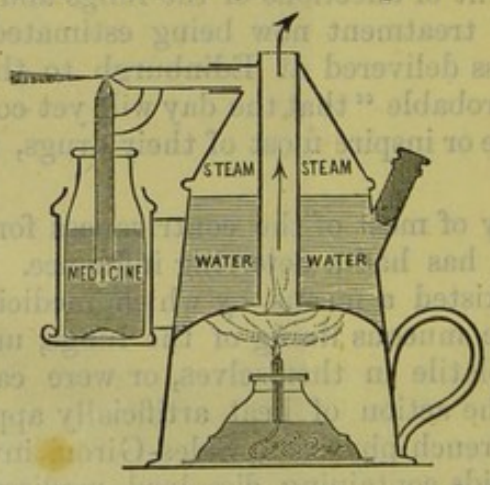
"Contrasting the vapours produced by this apparatus with that of the air pump or bellows arrangement, I should liken the first to a fine Scotch mist, and the second to a plump of rain.

"Experiment has shown what, indeed, was already very obvious—*i. e.*, that this very minute division or pulverization of the medical fluids, is a matter of prime importance, as the finer the vapour the less the irritation to which it gives rise in passing the larynx, and the more effectually it penetrates to the minutest and furthest removed air tubes. The patient requires no assistant in working the instrument. He inhales without fatigue or flurry, and at leisure; and the inhalations can be repeated and prolonged indefinitely and at pleasure.

"I have during the last fifteen or eighteen months had very extensive trials of this apparatus; and I think that with some modifications it has undergone at my hands, and to which I will immediately refer, it leaves little to be desired. I was led to a consideration of these modifications on account of the high cost of the instruments—ranging from 15s. to 50s., and the occasional delay of many days, and even weeks, before they could be obtained. . . . I felt interested in my attempts to improve the instrument; and you would be amused if I showed you all the patterns from first to last, and surprised if I were to go into a description of all the details which required consideration or remedy before the instrument I now place on the table was produced. Suffice it that I feel warranted in saying that it is the most efficient, ready, and cheap instrument that can at the present time be obtained. Let me state shortly some of the qualities wherein I think that it contrasts with, and is superior to others.

"It is compact and is ready for use, and is so put together that there is no necessity for frequent and nice adjustments—consequently the risk of troublesome disarrangements, or of accidental injury of the instrument is exceedingly small.

"The form of the boiler is distinctive and peculiar, and ensures several advantages. Thus, the position of the water inlet enables the boiler to be filled to the proper height and no more. Above the water line and inlet there is a reservoir for steam, sufficiently large to maintain a continuous current of spray, and to project it to any distance that may reasonably be desired. This arrangement of the water inlet, steam chamber, and steam outlet, prevents a very annoying and even dangerous accident of frequent occurrence in instruments with the ordinary form of boiler—namely, the forcible projection of spirts of scalding water in the face of the patient, caused by the boiling liquid coming over with the steam. The heat from the spirit lamp is carried up through the centre of the boiler, thus reaching a larger heating surface of the



boiler, generating steam more rapidly, keeping up a full supply of the steam, and at the same time *super-heating* and *drying* the steam so generated. The steam escapes by a short horizontal nozzle at the top of the boiler, and necessarily is subjected at the instant of its escape to the action of the flue of the lamp, thus ensuring such a dry condition of the steam that it quickly becomes dissolved or dissipated in the air, so lessening the risk of annoyance to the patient, and at same time avoiding in a great measure the dilution of the medicated fluid with watery steam. By carrying the flue of the lamp through the centre of the boiler the body of the instrument is not so hot but that a handle atttached to the lower and cooler portion of the case can be grasped with comfort and safety even when in use. An alarming-looking and costly safety-valve, very liable to become stiff and unworkable, has been dispensed with, as I have found that a simple cork or india-rubber plug is equally efficient and more convenient in use.

"Having said so much regarding instruments, I have little time to refer to the medicaments which may conveniently and with probable advantage be employed in the form of vapour. Those with the use of which I am most familiar are: solutions of Morphia, Digitalis, Stramonium, Squill, Tannin, Alum, Nitrate of Silver, Sulphate of Zinc, Chloroform, Acetic Acid, and Sulphurous Acid. I extend and combine this list of Agents as seems to me desirable. Each drug has of course its special properties, and it would open too large a discussion to enter, however shortly, upon their consideration. I might say much to show why I have reason to be satisfied with the results I obtain from time to time; but I think it sufficient to indicate the fact that I am so satisfied, and that I believe that the inhalation of medicated vapours is likely to be a more familiar and a more important therapeutic agent in the hands of the physician in time to come."

From among the many very favourable expressions of medical opinion of which the patentee and exclusive manufacturer of the Adams' Inhaler has knowledge, a few may be here referred to.

Dr. Gairdner, Professor of the Practice of Medicine, Glasgow University, says, "He believed that this instrument of Dr. Adams' would be of great advantage to persons in general practice, and to hospital physicians, etc., from being so cheap, portable, and not liable to be easily put out of gear, and he had no hesitation in saying that no other would now be in use in his own hands.

Dr. Perry, Physician to the Royal Infirmary, said, "He was in a position to bear witness to the great trouble which Dr. Adams had given to bring the instrument to a state which he (Dr. P.) considered one of perfection. To point out the advantages of the improved instrument were needless: for as regards cheapness, portability, and every useful quality, it had the advantage of the other form of inhalers. Siegle's last instrument, he might mention, from want of a handle, could not be held in the hand at the bedside, as it soon became too warm for the hand; and there were various other disadvantages in its construction which made it comparatively an inefficient instrument."

Mr. Pollock, of Mearns, stated "that he could corroborate Dr. Adams' observations about the impossibility of working Dr. Dewar's instrument (the hand pump india-rubber bellows plan) any length of time, owing to the hand becoming powerless. He thought Dr. Adams' instrument a great improvement on all its predecessors."

SPECIAL CERTIFICATES.

From FREDERICK PENNY, F.R.S., Professor of Chemistry, Andersonian University.

ANDERSONIAN UNIVERSITY,
GLASGOW, *October, 1868.*

"THE ADAMS' INHALER is, in my opinion, the simplest, the most convenient and effective, and the cheapest form of apparatus that has been constructed for the inhalation of medicated liquids in the state of spray. Having had occasion to employ personally this mode of treatment for the relief of a troublesome broncheal affection, I was led to examine carefully nearly all the leading Inhalers in use for the purpose, and in this way I became familiar with their respective peculiarities and advantages. I had no hesitation in giving the preference to THE ADAMS' INHALER, of which the following are the most noticeable features:—its compactness and portability, the conical and ring-like form of its little boiler, the rapidity with which the steam and spray are generated, the absence of danger from explosion, the simplicity of the arrangements for refilling the boiler with water, and the glass reservoir with medicated liquid, the application of the heat to the steam as well as to the water, and the force and regularity with which the spray is projected.

Certain of the Inhalers at present employed are larger and more expensive, more complicated in construction and more imposing in appearance, but for the general use of those who are not skilled in applying mechanical contrivances and in chemical manipulation, THE ADAMS INHALER will, I am satisfied, be found the most suitable in every respect."

(Signed) FREDERICK PENNY,
Professor of Chemistry.

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1 ROYAL BANK PLACE,
GLASGOW, *28th August*, 1868.

We have carefully examined the steam generator connected with "THE ADAMS INHALER," we find it not only *correct in principle*, but *perfectly safe* in *practical* use. Excess of pressure is an impossibility, and the fact of the steam being *superheated* before being used in the spray jet, prevents, in a great measure, the dilution of the medicaments while it adds to its efficiency as an injector.

The great portability of the apparatus, and above all, the marvel of its *cheapness* being conjoined with greatly *increased* efficiency, ought to make it exceedingly popular both with the medical profession and the public.

(Signed) JOHN DOWNIE & CO.,
Consulting Engineers.

To distinguish the Instrument, I have named it after the Gentleman under whose directions the first specimen was made; but at his request state that he has no interest whatever in its sale.

THE ADAMS INHALER

MAY BE HAD FROM ALL WHOLESALE DRUGGISTS AND SURGICAL INSTRUMENT MAKERS.