twenty-five grains of chloral were administered. The convulsions ceased in half-an-hour, the extreme rigidity leaving first the left leg, then the right, and then the back. On the 5th twenty grains of chloral were given every six hours. On the 6th and 7th the cramp was troublesome but there were no violent convulsions. On the 8th chloral was given every seven hours, and on the 9th every eight hours. On the 10th the dose was reduced to fifteen grains every ten hours. On the 11th there was return of severe cramp in the abdominal muscles, but twenty grains of chloral relieved it in a few minutes. On the 13th fifteen grains of chloral were given every nine hours, and on the 14th every twelve hours. On the 17th the patient only had chloral once in twenty-four hours. On the 18th there was still pain in the leg, but he felt much better. The appetite was voracious, but he could not masticate on account of stiffness of the jaw. On the 20th no chloral was administered. Recovery was uninterrupted after this. On the 31st the only remnant of the tetanus was a feeling of weakness in the left leg. From February 13th to March 19th he had taken six ounces and three drachms and a half of chloral.

ACUTE MANIA TREATED WITH HYOSCYAMIN.

BY C. THEODORE EWART, M.B., M.CH. ABER.

I HAVE tried this alkaloid in twelve cases of acute mania, and have found it answer admirably. Although there is nothing novel in what I have to state regarding its action, I thought it might be of some interest to give the following six cases.

CASE 1.—C. A——, male, aged sixty-one; not epileptic. About every fourth month he suffers from delusional mania, which lasts for two months. During this period he is very noisy, shouting loudly or muttering incoherently. He sleeps but little. After these brain storms he becomes quiet and tractable. Thinking that hyoscyamin might shorten the attack, I ordered one grain. Although the sleep produced was very profound, the breathing stertorous, and the paralysis most marked, the pulse throughout was good, beating steadily and regularly. I decided, however, in future to give a smaller dose. The attack was not shortened by any appreciable length of time.

CASE 2.—F. W——, male, aged thirty-six, well-built and muscular. Formerly in the Artillery; served in India for a few years. Has had sunstroke. Is epileptic. Tongue furred and bowels constipated. Is so violent and excited that he has had to be placed in seclusion; struck one of the attendants severely. Ordered three-quarters of a grain of hyoscyamin at bedtime. Was sleeping quietly in ten minutes. Awoke in the morning much quieter, although still suffering from delusions. Gave an aperient draught. Kept in seclusion three days, and then allowed out into the grounds.

CASE 3.—J. C——, male, aged forty-four. Not epileptic. Supposed cause, a fall. Tongue coated, breath offensive, and bowels constipated. Is very noisy and excited. Had to be placed in seclusion. Beat the door continually, fancying he was crushing blackberries. Imagined he had met God and the devil; the latter he knocked down. Ordered three-quarters of a grain of hyoscyamin. Was asleep in a short time. Passed a quiet night; more rational in conversation. Gave an aperient draught. In four days he was allowed out.

CASE 4.—G. B——, male, aged thirty-eight. Supposed cause, religion. Not epileptic. Most noisy and unmanageable; converses in a loud tone with imaginary persons; face flushed; excited expression of eyes; required four attendants to restrain him. Ordered three-quarters of a grain of hyoscyamin. Within a quarter of an hour he was sleeping profoundly, and did not awake till 6 A.M., having had twelve hours' refreshing sleep. More quiet. Had to be fed thrice. Repeated the draught at bedtime. On the third day he was sent to the infirmary ward, as he was suffering from an inflamed knee. Very deluded, but is free from excitement.

CASE 5.—W. E——, male, aged forty-four. Is epileptic. Suffering from an outburst of maniacal excitement, endangering the safety of the other inmates. Placed in seclusion. Given half a grain of hyoscyamin, which produced deep and prolonged sleep. Much quieter on waking. Allowed out the following day

CASE 6.—B. P——, male, aged fifty. Not epileptic. A noisy, troublesome patient at times; broke a couple of mirrors, and attacked the attendants. Placed in seclusion. Ordered three-quarters of a grain of hyoscyamin, causing deep sleep. Awoke in the morning quiet. Allowed out.

It is, I think, the better plan to give a large dose at once than to administer smaller ones at intervals; for in the cases which are most benefited by this drug the difficulty is to get the patient to take more than one dose, and to frequently disturb only tends to make his excitement greater. There is no danger in three-quarter-grain doses, nor is nausea or sickness produced. The pulse at first is very much quickened and stronger, and then gradually gets slower and loses strength. The face is flushed and the pupils greatly dilated by its stimulating action on the peripheral ends of the sympathetic. The breathing is in a few cases stertorous, but in the majority quiet. On waking, spectral illusions are apt to be present. When given in small doses the sleep procured is very restless and disturbed.

The conclusion I draw from the result of the treatment of these cases is, that hyoscyamin is undoubtedly of great service in certain cases of mania where the patient is violent and cannot be restrained. It is certain in its action, quieting the patient within a quarter of an hour after administration, through its effect on the nervous system. The sleep produced is very deep, and the muscular power greatly weakened by its direct paralysing action on the spinal cord. Whether this drug has any curative effect or not it would be difficult to say; but I imagine it is chiefly through the complete rest produced that its beneficial action is seen. There is no doubt that lengthened sleep in cases of acute mania does good, and the longer a patient continues in an acutely excited state the greater is the danger of permanent mental injury. After repose the patient awakes refreshed, and with greater strength to withstand mental excitement. An objection to the use of hyoscyamin is that it is so very expensive; I am therefore trying the far cheaper sulphate of atropia. The preparation I have used was obtained from the General Apothecaries' Company, and contained four grains to the ounce.

Fisherton House Asylum, Salisbury.

ON A NEW FORM OF INHALER.

BY ARTHUR HILL HASSALL, M.D. LOND.,

LATE SENIOR PHYSICIAN TO THE ROYAL FREE HOSPITAL, FOUNDER OF
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FOR CONSUMPTION ON THE SEPARATE PRINCIPLE.

IN many cases the substances intended for inhalation in diseases of the organs of respiration are prescribed in a form far too dilute to be effective. It is often desirable that the vapours should be inhaled in a comparatively concentrated state. Even when the medicaments used are undiluted, they usually become largely admixed with atmospheric air before reaching the lungs.

The means at present employed for the volatilisation and inhalation in a concentrated form of the vapours of certain substances are often very defective. Thus iodine and carbolic acid are sometimes vaporised from a porcelain or metal plate placed near the patient; in this way the greater part of the fumes are lost in the air of the apartment, and the small portion really inhaled is diluted many thousand times. I have therefore devised a very simple apparatus for the accomplishment of the object desired. Its several parts are shown in the subjoined figure. It is suited alike for solids and liquids; and when an increase of temperature above that of the air is required, this is obtained by applying the lamp either directly to the capsule containing the substance or through the medium of the small water bath. One great recommendation of the apparatus is its absolute cleanliness. There is no probability, unless it is used in the most careless way, of its becoming contaminated with bacilli, and hence there is no risk of infection or re-infection, such as may happen when flexible tubes and mouth-pieces enter into the structure of the apparatus employed, and especially when more than one person makes use of such an inhaler. Such a contingency constitutes a real danger, and one not usually realised.

The figures almost explain themselves, yet it may be well to give a brief general description. The apparatus