exist in these cases, and the restlessness which may be very prominent is perhaps the outcome of the somatic discomfort. Probably various paræsthesias give rise to the delusions. The cases often deteriorate, though the deterioration is apt to be of the milder type above sketched. Some cases begin with a state of apprehension and fear, or self-accusation, and then drift into such conditions with somatic delusions. Moreover, other absurd delusions may be combined with delusions of a somatic nature, so that there seem to exist transitions from this group to all the other possible states which we have described.

The following case is typical: A woman (Case VIII.), fifty-two and one-third years old, complained occasionally, over a period of ten years, that her throat was stopped up. Two months before her final menstruation she began to look run down, complained of pains through her body, and lost weight. Then the idea developed that she had uterine trouble, mortification of the spine, that she could not swallow, that the rectum was broken off, the body in two pieces, that she was getting copper-colored, was dying by inches. The ideas shifted. Then she became restless. Under observation she was very restless, but showed neither fear nor apprehension, only complained of the ideas below given, and said she felt "so restless." She claimed she could not swallow, that her throat was stopped up, that nothing went to her stomach; and since she receives no nourishment and yet does not starve she will never die; even if the head were cut off she would continue to live. Besides the sensations in her throat she complained that she could not feel her hands, but developed no delusions from this. She refused food, had to be tube-fed. Her weight from the beginning was very low. She remained in this state for a year, then calmed down, gained weight, dropped the ideas, but soon resumed them. She became inactive with loss of energy and a narrowed mental horizon.

The ideas may of course take various forms in different cases, such as "the face is falling in"—"the whole body is shrinking"—"the blood is dried up"—the patient is "only three feet high"—"nothing but a lip."

After the descriptions above given, the *diagnosis* of all these cases need not at length be discussed here. The differential diagnosis from manic-depressive insanity is mentioned under the diagnosis of that group. From general paralysis, with which some pictures may be confounded, the physical signs should guide us chiefly; from senile dementia, the memory defect there observed, and the greater confusion.

The *prognosis* must always be somewhat doubtful, but recoveries are not infrequently seen, and even comparatively grave cases may surprise us, after a number of years, with a recovery. Marked shallowness of the emotional reactions, notable insufficiency in thinking, with a poor grasp of surroundings and a narrowing of the mental horizon when the active symptoms are passed, speak for a permanent damage.

The *treatment* of cases of melancholia has to meet various indications. It is necessary to remove all disturbing mental influences as much as possible. At the same time rest is necessary and is a most important indication. It is time that the popular idea of diversion which usually involves much effort for the patient should be thoroughly eradicated. Diversions may do good in some depressions of constitutional neurasthenia, but in all severer depressions, above all here, it is entirely out of place. Rest in bed is often necessary. With it sufficient feeding—best, small quantities given often—is important. Tube-feeding may become imperative. At the same time the stomach and bowels need attention. Enemata or mild laxatives are usually called for, and the former are preferable. Stomach washing may be necessary and useful, but should not be done without indication. At night massage and warm baths may have a quieting effect, or various modes of partial or whole wet packs. Hypnotics should be sparingly used. Among them alcohol, chloralimid, and trional are the most serviceable. The fear may be alleviated by codeine, gr. $\frac{1}{6}$ t.i.d., or still better by tincture of opium, which may be started at ♏ v. t.i.d. and quickly raised to ♏ xx. or xxx. t.i.d. if borne well, and then gradually diminished again. If not tolerated or if it does not influence the condition it should be discontinued at once. There is no doubt but that it often alleviates fear a great deal, and it is strongly to be recommended. Another indication is a constant watch over the patient, because the danger of suicide is very great, especially at night. Most patients are therefore best sent to a hospital.

August Hoch.

XIX. INSANITY, MANIC-DEPRESSIVE.—In one form or another the old conceptions of mania and melancholia have been attacked for many years; modifications of either form were described; and their fundamental difference, if not from a psychological, certainly from a nosological point of view, was doubted by some. The sudden change from the melancholic to the manic syndrome, when it occurred in the cases with frequent alternations, made a deep impression and led to the description of circular insanity. However, so much weight was laid upon the peculiarity in the course of the disease without adequate consideration of the symptoms that the conceptions of mania and melancholia in general were not influenced by the views concerning circular insanity until Kraepelin showed that there exist in circular insanity certian fundamental symptoms which are also found in certain other cases of depression and excitement, in which the special characteristics in course which circular insanity presented were totally absent. These symptoms were carefully studied and were recognized in various modifications; and Kraepelin showed that we find not only combinations of these symptoms which fit the traditional conceptions of mania and melancholia, but also combinations which had hitherto remained unexplained, and which were by him and Weygandt termed mixed phases. Moreover, it was shown, as had already been claimed by some French writers for circular insanity, that all these cases also agree in the fact that they show no especial tendency to deterioration. Hence Kraepelin has included these various clinical pictures under the term "manic-depressive insanity." The features, then, upon which this conception is chiefly based are the existence of certain symptoms in various combinations, the tendency to recurrence (most pronounced in the classical circular insanity), and the absence of deterioration. The same determining data enable us to exclude other forms of excitement and depression, the more important of which are the following: In the young there are depressions and excitements which show a well-marked tendency to deterioration irrespective of the frequency or intensity of the attacks; among these are Kahlbaum's hebephrenia and katatonia. Kraepelin has united these with other forms under the head of dementia præcox. Whatever opinion we may entertain about the justification of this group, it certainly can be shown that the cases which it includes differ from manic-depressive insanity not only in the outcome (tendency to deterioration), but also in the symptoms, although the differential diagnosis may in certain cases present difficulties. Again, there are melancholias which differ not only in their pre-eminent occurrence in advanced years and their exhibition of a tendency to deterioration, but in their fundamental symptoms as well.

We find, therefore, in this conception of manic-depressive insanity, as well as in the classification of Kraepelin in general, an attempt to group the cases from a larger clinical or general pathological viewpoint than has hitherto been done. It is not only the more or less superficial symptoms, or the etiology, or the course alone upon which the grouping is made, but a combination of all the available data. In this general viewpoint lies the advance which Kraepelin's teachings have brought us, and in which Kahlbaum was his precursor. The whole classification as it stands will undoubtedly experience many modifications; but the general point of view must be conceded to be a fruitful one.

The best defined of the different clinical groups is manic-depressive insanity; nevertheless we are not justified in speaking of even this as a disease entity, for obviously when we know so little about the etiology and the actual nature of a condition, it is well to be cautious. Yet we must admit that it is an excellent clinical group based on the principles above given.

In the following an attempt is made to sketch the more important pictures which belong in this class as the writer has observed them in the course of his clinical experience. It has been deemed best to do this as much as possible by means of descriptions of cases; partly because this mode would seem to be more instructive, and partly because it permits those who may doubt the value of the clinical group of manic-depressive insanity to learn of at least some of the material upon which the conceptions are based.

Before we describe the clinical pictures it may be well to give a short résumé of those mental changes which at this stage of our knowledge we may regard as fundamental; a set of symptoms which in certain combinations gives rise to the many different clinical pictures we meet in this group. Obviously a deeper psychological discussion is out of place here.

We may divide the symptoms into those referring to the ideational, to the psychomotor, and to the emotional spheres. Thus we have "flight of ideas" and difficulty in thinking; increased psychomotor excitability and psychomotor retardation; emotional exaltation and emotional depression.

Flight of ideas was originally used to designate that ideational disorder which manifests itself in the quick succession of ideas more or less loosely associated and produced by the patient with great volubility. The talkativeness is, however, not always associated with it; and, in its absence, when the disorder manifests itself merely by a certain irrelevancy in answers and a loose connection of ideas, the term "flight" may appear inappropriate; nevertheless it is best to retain it for the symptom in all its manifestations. The essential feature seems to be an inability on the part of the patient voluntarily to guide his train of thought according to a definite aim; consequently he is at the mercy, as it were, of the arising associations or of occurrences which happen to attract his attention. Such patients are often distracted by words or happenings about them, and their train of thought is thereby deflected. However, the nature of this important symptom of distractibility is not quite clear; nor has it been possible to determine, so far as I am aware, why it is much more prominent in some cases than in others. In the sequence of ideas of a flight we can therefore recognize certain well-known laws of association (though the association is generally superficial), and a deflection by external happenings. By difficulty in thinking is here meant a certain slowness in mental processes. The patient's stock of ideas is not so fully at his disposal as usual; mental application to even simple tasks is more difficult; and a certain dearth of ideas is therefore the result. This may of course be present in different degrees ranging from a slight insufficiency to an almost complete mental standstill. Increased psychomotor excitability manifests itself in a greater tendency to keep in motion, and may range from a slightly increased general activity with loquaciousness to a wild maniacal excitement. Psychomotor retardation, on the other hand, is a term used to designate a certain difficulty in initiating voluntary action, which may present all degrees from a slight disinclination to move to marked slowness in all voluntary acts or even a complete akinesis. The emotional depression manifests itself in sadness and ideas in harmony with it, or in fear; while the exaltation may show any degree from mild exhilaration to exuberant wantonness. There are other traits which will appear in the description of the cases. The above are the most significant ones.

These different traits may appear in various combinations, the most lucid of which are the manic syndrome, consisting of flight of ideas, psychomotor excitement, and emotional exaltation; and the depressive syndrome: difficulty in thinking, psychomotor retardation, and emotional depression.

But there also exist other combinations in which the symptoms of the two syndromes are mixed. The clearest of these combinations are: (1) the syndrome of emotional depression with motor excitement and flight of ideas; (2) exhilaration with slowness of thinking and psychomotor retardation; (3) exhilaration with psychomotor excitement and retardation in thinking. Farther on, we shall discuss the special features of these combinations

Depressed Forms.—The pure depressive forms present, as was stated, three chief features: a difficulty in thinking, a psychomotor retardation, and an emotional depression.

Among these traits the difficulty in thinking and the psychomotor retardation seem to be the more fundamental; an emotional depression seems not to be a necessary accompaniment, nor does its intensity show any parallelism with the intensity of the other changes. Moreover, the difficulty in thinking and the psychomotor retardation have evidently a deeper relation with each other, and seem to be the outcome of a general retardation of voluntary efforts. In the mildest cases, therefore, we may have only a slight retardation of voluntary efforts which manifests itself in a feeling of inadequacy, and an inability to decide or accomplish anything for which a decided effort is required; while an emotional depression may be absent, or on the other hand be so pronounced as to hide the other alterations. In the more intense conditions, both thinking and moving are noticeably retarded, while the emotional depression is then almost always present to a greater or less degree. The various degrees of these changes are illustrated by the following cases:

Case I. is a druggist forty-two years old, who has had six well-defined attacks, all of them of the same nature as the present, while at one time he was for a week somewhat "keyed up." He woke up one morning with an "all-gone feeling," did not feel like going to work, and during the following day was "in a quandary what to do." He went to bed unable to work, and came to the hospital ten days later. The most striking feature about the patient was his inability to make up his mind to do anything, and his feeling of inadequacy. He described it thus: "I can't get hold of myself; I feel that something is gone, like my will, which enables me to concentrate my attention on what I am doing." "I have no energy." "When my condition is quite bad I simply have to give up, even if I knew the most appalling results would follow." He also said that when a question of judgment was involved he wavered more and could do a thing much less easily than "when it came naturally." Consequently when asked to do certain things, such as going in town to select some clothes, or occupying himself with wood-carving, he said it was perfectly impossible for him to do it, and every effort seemed to take on large proportions; while if he drifted into doing something such as playing a game or talking with those about him, or reading a paper, he did it without trouble, although in regard to the latter he often said that he had some difficulty in applying his mind. He was therefore occupied a fair part of the time, but he also sat or lay about, or walked restlessly up and down; the latter not in a depressed manner, but as it seemed because he chafed under the restraint which the condition of his nervous system imposed upon him. He complained much about his state, his digestion, the food, etc., but he did not make the impression of a melancholy patient, and never appeared gloomy. He never showed the slightest sign of slowness of motion, nor any disinclination to move, and at no time appreciable slowness in thinking. He felt only a great incapacity, and this he could not overcome.

This case presented, then, essentially the mildest degree of a retardation of voluntary efforts which showed itself in a feeling of inadequacy without a pronounced depression of feelings. These cases are not uncommon, though they are undoubtedly often called neurasthenia or hypochondriasis.

Another patient (Case II.) who had two previous at-

tacks gave much more the impression of "melancholia." He was often seen walking up and down saying, "O God, what will become of my family," and the like. He could see "no ray of hope"; thought he had been selfish all his life; told the physicians constantly that there was no use in doing anything for him. He was consistently depressed and gloomy. At the same time his feeling of inadequacy showed itself in utterances like "I cannot rouse myself to do anything"—"I have no individuality left"—"I cannot decide the simplest thing"—"I have not gumption enough to do the simplest thing." In this case it could be demonstrated that it was more difficult for him to apply his mind than normally, as it always took him decidedly longer to subtract continuously 7 from 100 down to 2 than it would naturally take a man of his education (he was a lawyer). A woman who was in a similar condition and who had been known for her brilliancy in conversation, expressed the greater slowness of her thinking by complaining she "had nothing to say" in conversation.

The emotional depression may be even more marked and may dominate the picture entirely. The pronounced self-accusation, with the familiar ideas of grave sins or crimes committed, having lost the soul, etc., or even more pronounced delusions, may exist. We also find that these patients sometimes complain of having lost all their natural feeling for others, which gives rise to renewed self-accusation. In some instances of this kind restlessness, which was indicated in Case II., becomes a pronounced feature. This, of course, may also obscure the other traits. Such cases may then resemble the melancholias of advanced years, although it seems that fear, which is in them common, is much less often met with in milder cases of manic-depressive insanity. Sometimes the picture in these milder cases may be somewhat obscured by the addition of imperative conceptions, either in the form of the insistent recurrence of certain thoughts, *e.g.*, of a sexual nature, or in the form of phobias or even the compulsion to repeat certain absurd acts. I have repeatedly seen such combinations in cases in which the diagnosis of manic-depressive insanity could not be questioned.

In more pronounced states the difficulty in thinking and the slowness in motion become more evident, as may be illustrated by Case III. The patient, an educated woman of fifty-seven, had an attack of depression when twenty-five years old. The present attack, which came on after some cause for worry, presented the following picture: In the first few days she was quiet, spoke little, worried, her motions were rather slow. This general retardation increased, she became slower in everything, and her answers, though spoken with fair rapidity, were slow in coming. She was slow in eating and dressing. Thinking was difficult; *e.g.*, it appeared a task for her to tell the year of the former attack; she gave her year of birth as '34 instead of '44; the continuous subtraction of 7 from 100 she soon gave up as impossible, etc. She looked depressed, and said she was troubled about her condition; soon her appetite became poor, and she complained of an obstruction in her throat, and feared her legs would get paralyzed. Then gradually a restlessness developed, at first very deliberate but in a few days more pronounced; while at the same time she developed fear, thought she was going to be dissected, had to go through a terrible ordeal, etc. At this time all her motions were faster, her sentences were longer, her speech was more prompt. After this episode, which lasted a few days, the former state again developed and the fear diminished. This case illustrates a moderate degree of retardation, and also that fear may to a certain extent overcome this retardation. This is important to remember.

A still more marked picture was seen in a young man of twenty-four who had had two mild depressions before (Case IV.). He sat about, moving very little, spoke seldom, every movement was extremely slow, and he had to be helped in dressing and eating. In order to give an idea of his slowness it may be stated that it took him thirteen seconds to count from one to twenty, though urged to do it as fast as he could. On another occasion when he was told to stand up, it took him twenty-five seconds before he started, then ten to go through the process. He wrote very slowly and with low pressure. It took him over a minute to repeat the alphabet. Simple calculations were done slowly and poorly (thus $100-7=94$, took twenty-five seconds; $9\times 8=72$, six seconds). At the first examinations he was not clear as to his whereabouts, nor was he clear about the month. He was able to tell when he had given up his work; but in other ways had difficulty in remembering. At times he drew away from those who came near him, evidently in fear, and once tried to escape through a window, on which occasion he moved quicker than at any other time. Besides this fear, which was often present, he always looked depressed, and said he worried much about his condition. He never showed any cataleptic symptoms nor was his drawing away anything like the negativism which is seen in catatonic patients (see Diagnosis).

It seems that patients who present these more marked degrees of slowness, though it takes them some time before they become oriented, have, after a time (if in the same place), a fairly good grasp on their surroundings; but they are inaccurate in estimating, for example, the elapsed time since entrance or since the previous visit. With increasing retardation, however, the patients become more confused. In these states also the retardation is quite consistent, and is noticeable not only in such acts as speaking and writing, but in walking, eating, dressing, and the like, in contradistinction to what we find in certain conditions of dementia præcox. The emotional state in these graver conditions is sometimes, as above, one of depression with episodic fear, self-accusation, and various depressive (occasionally quite absurd) delusions. Sometimes various delusions of persecution are noted. Sometimes a low moaning may be the only utterance of such patients, until we finally, after persistent questioning, obtain a whispered reply which evidently costs the patient considerable effort. These are not the most profound states, since an almost complete akinesis with probably almost complete mental standstill represents the most extreme picture. These are then the different depressive states. We shall later see that they may be modified by the admixture of manic traits, which considerably complicates the clearness of the pictures.

The Manic Forms.—The manic forms are characterized, as was stated, by psychomotor excitability, flight of ideas, and exhilaration. These traits are illustrated by the following cases.

The mild forms are represented by the case of a man forty-four years old—Case V.—who had had at the ages of thirty-one, thirty-seven, and forty-three, short mild attacks like the present, the second being followed by a mild depression in which he was somewhat dull.

The condition began a few weeks before admission and seems not to have been different from the state observed when in the hospital. He was constantly occupied, walking about as if he had urgent business, spending much time for example in clearing the garden of small pieces of wood or paper which he collected in a heap, and talking a good deal. His sleep was not interfered with; his physical condition was good. He showed no confusion in his understanding of things about him. He was amiable, exhibited a certain good-natured jolliness, and told stories, sometimes of a questionable character. Although his talk was often quite clear and his answers were to the point, he had a marked tendency to go into sidetracks and his talk was often peculiarly inconsequential. Thus, when asked why he had come to this hospital, he said, "I think if you were living at City Point and several mines went off, and some boats were wrecked, and then there was that explosion at the corner of Boylston and Tremont Streets, and don't you remember the fall of the Pemberton Mills at Lawrence?" When brought back to the subject he said, "What is the use of racking one's brain over old things?" Then he went on to speak of the history of the United States, the Fenian Raid of Montreal, the mode of living of the working men there

and here, of the social problem, continuing: "Everybody has a right to his own opinion; look at John B. Goff, look at Grant, look at Lincoln, don't you suppose that by forming these combinations and trusts something will happen? Talk about your foreign missions, why don't you attend to home missions first? Here are our sailors getting $16 a month and found, the cowboys getting $40 a month and found. Who wouldn't be a cowboy! It is the old question of capital and labor. There are the Swedes and the Danes, talk about dipsomaniacs and government by injunction, remember the Johnstown flood, they were all drinking in bar-rooms." We can trace the connection in this talk, but the whole is inconsequential and not governed by any central idea.

There are milder cases in which the flight of ideas is much less marked, and in which a certain exhilaration and over-activity are the dominant features. In many cases the alterations in character are very prominent. The finer feelings are in abeyance and, as Wernicke has put it, the emotional values of different ideas are levelled down. Hence tact, regard for others, delicacy, etc., are absent, the patients become coarser, and these traits, together with the fact that sexual feelings are often increased, are apt to lead to sexual excesses in men, to lack of modesty in women. Frequently alcoholic excesses occur. One man who was less flighty than the case just cited became the defendant in a number of libel suits, and also surprised his wife by suing for a divorce. In another similar case the patient had annoyed various authorities by his schemes to get rid of what he called various public nuisances. The expansiveness of such patients may become very marked even when the excitement and the flight of ideas are slight; they may speak of their wealth or of their personal superiority in a manner which suggests the initial stage of general paralysis, but in contradistinction to the latter their boasts are within certain possible bounds. The veracity of such patients may be very questionable, especially when their superiority or the wrong which they have suffered is concerned. Various traits of this kind may give to the picture a paranoiac color which may lead one who does not sufficiently consider the other alternations, and who is in general unfamiliar with the possibilities of these conditions, to a wrong diagnosis of some purely delusional state.

The emotional state in all these mild cases is either one of jovial exhilaration, of expansiveness, or episodically of irritability.

The cases thus far described have sometimes been designated as subacute mania, mania mitis, or hypomania. All possible transitions exist from these to the more active excitements, which represent the typical mania of most writers. The following case may illustrate this: The patient (Case VI.), a woman of thirty, who had had two former attacks similar to the present, was taken ill a short time before entrance. She spent her time tearing the bedding or rags which were given her for the purpose. With the pieces she draped herself in a fantastic manner; or she pounded the walls, sang, shouted, danced, and talked a good deal. In her talk she shifted from subject to subject, often did not finish her sentences, and the connection in her talk was at times impossible to trace; usually it was clear enough, though superficial, and sometimes sound associations were evidently the connecting link. Her talk was often deflected by utterances or acts of those about her; usually her volubility could not be broken into, and she answered but few questions directly. When the physicians entered, she at once accosted them, often abusing them for her detention or the next moment kneeling before them. Her mood changed often from an exuberant exhilaration to weeping, or scolding anger. She had her bearings and never mistook the identity of persons. She recovered after a few months.

In still more pronounced states the motor excitement may be more marked, but more often it is the flight of ideas which presents a greater intensity; the talk becomes more incoherent, and is either more dominated by mere sound associations (this seems to be the case when the motor excitement is especially prominent), or oftener the connection becomes more difficult to trace; then the confusion is greater.

This may be illustrated by the following case (Case VII.). The patient is a man forty-four years old, who had had a former attack of excitement from which he recovered. Under observation (the attack came on a short time before entrance) his condition was very stable. The most prominent feature was his constant talk, which will be presently described. Very often he lay in bed and would keep up an incessant flow of talk; again he would jump out, attack those about him, tear his bedding, shout. When up he usually did not keep on any clothes. His incessant talk continued when he was alone; when any one entered he at once directed it toward him, and usually ended by attacking that person. Generally expansive and exhilarated, this mood would quickly change to crying or more often to anger. It may be said that the motor excitement, with the exception of the talk, was less pronounced, certainly less constant and multiform, than that of the previous patient. His talk was flighty, even incoherent, so that it was usually difficult to trace the connection, but one could vaguely see through it, and recognize the loose association. Some of his utterances for which no connection could be found in his own talk, were evidently due to his attention being deflected by occurrences or objects about him. On looking over many samples of his talk it is noticed that it compasses comparatively few subjects, a feature which cannot be so well brought out in our limited citations as can the other features illustrated by the following, uttered in quick, commanding tones: " . . . Shut up or I'll kill you a year from to-day. You are my army mule, signed Gen. G. Custer, Jefferson Barracks. Leave it in Boston at the Adams House, suite 1. Take him out in the street and feed him on fish for life. As an honored man I got left. Give me soup. All I have had to-day is insult. . . . Bring me a piece of paper and let me sign my name the Czar of Russia. I am not Secretary Fish. I am XX; God only knows how dry I am. I want a fishing expedition from here to hell." Or: "Please express in person to your only sister; I love her. Rotterdam or any other damn place, I don't care. I am your American cousin, Abraham Lincoln, Jr. Judge F—I am your dead brother-in-law. He is not mad; he is at my apartments at the Astor House. What is your age? Mine is sweet sixteen. Go to hell. I am the Emperor of Germany. March General Lee to Washington, for I am the only sword I know. Who was the last Conqueror of the Rebellion? None of your damn business," etc. His confusion was marked and he evidently had a poor grasp on his surroundings. Often he did not seem to know where he was or was even unable to tell the month; he called only one or two by correct name, and these not always; the others were called by fictitious names and he never seemed to penetrate to a clear understanding of any one. We see therefore that this case differed from the former chiefly in the fact that, although the motor excitement was less marked, the talk was less connected, and the confusion much greater. There are of course cases in which this is even more pronounced. Kraepelin has described a delirious state which may occur in these cases—a condition with much clouding of consciousness, motor excitement, flight of ideas and numerous hallucinations. It may here be added that hallucinations, though not common, may occur in manic states even in considerable number.

The confusion above mentioned is always associated with the manic state if the flight of ideas is marked, and seems to some extent proportionate to it; while in other instances, when flight of ideas is slighter, a striking mental clearness may exist in spite of a very pronounced motor excitement. This confusion is characterized by the fact that the data of the surroundings are imperfectly elaborated, persons are taken for old acquaintances, the hospital ward for another building, and the like; at least this is the case when the patient is brought into new surroundings during the excitement, while it may be slight

in regard to persons or places he knows. It can often be demonstrated by questions later that a similarity in appearance or in the name, or some other superficial association leads to the wrong conclusion. Thus, one man who had persistently claimed he was in Windsor Castle, stated afterward that the heavy woodwork of the ward reminded him of that he had seen there, that the reason he called one of the physicians Lord Aberdeen was because he had seen the latter in Toronto, and the physician had told him he came from there. Such ideas may lead to other delusions. Thus, one patient was reminded by the grounds of the hospital of a place in Virginia where a relative lived; he concluded that one of the hospital buildings belonged to the relative, that the friends of the latter had built up their houses about him, and that two hundred years had passed by. Many other examples might be cited. These few may suffice. They show how the data of the surroundings, persons, places, and actions of those about the patient may be misinterpreted, and give rise to delusions. These are at times fleeting, especially if the excitement is great. In those who are quieter and yet have a considerable flight of ideas they may be held very tenaciously. The patients often not only utter these statements, but actually believe in them; and much that is incomprehensible in their talk and actions is thus explained.

If this difficulty in elaborating impressions, as we may call it, is associated with marked excitement and great flight of ideas, it impresses us as being the natural outcome of the general disturbance and certainly does not dominate the clinical picture. There are, however, cases in which this relation between the general excitement on the one hand, and confusion on the other is not preserved; cases in which the motor excitement and the exhilaration play a small rôle, but in which there is nevertheless a marked flight of ideas. As these patients are not, however, especially loquacious, this scarcely shows itself in a flight of ideas in the original sense of the term, but in a peculiarly confused talk in which we nevertheless recognize the same traits as in the flight of ideas. It is the confusion which strikes us most forcibly in these patients on superficial observation, while on more thorough study the more fundamental traits are as clear as in the other instances. These cases do not seem frequent in their most pronounced forms, but there are of course transitions from them to the more characteristic manic forms as well as to the so-called mixed phases which we shall take up later. Such a condition was seen for example in a young man of twenty (Case VIII.) who came to the hospital in his first attack. He began with a typical manic phase such as has been described above; then for eight or nine weeks presented a condition such as we are considering. It is interesting to note that after his discharge he was decidedly subdued for a time, and following this became slightly but decidedly exhilarated, both of which states must be interpreted as mild attacks.

This patient whenever seen was not at all excited nor loquacious; when he spoke it was in a natural tone, but he halted, broke off his sentences, looked puzzled, and what he said was usually very vague and confused. This was not the case when the subject was supplied to him, *e.g.*, when told to calculate or relate some definite occurrence which had taken place before he fell ill. Thus, to give one example: He was asked why he had written certain letters, to which he answered: "To pass away the time; I have been doing a lot of things that are decidedly foolish, writing these letters (pause); you see I have known Dr. H. here. I thought the work was divided up, surgical, medical, and of course the brain is a study by itself. Well, I don't know just how to say (pause); well, I tried to get a college education without going to college (pause); now speaking medically what I mean that I—well a—well—a—I want to purchase some stuff and I don't know how much has been used and how much has not been used." Asked to explain he said, "Well, I drew a plan here (pointing to a paper lying on the table) to show when I commenced smoking cigarettes, that affected my body—well, about cigarettes the law went into effect," etc.; or once he stated irrelevantly, "If Mr. X. would come and ask me about Odd Fellows what kind of a chart would you make for me?" (He had at that moment seen the physician take up a clinical chart.) The shifting of the subjects is very evident but the connection is often lost to the observer. In the last example especially, the external distractibility is evident (as was the case in many interviews); and the whole is clearly the same disorder seen in the earlier cases and shown by the same patient in a preceding phase. The puzzled look of the patient and his vague talk agreed well with his own interesting statement: "I start to say something and I don't know what I am saying, I am muddled—*one thing leads to another.*" The patient's confusion was also shown in the fact that, *e.g.*, he was scarcely ever able to tell when the previous interview took place, or relate the circumstances of it; he was never clear about the identity of certain persons, was not always sure where he was, and was moreover never able to give the gist of a pararaph given him to be read (a very good test for patients with flight of ideas). But he calculated well, and showed a good memory. He was never excited or talkative while in this state; he often walked aimlessly about, or lay around, talked in the manner above indicated, and wrote a considerable number of flighty letters. Exhilaration showed itself only on rare occasions.

It remains for us to illustrate certain possible combinations of symptoms, of which we have above spoken as mixed phases. It should be understood that there are all possible transitions from the simple manic or depressed states to these "mixed" conditions, and that as short episodic states they are by no means uncommon, especially in manias.

The following instances represent some typical examples of the mixed states: The patient, a woman of thirty-four (Case IX.), had had two previous attacks, the first of which seemed from her own description a characteristic mild attack of depression such as that illustrated by Case I. In the second attack, which lasted longer, she was depressed, complained of many pains, and according to the physician's statement was considerably agitated, talked rapidly, was opinionated, morbidly religious, and when somewhat excited was distinctly erotic in her conversation. In November, 1898, she began to get depressed, with pronounced self-accusation and inability to attend to her duties; again, she was active, walked about much, slammed doors, and talked considerably about her troubles.

Under observation she complained much of being condemned, of having lost her peace with God, etc., and appeared very depressed. When she was examined it became at once apparent that she was very loquacious, and though some questions were answered directly it was found that sometimes she had to be asked again and again but would invariably wander from the subject without returning to it. Her talk was, however, all in a depressive strain. After a few weeks' stay at the hospital the depression left her and she was slightly exhilarated, though not flighty. This patient, then, represents a case of depression with loquaciousness and distinct evidence of flight of ideas. Probably the former attack also represented a mixed phase. But not all depressions in which the patients become more talkative need be regarded as due to the admixture of manic traits, as the talkativeness may also have emotional causes, in which event it is associated with restlessness, as we have above pointed out (Case III.). The flight of ideas is then of course totally absent.

A different combination, and one which would naturally present more difficulty for diagnosis, is shown by the following case (Case X.): The patient is a young woman of twenty-four, who with the exception of a slight, short nervous breakdown, in which she is said to have become tired easily, has been well mentally till the present attack. After working very hard she became very tired, had some vomiting spells, and was in bed for two weeks. Some time later she became excitable and

peremptory. Soon she began to complain of being unable to think and became rapidly confused. Her condition then was the same as that seen while she was under observation. It was very stable. She usually sat or lay in bed, and never showed much tendency to move about; her toilet had to be attended to by the nurses, and she had to be fed by them. At times she was untidy. A large part of the time she muttered to herself more or less distinctly, or hummed—all this in a rather deliberate manner. Her face usually wore a bright smile which gave her a rather alert expression and contrasted strikingly with the difficulty in thinking which she presented. Often enough she laughed out, never loudly. Sometimes she looked dull, again rather puzzled. It was sometimes rather difficult to attract her attention and she never showed any distractibility. She was usually unable to solve any but the simplest multiplications or additions, could not tell the number of weeks in a year, the plays of Shakespeare (she studied elocution), the names of more than one of her teachers, her school books, and the like. She knew no names of those about her, except that once or twice she recalled a name she had often heard. Sometimes she knew she was in a hospital, again said she was at home, or simply she did not know. She could never tell, except in the very beginning, how long she had been in the hospital, nor could she give the day, month, or even the season. Some of her utterances as "my memory is wretched," "Oh dear, I can't think," and the like also showed her difficulty. Sometimes when test questions were asked she said with a happy, broad smile, "I don't know."

Her talk, which also shows peculiar fantastic ideas, was like what follows: "Why, I don't—I don't know anything about—no—well—I tell you—well it is too bad," etc., this being often repeated with a peculiar wondering inflection, or: "Look, look, what have I done!—Yes, why—he found a cloud then eternity—we had a lovely time (making motions with her hand as if playing the piano). I am way up in eternity—who is the doctor—no it's the sun. I am the Queen of Eternity," etc. Or, looking out of the window, she said: "You dear little birdie, you dear little birdies and chickens, don't you see that little bird? . . . I feel as though I was all colors of the rainbow"; or, "I am the sun and you are the moon and you revolve around me, this way and that way; no, this is the heaven and I am the moon," etc. All this was often said with a broad smile and at times was sung softly. The same smile was present when she uttered depressive ideas, such as "I want to die." "Is my soul lost?" "Have I to lie down with silver and gold?" Only at times did she moan. This state, which lasted for some months, was very imperfectly recalled afterward. After a clear period she showed a typical picture of a manic excitement with great exhilaration, flight of ideas, and distractibility. This case, therefore, presented fundamentally a profound difficulty of thinking, but with it an exhilaration and a tendency to much talk. The typical flight of ideas and distractibility were absent, and the slowness in motion, which a simple depression with such marked difficulty in thinking would present, was so modified that though she talked much, it was done very deliberately and in general she showed little tendency to move. The most marked features are therefore those of a depressive phase modified by the manic features of exhilaration and loquaciousness.

Finally, we may cite the following case (Case XI.): The patient, a man of thirty, came to the hospital in a typical attack of manic excitement, such as above described, which lasted for six weeks. Then followed a period in which his motor excitement and exhilaration continued, but he spoke very little or made silly, weak remarks, whistled the same tune over and over, made comical faces, pointed at those about him and laughed, was very mischievous. Gradually the motor excitement subsided somewhat, he sat about a good deal, but continued to be mischievous at times, and to laugh much. He showed great difficulty in thinking, was slow in calculation and in giving answers which required thinking, and had a poor grasp on the surroundings. This patient presented more of manic features as expressed in the whistling, grimacing, the motor excitement, the mischievousness, and the exhilaration; while his depressive traits were evident in the difficulty in thinking, in the weakness of his remarks, and in his actions. The impression which the patient made was one of silliness and certainly would have suggested dementia were it not for an analysis of the traits which made the correct diagnosis possible. He recovered completely.

We should finally mention some cases in which neither the manic nor the depressive element is very prominent, but in which, more or less episodically, excitements occur with angry scolding and some flight of ideas, while in the interval a certain difficulty in thinking exists, with perhaps a general disinclination to move, overshadowed, however, by the existence of delusions. These delusions are held rather tenaciously and may be combined with hallucinations, which are not infrequent in all mixed phases.

These cases may suffice. It would lead us too far to illustrate other modifications. One thing should perhaps still be emphasized, namely, that various combinations may occur during one attack, so that at one time one picture, and, a few days later perhaps, another picture is seen.

In closing this description of the clinical manifestations of manic-depressive insanity, we should not omit to state that it may at times, especially in certain mixed phases, be difficult to recognize the fundamental traits. For the study of such conditions cases which have had typical attacks, especially those in which a typical attack preceded or followed the more obscure picture, are very important. For it would certainly appear forced to regard the obscure picture as due to a totally different disease. It was for this reason that the three cases (VIII., X., and XI.) were especially selected as illustrations. But we must warn distinctly against the impression that such cases are necessarily preceded or followed by a manic attack.

It should also be added that we are still far from a full understanding of the symptoms and the laws which govern the symptoms of manic-depressive insanity.

The bodily condition suffers in almost all the severer cases, while in mild manias it may distinctly improve and the whole appearance of the patient may become more flourishing and his body weight rise. Usually the weight falls—in some excitements in spite of much food being taken. The sleep is almost always interfered with. The appetite in depressions is usually, in excitements sometimes, interfered with. In depressions the bowels are sluggish. The temperature may be subfebrile in excitements.

In regard to the etiology of manic-depressive insanity we must mention that heredity plays a striking rôle, and in the family history we often find mention of recurrent attacks of insanity not followed by deterioration, from which fact a direct heredity seems by no means infrequent. The individual attacks often occur without any appreciable cause; sometimes exhausting influences, acute diseases or puerperium, or some emotional strain seems to precipitate the attack. The same may perhaps be said of alcoholic excesses. In one instance I have seen a traumatism of the head, and in another a cerebral embolism, clearly produce a typical attack.

The nature of the disease is entirely obscure and it would seem superfluous to produce hypotheses when we know so little. The pathological anatomical findings are practically nil.

No definite principles can be given about the general course of the disease. Some patients present very many attacks, others few. The typical circular insanity with the depression, excitement, and free interval followed by the same cycle, is comparatively rare. More common are a recurrent depression and recurrent excitement; but frequently we find that an attack of excitement may replace one or more attacks of depression, and, vice versâ, that a mild exhilaration may follow one of the depressions, or