while watching his men at work, feeling cold, he started to help them dig up some earth to make himself warm. He did this for a quarter of an hour with a good deal of energy. He then examined several partially-built houses, running up and down a good many steps. On his way home he became conscious of this pain, and as it continued to increase in severity he called on me. I examined him carefully, and found a slight dilatation of the heart with an impure first sound. The blood pressure was 130 mm. Hg. On his way home the pain increased in severity, and after he reached home it became very violent, and my colleague saw him and prescribed opium, which relieved him. When I saw him next morning he gave a graphic account of his sufferings. He said: "In the tram coming home the pain got worse, and after getting home it became so severe that I felt I was going to die. The pain spread from my chest down my left arm to my little finger. You asked me, when I saw you yesterday, if I felt any gripping sensation, and I did not know what you meant; but, by George, I know now. When the pain was at its worst, I felt my chest suddenly seized as if in a vice, and I rolled on the floor in agony. The pain and the gripping eased off for a time and then came on again. This continued till I got the morphine. This morning I awoke all right, but at 10.30 that gripping sensation came on and held me tight for ten minutes. I dare not move for fear the awful pain should come, and I felt every moment that it was about to come, and I was in such terror of it that the sweat poured off me."

With rest and treatment these attacks got less, till now he only feels a slight pain when he over-exerts himself.

So far the symptoms I have dealt with have been mainly concerned with the reflexes connected with the sympathetic nerve supply. Equally instructive though less frequent symptoms can be shown to arise from stimulation of the vagus. At its centre in the medulla this nerve is in near relationship to the upper cervical nerves, and it would seem more particularly the sensory nerves supplying the sterno-mastoid and trapezius muscles. Not only can these muscles become extremely tender in various heart affections (see Observations 1 and 2), but the pain from heart affection may be felt in the region of distribution of the cervical nerves, as noted in Observation 4. The following observations also show the same thing.

Observation 11.—A man aged 62 years complained of great pain striking into his chest and behind his ears when walking. Thus in going to his work he was wont to allow seven or eight minutes to walk to the station, but now it took him over half an hour, as he had to stop on account of the pain every fifty yards. After accurately noting the pain, he described it as arising in the left breast, extending across to the right breast, seizing him in the neck, and extending up behind the ears, where it held him with great severity. In showing me the situation, he laid the fingers of both hands over the insertion of the sterno-mastoid into the mastoid process. On one occasion the pain extended from the breasts to the armpits and down the side of each arm to the elbow.

This patient dropped dead while at his work, and on *post-mortem* examination I found extreme calcareous degeneration of the coronary arteries.

Other Reflexes occurring during an Attack of Angina Pectoris.

Other very striking phenomena are sometimes met with during an attack of angina pectoris. During or after an attack an abundant flow of saliva and the secretion of large quantities of pale urine may occur; both symptoms I suggest are due to reflex stimulation of the floor of the fourth ventricle (see Observations 3 and 4).

Observation 12.—A man, aged 58 years, of gouty diathesis, complained of pain, induced often by the slightest exertion, which arose in the left breast, passed up the armpit, and extended down the inner surface of the left arm to the little finger. During an attack an abundant flow of saliva took place into the left side of the mouth. These attacks became so frequent that he could only walk a very short distance without inducing an attack. He dropped dead while sitting at his desk, and at the *post-mortem* examination I found that the heart had ruptured and the coronary artery was very atheromatous. Where the rupture had taken place the myocardia had nearly disappeared.

Observation 13.—Male, aged 46, whose work (a tackler) entailed periods of great muscular exertion, complained of pain striking into the chest when walking up a bill. If he stops as soon as he feels the pain coming on it passes off, but if he persists the pain increases to an agonizing severity and radiates into both arms, but worst into the left, as far down as the little finger. At the same time the chest is gripped so that he is forced to straighten himself and to breathe deeply, and at the same time his mouth fills with saliva and an aching pain is felt in the throat. A few minutes after each attack he has to pass urine, which is always abundant and very clear. These details I had from him after he had carefully noted a number of attacks.

Summation of Stimuli as a Cause of Angina Pectoris.

The fundamental functions of the heart muscle correspond to those of other involuntary muscles that form the walls of hollow organs; these functions being modified to suit its special work. Like the other viscera, the heart is insensitive when stimulated in a manner that provokes pain when applied to the tissues of the external body wall. I have pointed out that a prolonged strong contraction of a hollow organ can produce pain, and that this is undoubtedly the cause of the severe pain of renal gall stone and bowel colic. Can the heart give rise to pain in a similar manner? On account of the modification of its functions the heart cannot pass into a prolonged state of contraction. Immediately it contracts the function of contractility is at once abolished, and the muscle passes at once into a state of relaxation, and for this reason the pain cannot be produced by a "spasm of the heart." But I suggest that the heart muscle may produce pain when it is confronted with work greater than what it can readily overcome—a cause which produces strong peristalsis and pain in other hollow viscera. But the pain in the heart arises by a slightly different mechanism. A skeletal muscle will contract if a stimulus of sufficient strength be applied to its nerve. If the stimulus is too weak no contraction follows, but if this weak stimulus be frequently and rapidly repeated then the muscle contracts in accordance with the law of the summation of stimuli. I suggest that the heart muscle induces pain on the principle of the summation of stimuli. If we study such a case as is recorded in Observation 10 the pain was manifestly due to the man's unwonted exertion, but it did not attain its maximum severity till a couple of hours after the strain had been put on the heart. I could quote a large number of parallel instances, but for lack of space must be content here with throwing out the suggestion. I may say, however, that I submitted this view to Professor Sherrington, who replied that he thought my argument exactly right, and suggested several other cogent reasons in its support.

Presidential Address

ON

THE PAST, PRESENT, AND FUTURE OF THE BRITISH MEDICAL ASSOCIATION.

DELIVERED AT THE ANNUAL MEETING OF THE
METROPOLITAN COUNTIES BRANCH.

By HUGH R. KER, F.R.C.S. EDIN.,

PRESIDENT OF THE BRANCH.

THE first pleasing duty I have to perform on taking this chair is to thank you most sincerely for the great honour you have conferred upon me by electing me as your President. I can assure you I thoroughly appreciate the distinction; and though I feel how impossible it is for me to hope to compare favourably with my eminent predecessors, I gladly promise, trusting to your indulgence to overlook my shortcomings, that I will do my best to sustain the credit and high position of this Branch and to promote the interests of the great Association of which it forms so important a part.

I found it a most difficult task to select a subject suitable for my address to you, and I must ask your forgiveness if I succeed in bringing before you little that is fresh, and have again to traverse the paths which have been trod by many of my predecessors. After much thought and many doubts, I have taken for the title of my address, The Past, Present, and Future of the British Medical Association.

I did not know this title had ever been taken before, until I was looking up the records of former addresses, and found that it was the subject of Sir R. Quain's address in 1873.

On making this discovery I was at first inclined to choose another subject, but on second thoughts it seemed to me it would not be inopportune, considering the vast changes which have taken place in the position and constitution of the Association in the last thirty years, to review our position both past and present, and see if we

can derive some lessons which may be of use to us in dealing with the future of the Association.

Mr. Clark, our late President, in his excellent address of last year, very ably reviewed the work of the Association in relation to its advancement of science, and has left me little or nothing to add upon that side of the work of the Association.

I shall therefore devote myself almost entirely to the medico-political and business side of the subject.

I am anxious, if possible, to find out how it is that the Association has so far failed to attract the bulk of general practitioners; and that, whilst the consultants are proportionately well represented, the general practitioner is, speaking broadly, "conspicuous by his absence" in anything like proportionate numbers.

Before, however, attempting any solution of this problem, or suggesting any means of remedying the evil, I think it will be convenient to review some of the leading features in the history of the Association from its formation to the present time.

As you all know, the Association was founded by Sir Charles Hastings at Worcester in 1832 as the "Provincial Medical and Surgical Association," and in his first address he enumerated the objects of the Association as being:

1. The collection of useful information, whether speculative or practical, through original essays or reports of provincial hospitals, infirmaries, or of private practice.
2. Increase of knowledge of the medical topography of England through statistical, meteorological, geological, and botanical inquiries.
3. Investigation of the modifications of endemic and epidemic diseases in different situations and at various periods, so as to trace, as far as the present imperfect state of the art will permit, their connexions with peculiarities of soil or climate, or with the localities, habits, and occupations of the people.
4. Advancement of medico-legal science through succinct reports of whatever cases may occur in provincial courts of judicature.
5. Maintenance of the honour and respectability of the profession generally in the provinces by promoting friendly intercourse and free communication of its members, and by establishing among them the harmony and good feeling which ought ever to characterize a liberal profession.

For a period of over thirty years Sir Charles Hastings as President of the Council had the happiness of witnessing the realization of his hopes in the steadily-increasing number of its members, and the achievement of many of the objects of the Association.

The Association at its foundation numbered 140 members, which increased during Sir Charles Hastings's lifetime to between 2,000 and 3,000. Thirty-three years ago, when Sir Richard Quain was President of this Branch, the number of members had increased to 5,400 and were increasing at the rate of 600 per annum.

In 1833 the number was	10,500.
" 1893 " "	14,703.
" 1903 " "	18,189.
" 1905 " "	19,582.

When the Association came of age in 1853 it was thought that its powers and scope should be extended and an amended constitution was adopted. The title was altered to "The British Medical Association." The Council was made strictly representative, the members being elected by the Branches in the proportion of one member of Council to every twenty members, together with the honorary secretary of every Branch *ex officio*.

Again in 1882 there was a further modification of the constitution, chiefly for the purpose of making the representation of the Branches on the executive more direct. In 1902 the present constitution was adopted, and appears to promise a great increase of strength and power to the Association.

In multiplying the centres of work by dividing the Branches into Divisions the influence of the Association should be vastly increased, and by bringing its work into operation at the doors of the general practitioners, should induce them to take more interest in its doings.

Of the achievements of the Association in the promotion and advancement of science I think we may well be proud, but your late President, Mr. Andrew Clark, entered so fully and ably into this subject, both past, present, and future, that it would be only wearying you all to go over this ground again.

Financially, the Association has prospered beyond all expectations. For many years all that was attained was

a balancing of accounts; then followed an actual period of deficits from 1870 to 1874, when, thanks mainly to the efforts of the late Secretary, Mr. Francis Fowke, the deficiency was turned into a credit balance of £500. From that period up to the present time we have had a steadily-increasing surplus each year, and the Executive have continued to invest moneys thus saved until the income at the present time from that source alone amounts to over £1,000 a year, and the total income to £51,000 a year. The surplus for the year ending December 31st, 1904, was over £5,000.

In 1879 the BRITISH MEDICAL JOURNAL was first printed by the Association, and premises were taken in the Strand; but in 1887 the work of the Association had so much increased that the present premises were bought. The work still goes on increasing, and we have outgrown our present premises. Your Executive have arranged for the pulling down of the now existing buildings and erecting more commodious premises on the present site.

By the appointment of various Committees—namely, the Medico-Political, the Medico-Ethical, Colonial, Hospitals, Royal Naval and Military, Medical Defence, and Scottish Committees—the interests of the whole profession are well looked after. All this work is now admirably organized by Mr. Whitaker, our very able paid Medical Secretary.

It would simply weary you if I reviewed the admirable work done by these various Committees, as all this is well set out in the *Year Book*, which is supplied to each member of the Association. With all these great advantages to the members, less than half the medical men within the area of the Metropolitan Counties Branch are members of the Association. This deficiency appears to be chiefly among the ranks of the general practitioners.

I believe the chief cause of this unwillingness of the general practitioner to join our ranks is due to apathy and a want of appreciation of the benefits which the Association affords to its members. Much may be done for the furtherance of its interests by the various Divisions bringing the Association more in touch with the general practitioners in their respective neighbourhoods. Each Division may very well look after the local interests of the profession, and show how powerful and willing the Association is to help its members and protect their interests where needed.

In confirmation of this, I would remind you of the material aid which has been given of late in getting satisfactory settlements in contract disputes in various parts of the country, and, in times past, in obtaining improvement in medical departments of the Army and Navy Services. As you know, also, much is at present being done in trying to bring about reform in the general hospitals' out-patient departments and the removal of abuses which at present press so hardly upon many practitioners.

Again, Divisions may bring about a more friendly feeling between local practitioners by developing a social side through such means as smoking concerts and occasional dinners, as well as by providing for the reading of interesting papers. In this way much might be done to produce more unity and good-fellowship in the profession, the lack of which is at present one of our weakest points. In this way the general practitioner may be induced to see the great advantage of membership, and then I feel sure it will become the exception to find a medical man who is *not* a member of the Association.

Of the future success of the Association I have no doubt, and whilst I hope it will ever keep its primary objects in view, I trust we shall not stand still or rest content until everything has been done that is possible for the benefit and wellbeing of its members. The Royal Charter, if granted, will enable the Association to undertake much which is impossible under the Company's Act.

One other point, I think, ought to be seriously considered, and that is, how to increase our influence in Parliament. I am sure you will agree with me that as a profession we should be more largely represented in the House of Commons, but whether the Association should give support to a given number of candidates is a matter for the members as a whole to decide. For the present your Representatives have decided against the proposition, but the subject is sure to be considered again in the future. In the meantime much can be done in the

Divisions by supporting candidates who are pledged to vote for approved medical Bills.

The great weakness in the medical profession in the past has been its want of unity. The Association offers the best solution of this difficulty, and if only made use of would materially improve the position of the profession. The Association has to a great extent realized the objects of its founder, but there is no reason why we should stand still and not endeavour to further develop its immense possibilities. There is much yet to be done in completing its organization and co-ordinating its work.

It cannot be too often impressed upon each member that he can by means of his own Division bring forward any subject for discussion which he thinks of interest or for the benefit of the Association; and he may rest assured of careful consideration, and should his suggestion be considered of importance, the Division would refer it to the next meeting of Representatives.

We as a profession are too fond of finding fault with one another instead of uniting for one common good. Of us, too, it might be said:

In other men we faults can spy,
And blame the mote that dims their eye;
Each little speck and blemish find,
To our own stronger errors blind.

In matters of importance affecting the profession we too frequently fail to present a united front, and the public, not slow in perceiving this, take full advantage of it. Might we not take to heart the old rhyme of our childish days?

Birds in their little nests agree,
And 'tis a shameful sight
When children of one family
Fall out, and chide, and fight.

If we only complete and consolidate our organization, the Association has a grand future in store for it, both by increasing its scientific work and by improving the social position of its members in particular and the profession in general.

In conclusion, allow me to quote those lines of Longfellow's which, though hackneyed, have yet a lesson for all time:

The shades of night were falling fast,
As through an Alpine village passed
A youth who bore, 'mid snow and ice,
A banner with the strange device,
Excelsior!

May we not take this device for our motto, and not rest content with our Association as we find it now, but, in our time push forward and try to hand it down to our successors a more useful and a more powerful organization for the good of the profession and the public.

MEMORANDA: MEDICAL, SURGICAL, OBSTETRICAL.

PULMONARY EMBOLISM.

THE following case is interesting because of the rarity of recovery:

M. A., aged 36, was confined on February 3rd, 1905, of her fourth child. The labour was natural, and there were no complications. Her mother and sister had both suffered from phlegmasia dolens. The patient went on well, but on the ninth day she complained of pain in the left leg, and a diagnosis of phlegmasia dolens was made. Complete rest and a flannel bandage were ordered.

On March 16th pleuritic friction sounds were heard at the base of the right lung, and she was removed to the South Wimbledon Cottage Hospital on a hand ambulance. She bore the journey well, and there were no untoward symptoms till March 20th. The temperature was being taken by the mouth, when the thermometer dropped out, and she fell back on her pillow; she was deeply cyanosed, the radial pulse could not be felt, and the heart was beating 160 to the minute; the pupils were widely dilated, and there was the look of impending death on her face. Liquor strychninae π v was injected and nitrite of amyl given by inhalation, followed by ether and digitalin injections,

and oxygen gas. She gradually recovered from the attack, but on March 22nd developed phlegmasia dolens in the right leg, followed, on March 28th, by pleurisy on the left side. She left the hospital on April 21st, and soon afterwards went to the seaside to recruit. On March 20th she was ordered: Tr. strophanthi ζ j, sp. am. arom. ζ ijj, liq. cardam. co. ζ j, sol. nitroglycerine π vj (1 per cent.)— ζ ss every four hours. On March 24th this was changed to the following, with the hope of absorbing the errant clot: Pot. iod. $\varnothing$ ij, tr. stroph. ζ j, tr. digit. ζ ij, sp. chlorof. ζ ijj, tr. nucis vom. ζ ij, liq. cardam. co. ζ j, aq. ad ζ vj— ζ ss ter die; and on April 18th this was changed to pot. iod. $\varnothing$ ij, inf. gent. co. ζ j, tr. nucis vom. ζ ij, tr. digit. ζ ij, aq. chlorof. ad ζ vj— ζ ss ter die. She had full milk diet, with custard puddings.

Wimbledon.

GEORGE WALKER.

AN ANENCEPHALOUS MONSTER.

THE annexed photographs show an anencephalous infant of which I lately delivered a woman; it survived its birth for forty-eight hours.

The apparent prominence of the eyes, due to absence of the frontal and parietal bones, the shortness of the neck, and upward direction of the head—characteristics of this form of monstrosity—can all be seen.

The cranial bones could readily be felt to come to an abrupt termination, at the sides and posteriorly, in the upper margins of the temporal and occipital bones. The vertex was covered in with the hairy scalp except in the middle line, where an irregular mass of brain matter protruded through it. This was red and glistening, and bled readily when touched. Slight pressure on it during life set up regular rhythmical movements of the head, body, and limbs. There was a constant escape in small quantities of cerebro-spinal fluid.

The only other malformation discovered was absence of any urethra. Otherwise the child, a male, was particularly well nourished and developed in body and limbs, weighing 7 lb. and measuring 20 in. in length. It uttered no sound when it cried—a mere detail perhaps, but one which added greatly to its uncanny, rather cat-like appearance. It could swallow milk from a spoon. The mother, a primipara, was an anaemic girl, aged 19, of the working classes. There was no history of maternal impression. Labour was quite natural. The presenting part was not, as in the majority of these cases, the face, but the vertex, and this, with the protruding brain, gave me the impression that I was dealing with a face presentation. Pressure with the finger on the child's brain-protrusion, while in utero, caused violent kicks, which were not less perceptible to the mother than to my hand on the abdomen.

This child appears to have lived longer than the majority of such cases, judging by a list of 17 given in Gould and Pyle's *Anomalies and Curiosities of Medicine*. The longest time there recorded is eight days. Had this child possessed a urethra, there appeared no reason why it should not have survived much longer than two days.

Penzance.

E. C. EDWARDS, M.D.

DERMATOLOGICAL CONGRESS.—The German Dermatological Society will hold its ninth Congress at Berne on September 12th and two following days. Professor A. Neisser will deliver an address on the present state of the experimental investigation of syphilis, and Professor E. Hoffmann will give one on the state of our knowledge as to the etiology of the disease.