it was a very foolish and irrelevant clause to put into the Dogs Act. If physiologists could buy dogs from the Dogs' Home, every dog in London would be taken to the Dogs' Home by the police. There could be no chance of a pet dog then getting into the physiological laboratories; they would confine their purchase to dogs under sentence of death. They obtained their dogs from dealers, and, as long as he remembered, had done so. So that really the Act confirmed the existing practice. He thought the Commission might take that into consideration with a view to making a recommendation on that point. Asked if physiology would be really damaged if curare were absolutely prohibited, he said that it would seriously interfere with some of the most important classes of experiments. Asked how many times curare had been used in his laboratory in the last year or two years, he said twenty papers had been issued from his laboratory during 1906. Two of these included some experiments in which curare was used. During the previous two years twenty-two original papers were issued, of which, again, only two contained certain experiments involving the use of curare. Asked whether, if he found an animal in a state of serious suffering, he would order it to be killed, he said certainly. Asked if there were any cases of intentional partial anaesthesia when animals were operated upon, he said partial anaesthesia was a misleading expression. They spoke of a light or a profound anaesthesia. For instance, with a slight operation, where complete muscular relaxation was not necessary, the anaesthesia was a light anaesthesia. On the other hand, when complete muscular relaxation was wanted, there was profound anaesthesia. Asked if there were any operations performed under circumstances in which the animal was necessarily and intentionally sensitive to some pain, he said, No, never. He had never come across a laboratory where there were any closed doors. Asked as to the statement that the effect of the present Act was to protect vivisectors and not to protect animals, he said he was not aware of any protection given to vivisectors. The Act would prevent the infliction of pain on animals if there were any physiologists who desired to inflict pain. He would not wish to see the present Act abrogated, or altered to any very marked extent. Asked in what way aseptic treatment prevented pain, he said that when a wound was made, say, in the skin, and was exposed to infection by micro-organisms, there was injury of the vessels and tissues surrounding the wound. That injury caused swelling of the tissues and, therefore, pressure on the nerves running through these tissues, and hence sensations of tenderness and pain. If, by proper cleansing of the skin, and of the instruments used, they prevented the access of micro-organisms to the wound, the only result of the incisions was that the processes of repair followed, unaccompanied by any marks of inflammation. The fact that the aseptic treatment of wounds had abolished pain could be demonstrated simply by taking a walk round the surgical wards, and asking each patient that one came across who had had an incision of the healthy tissue what pain he had had. Surgical wards in the hospitals were merry places now because the patients were well. There was no question of pain at all in the wards, and that furnished the best possible proof that asepsis had abolished pain. Asked if he was quite satisfied that, in the case of a dog, it was possible to keep it for a long time under perfect anaesthesia between sensibility and death, he said, Perfectly. The dangerous part in anaesthetizing a dog was at the beginning. There was no serious difficulty in anaesthetizing any kind of animal and keeping it perfectly anaesthetized. He thought it would be a good thing if some of the Commissioners who were doubtful as to the completeness of anaesthesia would go and see an actual experiment; then they could convince themselves of the reality of the measures taken to prevent sensation, and of the general nature of the experiments performed. He would be only too pleased to see any Member of Parliament or any layman who had any doubt about the experiments if he presented his card, but he would have to be satisfied of his bona-fides. Prohibition of the inoculation of dogs might stop experiments absolutely essential to our knowledge of some of the very important protozoal diseases. Asked if almost all the chief results of physiological research in this country and abroad were published in the *Journal of Physiology*, he said, The greater part of them. Some important papers would also be found in the *Proceedings of the Royal Society*, and a *précis* of them in the BRITISH MEDICAL JOURNAL. Asked if he thought these publications were read much by the medical profession, he was sorry to say that they were not, but their practical applications would be brought before the notice of the medical profession in the BRITISH MEDICAL JOURNAL. Asked in regard to Dr. Crile's experiments on shock, he said they were not experiments which he would have done himself. Asked in regard to an experiment described in the *Shambles of Science* under the heading "The Dog that Escaped," he said the whole thing was a wilful deception. The writers said: "*If* the dog was under curare"—"*if* it had artificial respiration." The dog was being subjected to artificial respiration from the next room, and the anaesthetic was being pumped in with air, and if they had had any bona-fides they could have gone down and smelt the anaesthetic at the tube. That was not the brown dog experiment, but it was the same style throughout, and it was all query. The authors did not dare to make an assertion that there was no anaesthesia, but the question was raised, "Is it anaesthetized?" "Can we be sure it is anaesthetized?" He certainly believed they wrote with a wrong intention.

LITERARY NOTES.

MARK TWAIN'S long-promised book on Christian Science is announced by Messrs. Harper and Brothers for publication this day (March 8th). It is described as a serious examination of the tenets and constitution of the Christian Science Church, and contains an account of the foundress, Mrs. Mary Baker G. Eddy. The book was written in 1903, and some parts were published that year as articles in the *North American Review*.

In 1889 the Belgian Royal Society of State Medicine was ordered by the Government to prepare a medical topography of the kingdom. The Society parcelled out the work among a number of experts, who dealt respectively with the physical, demographic, intellectual, social, and medical history of the twelve natural zones which constitute the territory of Belgium. The Society decided to print the reports as they were ready, after they had been passed by a special jury to which that duty was entrusted. The first result of the labours of the experts has just been issued, in the shape of two fasciculi of an octavo volume of 1,000 to 1,100 pages illustrated with maps and plates. It is published by Messrs. Vaillant-Carmanne of Liége. The first of these fasciculi contains a general historical and geographical introduction; the second is a monograph on La Campine, the third zone of Belgium. The author is Dr. L. Goffin of Turnhout. It is expected that the issue of the whole work will—thanks to the energizing inspiration of Dr. Kuborn, President of the Society, be completed at no very distant date.

Messrs. W. B. Saunders Company have in the press a new work on gynaecology and abdominal surgery edited by Drs. Howard A. Kelly and Charles P. Noble. The operations and procedures described in the text are illustrated by some 650 original illustrations by Messrs. Max Brodel and Hermann Becker, of the Johns Hopkins Hospital, Baltimore. It is expected that the first volume of this important publication will be ready in about a month.

The *Annals of Tropical Medicine and Parasitology* is a new publication of the Liverpool School of Tropical Medicine, intended to replace the series of separate *Memoirs of the Liverpool School of Tropical Medicine*, twenty-one of which have been published by the School. Ten of these, comprising 640 pages and forty-nine plates and figures, have been issued within the last two years. The editor is Professor Ronald Ross, who has as collaborators Dr. J. W. W. Stephens, Mr. R. Newstead, Dr. J. L. Todd, Dr. H. Wolferstan Thomas, Dr. Anton Breinl, and Sir Rubert Boyce. The first number contains an account of insects and other *Arthropoda* collected in the Congo Free State, being the Seventh Interim Report of the Expedition of the Liverpool School of Medicine to the Congo, 1903-5, by Mr. Newstead, the late Dr. Everett Dutton, and Dr. Todd; a paper on some parasites in the Museum of the School, by Dr. A. Looss, Professor of Parasitology in the Congo School of Medicine, with a contribution on a case

of distomiasis of the liver and rectum, by Dr. Edward Cuffey, Physician to the British Hospital, Port Said, and other communications. The new periodical is well and abundantly illustrated, and altogether presents a handsome appearance. It contains on a separate page an excellent portrait of Laveran.

In the January number of *Janus*, Dr. J. A. Nixon, of Bristol, gives an account of a new MS. of Guy de Chauliac, including the *Practica Astrolabii*. Among the manuscripts of the Bristol City Library is one which formed part of the collection of Matthew, Archbishop of York, who in 1615 bequeathed a portion of his books and manuscripts to the city. This manuscript is a work on surgery in Latin by Guy de Chauliac (1300—1368), and the Bristol copy was made by John Tourtier for John, Duke of Bedford, between 1420 and 1435. The book is complete and includes a preliminary treatise on astrology, while to the end of the surgery is appended a Latin-English glossary. The first five double pages are occupied by the "astrology," which deals with methods of determining the position and influence of the planets, stars, etc. After this are ten double blank pages, as though, perhaps, the copyist had intended to include at some later date the treatises on "Cataract" and "Hernia." Then comes *La Grande Chirurgie* in full. It begins:

In dei nomine incipit inventarium seu collectarium in parte cirurgicali medicinae compilatum et completum anno Domini Millesimo tricentesimo sexagesimo tercio per Guidonem de Caulhiaco Cirurgicum Magistrum in medicina in preclaro studio Montispessulani. Quodquid inventarium seu collectarium fecit scribi et taliter ordinari venerabilis vir magister Johannes Tourtier Magister in Cirurgia ad requestam altissimi excellentissimique et potentis principis Domini Johannis ducis de bedford Regentis regni Francie et Protectoris regni Angliae.

After this follows in black the usual prologue:

Postquam primo gratias egero deo omnipotenti.

At the beginning of each of the seven books are miniatures representing various surgical or anatomical subjects; the costumes are of an earlier date than those reproduced in Nicaise's edition published in 1890. The manuscript is not mentioned by Nicaize, nor was its existence then recognized. Dr. Nixon thinks it may be assumed that the MS. dates from between the "perpetual peace" of Troyes and the battle of Verneuil (that is, 1420-24). A name remarkably like that of "Johannes Tourtier Magister in Cirurgia," namely, Jehan Fourtier, has been found among the surgeons of Paris in 1424. Serving with the Duke, and acting as Principal Surgeons to the English army of Henry V were Thomas Morstede and Nicholas Colnet; the latter being a Frenchman was naturally acquainted with Guy de Chauliac's writings, and Thomas Morstede, Surgeon to the King, was a man who took the greatest share in organizing the education of surgeons in London. Dr. Nixon thinks it was probably at the instance of one or both of his surgeons-in-chief that the Duke ordered a copy to be made, perhaps enjoining its use upon the surgeons of his army. In a subordinate capacity served also Richard Ferris, afterwards Sergeant-Surgeon to Queen Elizabeth, one of the surgeons depicted by Holbein in his picture of Henry VIII presenting a charter to the Barber Surgeons of London; and a pupil of Ferris, Thomas Gale, wrote in 1563 the first book on surgery in the English tongue, in which he quotes freely from Guy de Chauliac.

MOTOR CARS FOR MEDICAL MEN.

ANOTHER TWELVE MONTHS WITH A MOTOR CAR.

By H. P. BARLOW, M.B.,
Parkstone, Dorset.

IN the summer of 1903 I bought a second-hand Argyll car, but must draw a veil over the six months I laboured with it. Nevertheless, I learnt to drive on it, and acquired some skill in diagnosing the causes why a car will not go. In April, 1904, I bought a new 10-12-h.p. two-cylinder Argyll car for £350, and from that day to this the car has been an unfailing source of profit and pleasure.

My man who cleans the car has had no previous experience of motor cars, and I myself am not in the least mechanically inclined. But at the same time I must in fairness state that at the Parkstone Motor and Cycle Co. we have a skilled engineer at our very doors whose charges are reasonable. On January 1st, 1906, the car had been in almost daily use for twenty months practically without giving any trouble, and to-day, after just on three years' similar use, after running close on 15,000 miles, the car is going, and looking, too, as well as ever.

The following are the total expenses for the year ending December 31st, 1906, excluding man's wages and rent of motor house:

	REPAIRS, RENEWALS, AND OVERHAULING.					
February.	Examining and adjusting coil, taking carburettor to pieces, and cleaning ditto, overhauling ignition	0	12	6		
	Repairing starting gear... ...	0	2	6		
	Taking coil to pieces, adjusting stray connexions, new H.T. wire, etc., ...	0	6	8		
	Examining for weak firing, taking out pistons, scraping and cleaning ditto and rings	0	8	8		
	Taking up play in brake parts and cardan shaft and adjusting...	0	3	4		
March.	Adjusting switch	0	2	0		
April.	Dismantling rear brake and fitting new links, etc. ...	0	12	2		
May.	Reseating valve	0	5	6		
	Fitting new H.T. wire	0	1	10		
June.	Grinding in valves, examining gear box, and minor adjustments	0	12	8		
July.	New brake rod, and fitting ...	0	3	9		
	Rewiring car and supplying L.T. wire...	0	10	10½		
	Overhauling car, cleaning carburettor and exhaust pipe, and adjusting coil	0	7	6		
August.	Fitting new rubber water connexions	0	3	0		
	Fitting new double coil, etc. ...	0	9	6		
September.	Dismantling clutch and parts, dress and re-erect ditto, examining gears, parts taken down and overhauled, differential half taken apart, examined, cleaned, and refitted, enlarging water outlets for tubing, new bands for brake, stearing gear taken down and refitted and various adjustments, making and fitting new steering rod ...	3	13	10		
					8	16 3½
	Tyre expenses:					
March.	Outer cover retreaded	2	2	0		
June.	1 Dunlop inner tube	1	19	2		
July.	1 Dunlop inner tube	1	19	2		
August.	2 Collier 810 × 90 outer covers	12	17	6		
December.	Tyre repairs for the year ...	1	18	6		
					20	16 4
	Petrol for the year—260 gallons	15	8	6		
	Grease and oil, do.	2	7	9		
					17	16 3
	Accumulators charging for the year				1	14 6
	Sundries during the year:					
	10 plugs	1	6	10		
	Voltmeter	0	8	9		
	Prested double coil	3	12	6		
	Spanner, 3s; grease bags, 5s., pump tubing, 1s. 3d.; radiator cap, 5s.; sponges, leathers, waste, etc., 15s.; polish, 8s. 10d.: carbide and paraffin, 20s.	2	18	1		
					8	6 2
	Motor licence, annual	2	2	0		
	Dorset Automobile Club sub., annual	0	10	6		
	Driving licence, annual... ...	0	5	0		
	Licence for manservant.. ...	0	15	0		
					3	12 6
	Motor insurance				11	10 0
					72	12 0½

Remarks.—It will be observed, on referring to the number of sparking plugs bought and to the number of times the ignition system was overhauled or parts renewed, that ignition troubles were a constant feature up till August. I then bought a Prested double coil and two Darop sparking plugs, and from that date to this—February 23rd — no misfiring in either cylinder has occurred. The reliability of the car is such that any