

paper "On a New Kind of Rays" from the *Sitzungsberichte der Würzburger Gesellschaft*, 1895, which appeared in the same issue. This, we believe, was the first complete account of Röntgen's work published in England. To the same issue (Jan. 23, p. 276) the late Mr. A. A. Campbell Swinton contributed an article describing how, "Working upon the lines indicated in the telegrams from Vienna, recently published in the daily papers, I have, with the assistance of Mr. J. C. M. Stanton, repeated many of Prof. Röntgen's experiments with entire success"; and his article was illustrated by an X-ray photograph of a human hand taken by him with a Crookes tube. In the following three months as many as one hundred and fifty-five notes and original communications upon X-rays and their applications appeared in our columns.

Gold Medal for Astronomy

THE award of the gold medal of the Royal Astronomical Society to Dr. R. G. Aitken, director of the Lick Observatory, Mount Hamilton, California, was the subject of the presidential address given by Dr. Knox-Shaw, Radcliffe Observer, Oxford, at the annual general meeting of the Society on Feb. 12. The actual presentation of the medal is deferred until May 13, when the medallist is coming to London to deliver the George Darwin lecture; the subject of this has not yet been announced, but it will probably be connected with double stars. Dr. Knox-Shaw began his address by giving a description of the state of double-star astronomy in the middle of the last century; it was taken for granted that the work of the two Herschels and the two Struves had exhausted the mine of possible discoveries, at least in the northern hemisphere, and that it only remained to continue the observation of the known pairs, with a view of obtaining better orbits.

Dr. Aitken and other Double-Star Observers

WITH the advent of the great American telescopes a new era began. It became possible to detect much closer pairs than before; these offered such a large field that for the first time a distance limit was fixed, beyond which stars should not rank as doubles. This was taken as 5" for stars of the ninth magnitude, but was made wider for brighter stars and for stars of large common proper motion. S. W. Burnham was the first to make a great advance in this direction; in 1906 he brought out a great catalogue of 13,665 pairs, more than two thousand of these being his own discoveries. Dr. Aitken has been a worthy successor. With the aid of Dr. Hussey, who was his fellow-worker for many years, about four thousand new pairs have been found, and a new general catalogue is in course of formation. An important point is that many of the new pairs are extremely close (separation less than half a second). As was to be expected, many of these close pairs showed fairly rapid motion; in fact, one of them has completed a revolution since discovery; Dr. Aitken enjoys the distinction of having made all the observations upon it, and also of computing its orbit. From a physical point of view, the chief importance of double-star astronomy is

the information that it leads to on the masses of the stars. At the beginning of this century not more than a dozen star-masses were known with any accuracy; the number has now been greatly increased, the study of eclipsing binaries having added to it. As a result, Sir Arthur Eddington was able to deduce the law correlating mass with absolute magnitude. This important law rests largely on such work as that carried on by Dr. Aitken.

Gold Medal of the Hunterian Society

THE Hunterian Society, the oldest medical society in London, offers annually or periodically for competition a medal bearing the profile of John Hunter. It is open to all general medical practitioners resident in Great Britain, Ireland, and the Channel Islands, and is awarded for an essay. The subject of the essay is chosen by the writers from any subject in the medical sciences, and each essay has to be written under a motto or device and is accompanied by a sealed envelope containing the writer's name. In 1931 the Council recommended that the medal should be of gold instead of silver as heretofore, and that a new design should be struck. Accordingly, Mr. Thornton Shiells, with Mr. H. Youngman, engraver, produced a gold medal the size of a crown piece. The original designs and the plaster medallion made for the purpose are now preserved in the Library of the Society. For the first competition under the new régime a number of essays of high order were received, and the medal has been awarded to Dr. Griffith Ifor Evans, 37 Castle Square, Caernarvon, for an essay on "Chronic Familial Syphilis". Dr. Gwladys Victoria Smallpiece, of 365 Woodstock Road, Oxford, was declared "proxime accessit". The medal was presented to Dr. Griffith Evans at the annual dinner on Feb. 11. The next award of the gold medal will be made in 1933 for essays received on or before Dec. 31, 1932. The rules governing the award may be obtained on application to the honorary secretary of the Society, Mr. Andrew McAllister, 79 Wimpole Street, London, W.1.

Extension of University College, London

UNIVERSITY College, London, has acquired by purchase a site of two acres, formerly occupied by Messrs. Shoobred, immediately south of the buildings of the Faculty of Medical Sciences of the College. This is the largest addition to the site of the College made since its foundation more than one hundred years ago. The site acquired by the founders was some eight acres in extent, and most of the previous additions to the College have been confined to this area. So long as fifty years ago attempts were made by the College to buy the site, on which, eventually, were erected warehouses, depositories, and stables for Messrs. Shoobred. The site was too large for University College to buy or to occupy as a whole. The problem was solved by the Carnegie United Kingdom Trustees, who acquired part of the property as permanent headquarters for the National Central Library and the Library Association. In the College part of the territory there will be housed the Departments of

Zoology and Comparative Anatomy, Botany, Geology, Geography, and Political Economy, and certain other needs will be served there. The Departments moving out of the old buildings of the College will set free accommodation much needed by the Faculty of Arts and by the Libraries. The College has also received a great benefaction for the endowment of the Department of Zoology and Comparative Anatomy from the Rockefeller Foundation. The benefaction amounts to £88,000, and must be devoted to the advancement of research. This gift follows other benefactions by the Rockefeller Foundation, which have made possible the building of the new Department of Anatomy and Embryology and the provision of endowments for that Department and the Departments of Physiology and Pharmacology.

British Industries Fair

THE eighteenth British Industries Fair, which will open in London and Birmingham on Feb. 22, will be the largest and most representative display of British manufactured goods that has yet been organised. Last year exceeded all previous efforts, and this year marks a further advance. Following the practice of last year, the Fair will consist of two sections, the London Section and the Birmingham Section. In London the exhibits of the lighter trades and the specifically Empire exhibits will be held at Olympia; the White City will accommodate the display of textiles and clothing, which for the first time will represent all branches of the textile industry. At Castle Bromwich, Birmingham, there will be exhibits mainly of hardware, house equipment, and engineering, and, out-of-doors, an exhibition of agricultural implements and of plant for light railways, quarrying, and roadmaking. The total frontage of the stands in all sections of the Fair will amount to approximately 16 miles. The total number of exhibitors will be 2305, of which 1150 will exhibit their products at Olympia, 130 at the White City, and 1025 at Castle Bromwich. Of the new trade groups that have co-operated in this organised effort to exhibit the variety and extent of British manufactures, mention may be made of the oil section, and of the section for mining, quarrying, and roadmaking plant. The former will provide working exhibits of the latest oil-fired plant, and the latter will give a demonstration of the actual construction of a road. We hope to give, in a subsequent issue, a review of some of the chief features of the Fair.

Second Dynasty Burial Rites at Ur

MR. LEONARD WOOLLEY'S first report on the current season's work at Ur, which appeared in the *Times* for Feb. 12, chronicles *inter alia* the discovery of a burial of a type "quite out of the ordinary". It has the additional interest that it belongs to the Second Dynasty of Ur, about 2800 B.C., a period and dynasty about which at present nothing is known. The Joint Expedition of the British Museum and the Museum of the University of Pennsylvania is now engaged in endeavouring to trace the earlier history of the sacred area on which stands the famous ziggurat of the Third Dynasty. In the first month's work the complete ground plan of a range of buildings on the

north-west side has been brought to light. The buildings belong to the First Dynasty. The burial to which reference has been made was not discovered here, but in the course of excavating a patch of ground between the predynastic cemetery and the mausoleum of Bur Sin. Eighteen people were found buried at the foot of a rectangular shaft originally at least 20 ft. deep, but of which the bottom is now 30 ft. below the surface. All the bodies, which were bedecked with gold ornaments and beads, had been buried independently, although the burials were contemporary, and the same elaborate ritual had served them all. Above the graves a clay floor had been spread, and on this were fireplaces and a brick-walled enclosure containing traces of food. Above this were two floors, at different levels, with altars, and the shaft was closed finally with rubble and brick packing. Evidently, Mr. Woolley notes, the burial had been by stages, each marked by ceremonies of fire and sacrifice.

Co-operation in Archæological Research in France

THE Smithsonian Institution announces the completion of an agreement with the University of Toulouse, whereby the two bodies will co-operate for a period of ten years in the excavation of the cave of Marsoulas in the Haute-Garonne among the foothills of the Pyrenees. The cave is the property of the University, and is already well known to archæologists for its polychrome paintings and wall engravings of palæolithic age. It was first investigated by archæologists in 1886-87, but after that it was comparatively neglected until recent excavation by Mr. J. Townsend Russell of the Division of Old World Archæology of the Smithsonian Institution. The cavern is about thirty metres in extent, but galleries now closed by clay infiltration suggest that at the time of its occupation by palæolithic man it may have afforded more extensive accommodation than at present. It is hoped that it may be possible to open up these galleries. By the time the agreement expires, the cave should be cleared completely. In the meantime the terms of the agreement may be extended to cover other investigations, possibly so far afield as the French Near East and Africa.

Recent Excavation in the Marsoulas Cave

EXCAVATION in the Marsoulas Cave during the past season by Mr. Russell on behalf of the Smithsonian Institution has already produced results of importance, which promise well for the future of the joint undertaking. Two ancient hearths were found, of which the upper yielded artefacts typical of the Magdalenian period. Just below was an Aurignacian hearth with typical knives, scrapers, points and decorative pendants of flint and bone. An unexpected find was a triton shell, which must have come from warm water then far to the south, probably from Africa. The technique of one of the numerous wall-paintings observed is described as unique. The animal form had been produced by the thumb of the painter, which had been dipped in the wet pigment and then pressed on the wall. The paintings of the Marsoulas Cave are singular in the fact that they are near the entrance