progress is being made in such problems as the further analysis of the relations between chromosomes and heredity, and the compilation of data on which the improvement (germinally) of the human race could be based.

WE have received the annual report for 1924 of the Crichton Royal Institution, Dumfries—a hospital for mental diseases. Both private and rate-aided patients are admitted, numbering approximately 630 and 339 respectively during the year. Some 70 per cent. of the private admissions were voluntary, but all the rate-aided admissions were under certificate, and the medical superintendent, Dr. Easterbrook, comments forcibly on the obsolescent provisions and objectionable terminology under existing statutes which officially distinguish the latter class as "pauper lunatics," and he points out that the absence of definite statutory provision for the treatment of rate-aided patients as voluntaries has had unfortunate results. A well-equipped clinical and pathological laboratory conducts much useful work at the Institution, which has received commendation from the Commissioners of the General Board of Control after inspection.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned: Grade IV. of the Civilian Educational Staff of the Royal Air Force, preferably with engineering qualifications and experience.—The Secretary, Air Ministry, Adastral House, Kingsway, W.C.2; Bio-chemist at Dove Marine Laboratory, Cullercoats.—The Registrar, Armstrong College, Newcastle-upon-Tyne; an assistant lecturer in the department of physiology of the Welsh National School of Medicine.—The Secretary, University College, Cardiff (April 11); a lecturer in morbid anatomy and histology in the University of Manchester.—The Internal Registrar (April 15); a research fellowship at Somerville College, Oxford, open to Oxford women graduates.—Miss Lorimer, at the College (April 16); woman as principal administrative officer of King's College for Women, Household and Social Science Department, Campden Hill Road, W.8.—The Chairman of the Executive Committee (April 16); two assistant lectureships in physics in the University of Manchester.—The Internal Registrar (April 18); the professorship of bio-chemistry at Middlesex Hospital Medical School.—The Academic Registrar, University of London, South Kensington, S.W.7 (April 23); the professorship of chemistry and directorship of the department of chemistry, the University of Birmingham.—The Secretary (May 1); four scientific assistants for the science exhibition of the Royal Society at the British Empire Exhibition.—The Secretary, British Empire Exhibition Committee, Royal Society, Burlington House, W.1.

Our Astronomical Column.

TWO NEW COMETS.—Comet 1925 *a* was discovered by Herr Schain at Simeis Observatory, Crimea, on March 23. It is of the tenth magnitude and visible in moderate telescopes. When discovered it was near β Virginis, and was moving slowly to the north-west. Being nearly opposite to the sun, it is observable for most of the night. The following positions have come to hand:

G.M.T. (new). d. h. m.	App. R.A. h. m. s.	App. N. Decl. ° ′ ″	Observer.	Place.
Mar. 23. 22 43·6	11 47 48·9	1 43 49	Schorr	Bergedorf.
,, 25. 23 42·3	11 44 8·3	1 53 46	Vinterhausen	Copenhagen.
,, 27. 23 37·5	11 40 32·2	2 3 22	Steavenson	Norwood.
,, 29. 0 22·0	11 38 39·7	2 7 53	,,	,,

The last place depends on an approximate position of the star $BD + 2°$ 2468, mag. 9·5; assumed place for 1925·0, $11^h\ 39^m\ 6{\cdot}3^s$, 2° 12′ 12″. Use should not be made of this position until a better star-place is available. The comet's R.A. is diminishing by about $1^m\ 53^s$ daily, its declination increasing by 5′ daily.

The orbit has not yet been calculated, but the ascending node is evidently near 0°, and the inclination not large; this fact would make an elliptical orbit not unexpected.

Comet 1925 *b* was found by Mr. William Reid at Cape Town on March 24. It should be stated, in correction of some paragraphs in the press, that Mr. Reid, whose diligence and success in comet-sweeping are well known, is not on the staff of the Cape Observatory, but is an amateur.

This comet is brighter than the other, being of magnitude 8, but its low altitude is a hindrance to easy observation in England. The following positions have come to hand:

G.M.T (new). d. h. m.	App. R.A. h. m. s.	App. S. Decl. ° ′ ″	Observer.	Place.
Mar. 24. 21 33·0	13 29 47	20 16 0	Reid	Cape Town.
,, 28. 1 9·4	13 26 58·3	21 5 16	Steavenson	Norwood.
,, 28. 2 49·0	13 26 54·5	21 6 15		Algiers.
,, 29. 1 12·0	13 26 0·1	21 20 36	Steavenson	Norwood
,, 29. 1 29·0	13 25 59·8	21 20 54	,,	,,

The R.A. is diminishing by 54 sec. daily, the south declination increasing by nearly 16′ daily.

The orbit has not yet been calculated, but, as in the case of Comet 1925 *a*, the observations given should be sufficient to deduce preliminary orbits. Reid's comet is not far from γ Hydræ, and is due south about three-quarters of an hour after midnight. There will be more chance of observing the comets after the moon has set.

BROADENING STELLAR SPECTRA.—In Mon. Not. R.A.S., vol. 85, p. 47, Dr. W. J. S. Lockyer, Director of the Norman Lockyer Observatory at Sidmouth, describes a new method of broadening stellar spectra for purposes of reproduction. Since stellar images are merely points, the spectra have no breadth unless special methods are adopted to broaden them. For practical purposes it is customary to allow the image of the star to "trail" on the photographic plate by a suitable adjustment of the rate of the driving clock, but very little breadth is usually possible owing to the increased time of exposure entailed. Further, various unavoidable irregularities in brightness make the spectra broadened in this way unsuitable for picturesque reproduction. In the arrangement devised by Dr. Lockyer, the original negative, showing a narrow spectrum (after being specially prepared in a manner explained in the paper) is allowed to fall under gravity in a direction parallel to the spectrum lines, its speed being regulated by a flow of oil which, by an ingenious arrangement, is produced by the fall. During the fall the negative is illuminated by a constant source of light and photographed, the breadth of the spectrum thus obtained clearly being determined by the distance of descent. The paper contains an account of investigations made to determine the most satisfactory time of exposure, and also a beautiful photograph of the spectrum of α Cygni broadened by the new method.