

dustries and homes also depend on rectifiers to convert alternating to direct current. It is not economically feasible to generate and transmit direct current.

Despite a trend in recent years toward smaller and more efficient components, power rectifiers have remained large, limited in efficiency, and in need of bulky cooling equipment to prevent overheating.

It is believed that the new power rectifier will far surpass any yet made of silicon or other material. Expectations are that it may have an almost unlimited life-span, and will be capable of operating continuously at temperatures up to 400°F. These advantages are expected to open up many new uses in telecommunication, heavy industry, and in military applications.

The new silicon rectifiers provide 5000 times more current than conventional rectifiers of the same size, thus permitting miniature operating units. Even so, the newest techniques may be applied to large units and thereby provide entirely new power possibilities for industry. On a machine the size of a locomotive, for example, significant amounts of space may be saved by the new rectifiers.

■ The Shell Chemical Corp. has announced plans to build a new urea plant at Ventura, Calif. Construction will start shortly, and the plant will be in operation by Sept. 1956, with a capacity of more than 100 tons a day.

■ Corning Glass Works has announced the development of a fast, economical method for the precision casting of metals through the use of glass molds. The process, called Glascast, is designed especially for work with high-temperature alloys. It eliminates the precoat step, and has given excellent results with test production of castings.

Fabrication of the molds requires a minimum of equipment and material, the time of preparation is reduced, and the technique is suitable for any of conventional casting methods used with aluminum, brass, carbon steels, cobalt-base alloys, and chromium-base alloys.

■ A new type of "moving sidewalk" that can go around corners and carry passengers in two directions has been demonstrated at the plant of Hewitt-Robins, Inc., Passaic, N.J., manufacturer of rubber and conveyer machinery products.

Passengers stand on a rubber carpet fastened to a train of pallets, mounted on rubber-tired wheels that run on a steel track. When going around a curve, the rubber carpet stretches on the outside curve and contracts on the inside. The conveyer is driven by electric motors that transmit power to the pallets by means

of a "caterpillar" type of chain, which engages steel "dogs" on the underside of each pallet. The carpet itself does not help to pull the load but functions as a smooth, antiskid surface for the passengers to stand on. The conveyer can carry passengers in two directions because it can turn around and travel in a continuous circuit. It is designed to run at a speed of 1 2/3 mi/hr, average walking speed, but can be adjusted to run faster or more slowly.

Three of the new conveyors will be installed in the new air terminal to be built at Dallas Love Field, Dallas Tex., They will carry passengers and their baggage from the ticket office to planes and bring incoming passengers from the planes into the terminal. The total length will be 1406 ft. The Dallas installation is scheduled for completion in 1957. It will cost \$234,703.

Miscellaneous

■ The International Commission on Zoological Nomenclature will start to vote 7 Jan. 1956 on the following cases, involving the possible use of its plenary powers, for the purposes specified against each entry. Full particulars of these cases were published on 7 July in parts 7 and 8 of volume 11 of the *Bulletin of Zoological Nomenclature*.

1) *Gnathophyllum* Latreille, 1814 (Cl. Crustacea, Order Decapoda), validation of emendation from *Gnatophyllum*; Hippolytidae Bate, 1888 and Eugeonatonotidae Chace, 1937, validation of.

2) Mayaitidae Spath (L.F.), 1928 (Cl. Cephalopoda, Order Ammonoidea), validation of.

3) *Lernaocera* Blainville, 1822 (Cl. Crustacea, Order Copepoda), validation of emendation from *Lernaocera*, and designation of a type species for.

4) Proposed grant to the ICZN for authority to prescribe for generic names a gender different from that grammatically appropriate when such action is needed in the interests of nomenclatorial stability.

5) Determination of a gender for (i) generic names in the Class Aves that have the termination *-rhynchus*; (ii) generic names in the Order Decapoda (Cl. Crustacea) that have the terminations *-opsis* and *-gnathus*; and (iii) for the following names: *Gigantorhynchus* Hamann, 1892 (Cl. Acanthocephala), *Desmognathus* Baird, 1830 (Cl. Amphibia), *Nephrops* Leach, [1814] (Cl. Crustacea, Order Decapoda), and *Syngnathus* Linnaeus, 1758 (Cl. Pisces).

6) *Varuna* Milne Edwards, 1830 (Cl. Crustacea, Order Decapoda), validation of currently accepted gender for.

Proposals are also made for the adoption of the following "Declarations":

(i) Article 21, clarification of the authorship to be attributed in certain circumstances to zoological names and to actions affecting the status of such names; and (ii) Article 25, clarification of the status of names published only in the indexes of books. Comments should be sent as soon as possible to Francis Hemming, Secretary to the Commission, 28 Park Village East, Regent's Park, London, N.W.1.

■ Descriptions of 20 patents owned by the U.S. Government and held by the Atomic Energy Commission have been released by the commission. The AEC will grant nonexclusive, royalty-free licenses on these patents, as part of its program to make nonsecret technologic information available for use by industry. Commission-held patents and patent applications released for licensing now total 767. Applicants for licenses should apply to the Chief, Patent Branch, Office of the General Counsel, U.S. Atomic Energy Commission, Washington 25, D.C., identifying the subject matter by patent number and title. Copies of these patents may be obtained from the U.S. Patent Office.

■ Preparation of an up-to-date aeronautical dictionary has been undertaken by the National Advisory Committee for Aeronautics. The basic aim of the new dictionary, which will be compiled under the direction of Frank D. Adams, will be to reflect the best current usage of those terms peculiar to aeronautics, as well as those terms that have special significance when they are used in aeronautical literature. Preferred usage of terms will be indicated, but well-established usages that may be considered less desirable will also be included. It is hoped that publication can take place in 1957.

■ A comprehensive appraisal of the status of educational television in the United States will be undertaken during the academic year 1955-56 by the Educational Television and Radio Center, Ann Arbor, Mich. The detailed appraisal of ETV is being made possible by a grant from the Fund for Adult Education.

Richard B. Hull, radio-television director of Iowa State College, has been appointed director of the project. Hull has been granted a year's leave of absence from his Iowa State position to assume the new responsibilities. During the course of the year, Hull will gather firsthand information on the operations of all ETV stations now on the air and those scheduled to begin broadcasting in the near future. He also will meet with leading educational and civic authorities in an effort to appraise the successes, failures, and potentialities of the medium in education.