

could well be transformed overnight if suitable discoveries were made. At present, the annual production of gold and silver in the country, the population of which is nearly half a million, amounts to merely a few thousand dollars. The production of manganese ore, however, has been increasing quite quickly—in 1967, Botswana exported 4,688 short tons of ore, more than four times as much as in the previous year.

For the future, the report has some encouraging pointers. Copper, nickel and diamonds have been discovered by a number of the companies with a licence to prospect in Botswana, although the economic potential of the diamond deposits discovered by Kimberlitic Searches Ltd, a subsidiary of De Beers, has not yet been evaluated. The report of the geological survey suggests that in the long run the chief mineral resources of Botswana will be diamond deposits like these and the copper and copper nickel ore which have been found in two areas in the north-east of the country. The reserves so far defined amount to some 33 million tons of ore, and everybody must, of course, be hoping that this is merely the tip of an iceberg.

#### PUBLICITY

### Soft Sell ?

THE Institution of Electrical Engineers has distributed the following notice of a lecture to be given to the joint IEE/IERE medical and biological electronics group on February 11, 1969:

Available *now*. LINEAR MOTOR. Rugged and dependable: design optimized by world-wide field testing over an extended period. All models offer the economy of "fuel-cell" type energy conversion and will run on a wide range of commonly available fuels. Low stand-by power, but can be switched within msec to as much as 1 KW mech/Kg (peak, dry). Modular construction, and wide range of available subunits, permit tailor-made solutions to otherwise intractable mechanical problems.

Choice of two control systems:

- (1) *Externally triggered mode*. Versatile, general-purpose units. Digitally controlled by picojoule pulses. Despite low input energy level, very high signal-to-noise ratio. Energy amplification  $10^6$  approx. Mechanical characteristics: (1 cm modules) max. speed; optional between 0.1 and 100 mm/sec. Stress generated; 2 to  $5 \times 10^{-5}$  newtons  $m^{-2}$ .
- (2) *Autonomous mode with integral oscillators*. Especially suitable for pumping applications. Modules available with frequency and mechanical impedance appropriate for
  - (a) Solids and slurries (0.01–1.0 Hz).
  - (b) Liquids (0.5–5 Hz); lifetime  $2.6 \times 10^9$  operations (typ.)  $3.6 \times 10^9$  (max.)—independent of frequency.
  - (c) Gases (50–1,000 Hz).

*Many optional extras* e.g. built-in servo (length and velocity) where fine control is required. Direct piping of oxygen. Thermal generation. Etc.

Good to eat.

The lecture is by Professor D. R. Wilkie. The subject is muscle.

## Parliament in Britain

from our Parliamentary Correspondent

MEMBERS of Parliament returning from their Christmas vacation started work near home by discussing an ambitious plan to make their working conditions more habitable. The first business on the agenda was a discussion of the report of the Services Committee, which recommended the erection of a new building across Bridge Street, to provide office space for MPs. Ultimately, it may be possible to close Westminster Bridge altogether, and to build instead a tunnel under the Thames from Hungerford Bridge to Lambeth Bridge, to divert traffic from Parliament Square. Bridge Street, which is the street leading from Whitehall to Westminster Bridge, would then become part of a "parliamentary precinct". The new building, six storeys high, may cost £5 million. The alternative is an entirely new House of Commons, costing £35 million.

Members carried away by the heady excitements of a tunnel beneath the Thames were, however, brought back to earth by the publication of a report by the Labour Party Science and Technology Group. The report gives the views of the group on the subject of European collaboration in technology, and resulted from a series of debates within the group, and a number of discussions with European executives which took place in the summer of 1968. The report's recommendations follow the committed European line of the chairman of the group, Mr Eric Moonman, MP for Billericay. But first it identifies the problems of forming European companies, which have by no means disappeared with the gradual dissolution of tariff barriers in the EEC and EFTA. Patent laws and standards are one obstacle, and the report supports the idea of a more flexible European patent system, with patents lodged automatically, and closely examined only if an objection is raised. In any case, the report believes that "patents are much less important now than they were 25 years ago". Two more limited difficulties are the system of worker participation in German companies, and the shareholding system in Italy.

The report concludes with a stirring call to action. First, the Prime Minister should state "publicly and emphatically" that it remains Britain's aim to promote European collaboration in technology, by strengthening existing projects like Concorde, the airbus, ESRO and CERN, and by undertaking new ones. Suggested areas are satellite communications systems, nuclear marine propulsion and oceanography, and the report also suggests cooperation at a more basic level in molecular biology and nuclear fusion. Within Britain, the Chancellor of the Exchequer should make a careful appraisal of all public spending on science and technology, distinguishing carefully the amount spent on national projects and on international ones. The Government must then determine how much it is prepared to spend on international projects in the next three financial years. "If we are going into partnership with other countries", the report says, "we must be absolutely clear about our financial resources and commitments." The Board of Trade and the CBI should at the same time attempt to devise ways of bringing into line European regulations on subjects such as mergers and monopolies, patents, safety regulations and standards and calibration.