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# ECONOMIC AND TECHNICAL ITEMS

## Pro Aqua—Pro Vita

The 5th International Exhibition for the Protection of the Environment, PRO AQUA—PRO VITA 1971, an international exhibition of sanitary technology—water, waste water, refuse, air, noise—will be held in Basle from 8th to 12th June, 1971. In an area of nearly 120,000 sq. ft. some 300 exhibitors, from 14 countries, will be presenting the most modern appliances and installations used in the fields of water catchment, the mechanical, chemical, thermal and electrical treatment of water and waste waters, refuse disposal, the purification of the air and the fight against noise. As in previous years, PRO AQUA 1971 will be accompanied by a number of conferences devoted to various subjects. On 7th and 8th June, experts will talk about the medical, legal, acoustic and technical conditions of the fight against noise, with particular reference to the sound-proofing of buildings. The 9th and 10th June will be devoted to the problems of air hygiene and the fight against atmospheric pollution, while on 11th and 12th June it is mainly the economic aspects of water supply and water purification that will be covered during the nine talks on the structure of costs in the hydraulic economy of built-up areas.

## SSIH Presents

### 2 Revolutionary Watches

The "Société suisse pour l'industrie horlogère" (SSIH)—the Swiss Company for the Watch Industry—recently presented two technical novelties of the greatest interest for the watch industry: the plastic watch and the hand-less watch. After years of trials, a watch factory at Le Locle (Switzerland) has begun manufacturing movements whose main parts, with the exception in particular of the spring and hairspring, are made of injected synthetic material. The main part is cast in one; the traditional bottom plate, which normally requires 40 operations to assemble, now requires only one single injection in the mould. As, in addition, plastic is self-lubricating, it is no longer necessary to oil the parts. This revolutionary technique also makes possible a completely different approach to watch construction, simplifying the mechanisation of assembly and doing away with all screws, which considerably reduces manpower requirements in the production of average precision and low price watches.

The first portable digital chronograph, produced by a watch factory at Bienne (Switzerland), is also a world first. The originality of this chrono-

meter lies in its "passive optoelectronic" method of indication—"passive" because the optical change is effected not by transmission but by reflection of the light thanks to an original system of liquid crystals. This process offers the advantage of reducing the consumption of electricity and being unaffected by changes in light intensity. This new timepiece is specially designed for sports timing: it indicates continuously the minutes, seconds and hundredths of a second; it can be coupled electrically to the starter's pistol or a swimmer's arrival bar. At the moment it weighs about 1 lb., but the Swiss firm's engineers are concentrating their efforts on miniaturisation.

### World Watch First

A watch factory at Renens (Switzerland), recently presented a new creation representing a world novelty: its electronic "SPACE QUARTZ" digital clock. The quartz guarantees extremely high precision (less than a minute's difference per year). Made according to the most advanced techniques, it also offers every guarantee with regard to reliability and strength. The SPACE QUARTZ clock possesses the great advantage of being able to indicate the time in five different time belts: in fact, the digital system indicates the hour, minute and second on a central global dial, a push-button making it possible to select the time-zone desired. This clock is therefore ideally suited to the needs of travel agencies, booking offices, airline companies, hotels and multi-national concerns with a large number of branches throughout the world, etc.

### Automatic Safety Belt

At the 20th International Exhibition of Inventions and New Products recently held in Brussels, an inventor from Aigle (Switzerland) presented an original fastening device for safety belts used in automobiles. The jury awarded him a silver medal. Thanks to this device in an accident, the injured or panic stricken motorist no longer has to think about opening his belt himself. In fact, unlike the traditional fastenings, which have to be opened by hand, this new fastening is opened automatically by an electro-magnetic release system. Connected to the motor, separate from the battery circuit, it opens automatically as soon as the current is switched off and the belt is no longer under traction. The belt can also be undone manually with or without exciting current. The system can be adapted too for use in various forms of public transport—buses, airplanes, etc. In

this case, the model comprises a system of remote release for all fastenings; a light signal makes it possible to check whether the belt is properly worn and whether the fastening is open or closed. In airplanes, the fastening device is connected to a general control panel within reach of the hostess, who can then temporarily release any individual passenger or, in an emergency, undo the belts of all passengers by means of a central switch.

## Switzerland Makes the Fastest Funicular in the World

At Val Thorens in the French Alps, at an altitude of 7,200 feet, work recently began on the construction of a big sports centre where it will be possible to ski all the year round, even in summer, thanks to the Val Thorens Ski Rail, the fastest high capacity funicular in the world, which takes skiers up to the glaciers and snow trails. The Von Roll Works Co. Ltd., of Berne made the plans for this funicular and have been commissioned to supply all mechanical and electrical equipment. This new scheme offers a number of remarkable features: the Ski Rail is the longest funicular in the world, measuring some 4,000 yards. The track passes over a viaduct whose pre-stressed concrete supports are supplied and erected by Losinger & Co. Ltd. of Berne. Each of the two trains comprises six carriages with a seating capacity of 140 each: thus, six thousand people an hour can be carried in either direction. The trip lasts 8½ minutes at 22½ m.p.h. The Val Thorens scheme represents an example of co-operation between different Swiss firms forming an international size concern, thus confirming the value of Swiss industry in the field of the construction of funiculars and aerial cableways.

## Heuer-Leonidas

### to Co-operate with Ferrari

Heuer-Leonidas Co. Ltd. of Bienne (Switzerland), a firm specialising in sports timers and electronic timekeeping, recently signed a technical co-operation agreement with the Ferrari works at Modena. For both firms, the purpose of the agreement is to improve timekeeping in the field of motor racing, as well as, more generally, to provide for long term co-operation in the sector of timekeeping technology in the automobile industry. For the Heuer-Leonidas group, the first stage consists in supplying the Ferrari Teams with portable timekeeping and timeprinting equipment. This equipment has been designed for motor racing at international level, in particular endurance races like the 24-hour Le-Mans race in France, or the 12-hour Sebring race in the United States. In addition to this equipment, the Bienne firm is to develop and then supply an electronic timing system for

the new test track that Ferrari is planning to build.

#### **Federal Guarantee Against Export Risks**

Since it was started 37 years ago, the department for guaranteeing export risks has examined over 76,000 applications, including 49,000 from the machinery industry alone. It has granted guarantees for a total of 18.1 billion Swiss francs (US \$4.2 billion) representing invoices totalling S. Fr. 29.2 billion (US \$6.8 billion) and salaries amounting to 11.1 billion francs (US \$2.6 billion). After deducting the Confederation's commitments amounting to 3,378 million francs (US \$785.6 million) on 31st December, 1970, the total of the guarantees settled amounts therefore to 14.7 billion francs (US \$3.4 billion), corresponding to 24.6 billion francs' worth of invoices (US \$5.7 billion). Since 1934, 11.0 million francs (US \$2.6 million) in round figures payments of S. Fr. 45.4 million (US \$10.6 million) from which repayments totalling S. Fr. 34.4 million (US \$8 million) are to be deducted—have been paid out by the export risks guarantee fund; this amount however comprises 3.2 million francs' worth (US \$740,000) of loans made within the framework of the consolidation agreements concluded with Argentina and Brazil. Thus, the actual compensations amounted to only some 7.8 million francs (US \$1.8 million). So far it has been possible to cover losses by receipts from fees and in addition to form a reserve of 125 million francs (US \$29.1 million) in round

figures. In view of the volume of the Confederation's total commitments in the way of guarantees and considering too that the external debts of the developing countries continue to increase, it is obvious that reserve must be increased still further in spite of the favourable results achieved so far.

#### **Best Swiss Posters 1970**

Each year, under the auspices of the Federal Department of the Interior, a jury selects the best advertising posters. This year, 26 entries were awarded prizes. Some of them revealed a two-fold phenomenon: graphic artists are trying to renovate art, to relate it to present day civilisation by integrating techniques and a system of aesthetics peculiar to advertising in all its forms. Other posters are inspired by pop art from America, which aimed first of all at strict realism before coming to use the commonplace object as an essential ingredient of an original poetic form. This art has perhaps found its true form in posters. The prize-winning awards bear witness to the very high standards achieved by the graphic arts in Switzerland.

#### **Viscosuisse in 1970**

Viscosuisse, the biggest producer of chemical fibres in Switzerland, recorded a turnover of 370.7 million Swiss francs in 1970, which represents an increase of 7% compared with the previous year. The net profits amounted to 12.48 million francs (US \$2.9 million). Sales in Switzerland represented 40% of the total turnover. Two-thirds of the products exported went

to EFTA countries, sales therefore of Viscosuisse to EFTA—Switzerland included—represented over 80% of the total figure. The production works at Emmenbrücke, Widnau and Steckborn worked to full capacity during the year 1970. Investments, amounting to over 60 million Swiss francs (US \$4 million), served mainly to expand the factories producing polyester yarn (Tersuisse) and nylon yarns for carpets (Nylsuisse). At the same time, large sums were spent on rationalisation; a big programme of investments, planned for the years to come, will make it possible to continue to rationalise and automate the production plants. (OSEC)

#### **JUBILEE OF A MECHANICAL FIRM**

Les "Ateliers des Charmilles S.A.", reputable engineering company with factories in Geneva and Annemasse, celebrated its 50th Anniversary with a dinner at the Intercontinental Hotel in Geneva honoured by the presence of Mr. Brugger, Head of the Federal Department of Public Economy. Representatives from the shop floor were also invited. Mr. Brugger made a speech warning his audience of the new threat posed by the demands of the Italian trade unions operating in Switzerland. A worker who was a member of the staff was invited to speak and, referring to the present inflationary situation in Switzerland, said that "workers were perfectly conscious of the incidence and the influence of their wage demands on inflation, but were not prepared to be the sole victims of this inflation".



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