

Current Patents

CYBERNETICS

Computer Speed-Up

IBM Corp. was finally granted a patent last week for a widely used invention that speeds up computer operation. The patent was originally applied for in 1956.

The invention, called a program interrupt feature, allows data to be fed into a computer memory at the same time that the calculating part of the machine is working on other data.

High speed computers save time by storing both data—numbers—and instructions or programs, in magnetic memory sections. When the machine is started, the stored program directs the calculating section to draw data from the memory and operate on it.

Often an operator wants to add more data to the memory after he has started a program. The invention allows him to do this without manually interrupting the program.

Earlier machines had to stop working while data was fed into the memory. Sometimes considerable delays were necessary, all of which were serious, since computer time costs hundreds of dollars an hour.

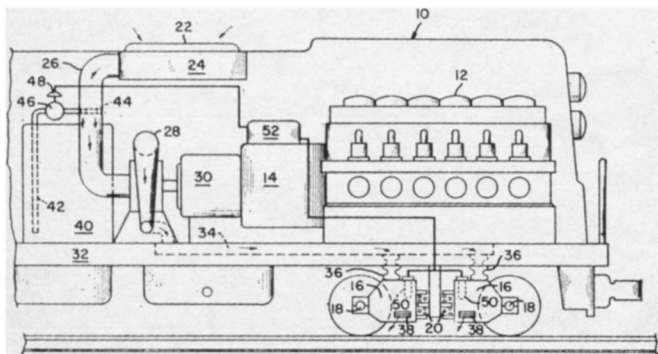
The patent, No. 3,319,230, was part of a data processing machine invented by Morton M. Astrahan, Bennett Housman, Hrand L. Kurkjian and Bernard L. Sarahan.

The 1956 application was divided and part of the invention was granted a patent in 1965. The present patent covers the program interrupt feature, which is used in the IBM System/360 computer and in almost all other modern data processing systems, according to IBM spokesmen.

CRYOGENICS

Cooling Locomotive Motors

Diesel-electric locomotives can haul only a limited number of cars because their electric motors tend to overheat. The problem has increased in recent years because new materials on wheels allow engines to push harder without slipping on the tracks.



Conventional motor cooling systems use a blower to suck in air from outside. Although they work well

enough on level or downhill grades, extra torque required for uphill work causes overheating.

A new invention using liquid nitrogen or liquid air to cool the motors under stress was granted patent No. 3,319,072 last week. Inventors Ralph T. Maynard and Clarence J. Schilling assigned the patent to Air Products and Chemicals, Inc.

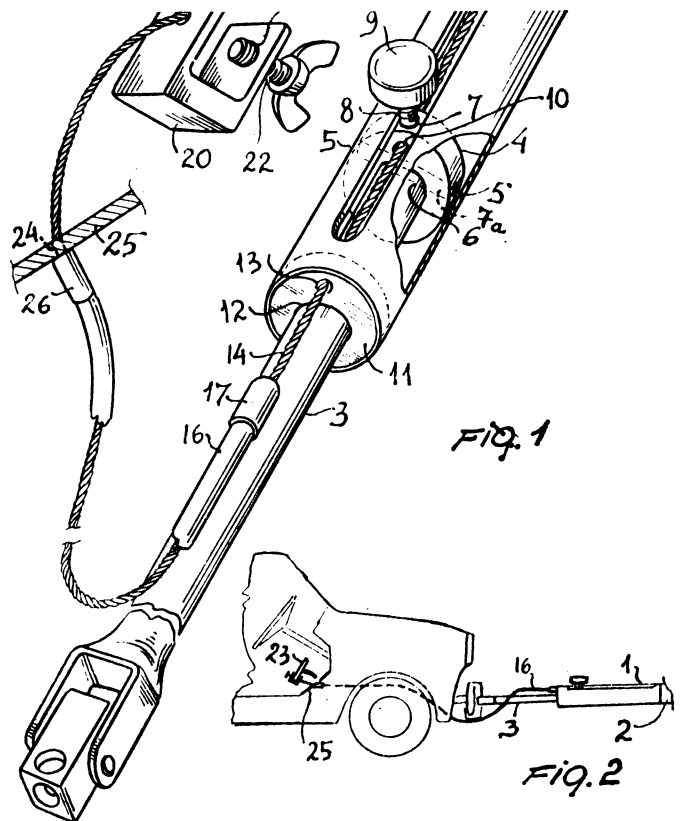
The cryogenic cooling system has an insulated tank containing a liquified gas at around minus 300 degrees F. A pipe from the tank leads through a valve into an outlet in the main air intake.

Sensors measure the temperature of the motors. When they overheat, the valve is opened, the super-cool gas boils into the air intake and the extra cooling power brings the motor temperature down.

AUTOMOTIVE ENGINEERING

Automatic Brake for Towed Car

A device that automatically applies the brake of a towed car was patented last week. Eugenio Frescura of Bergamo, Italy, received patent No. 3,318,422.



The brake actuator fastens onto the tow bar and operates when the towing car slows down. A piston with a cable attached compresses when the towed car begins to catch up with the tower. The piston activates the cable which is fastened to the brake pedal.

As the distance between the two cars increases, the piston retracts and the brake is released.