

# Current U.S. Patents

**The prototype of IBM's 701 computer was granted a patent after a 12 year wait for processing and approval**

► A "jumbo" patent covering components of the first commercially available computer was granted by the U.S. Patent Office.

Twelve years were needed to process and approve the patent application for the prototype of International Business Machines Corporation's 701 computer. This giant electronic "brain" was specifically designed for tackling scientific problems and was the fore-runner of today's extremely high-speed models, such as the IBM 7094.

The basic patent, rights to which were assigned to IBM, was granted the unusually high number of 129 claims. When it was first built, the IBM 701 could do 16,000 additions or subtractions per second.

It was followed by the 704, which could perform 40,000 additions each second. The latest commercially available descendant of the 701 is the IBM 7094, which can perform more than 30 billion multiplications during a 24-hour period.

Patent 3,245,039 was granted to Drs. Nathaniel Rochester and Werner Buchholz of Wappingers Falls, N.Y., Charles J. Bashe, Robert P. Crago, Philip E. Fox and Byron E. Phelps of Poughkeepsie, N.Y., and Jerrier A. Haddad of Binghamton, N.Y.

## Russian Stapler for Suturing

A surgical stapler for holding tissue together after eye operations or neurosurgery earned a patent for 10 Russian inventors, who assigned rights to patent 3,244,342 to the Scientific Research Institute for Experimental Surgical Apparatus and Instruments, Moscow.

Scientists on the Institute staff have developed more than two dozen staplers for specific surgical suturing. The idea is to mechanize, as much as possible, some of the most difficult surgical procedures.

The newly patented stapler permits a mechanical stitch to be made on tissues having edges flush with one another. This would occur, for instance, in suturing the cornea in case of injury or replacement.

## 3-D X-Ray Device

A stereoscopic X-ray apparatus that uses light-conducting rods to transmit images to the physician making the examination was granted patent 3,244,878. Edward S. Stein and Dr. Ralph R. Stevenson of Washington, D.C., were awarded the patent, rights to

which Mr. Stein assigned to Dr. Stevenson.

The apparatus is actually an improvement on a 3-D X-ray device developed by Dr. Stevenson that has not yet been granted a patent. A prototype of this device is now in use at a Washington hospital.

The patent covers a method that makes it easier for the examining physician to orient himself with respect to the patient and the image he is viewing. The 3-D apparatus is believed particularly valuable because it markedly reduces the time a patient is exposed to X-rays.

It can be used to X-ray any part of the body. The prototype machine, not yet granted a patent, was built by Dr. Stevenson at his home with the help of many industrial firms, including Radio Corporation of America, Westinghouse Electric Corporation and General Electric Company.

## Other Interesting Patents

A miniaturized hearing aid that has an automatic gain control arrangement earned patent 3,244,997 for Kenneth R. Wruk of Joliet, Ill., who assigned rights to Zenith Radio Corporation, Chicago, Ill. The device is commercially available in Zenith's Sentry hearing aid.

A keyboard designed to be used for preparing a control tape for a

photocomposing machine was awarded patent 3,244,364. Paul W. Golden of Colorado Springs, Colo., assigned rights to the International Typographical Union, a group that has been charged with blocking attempts by newspapers and other publications to use such modern typesetting aids as photocomposition.

A tent that helps to keep the occupants warm in the wintertime but can be reversed to provide shade that helps keep the temperature down in the summertime earned patent 3,244,186 for Teresa Delores Thomason and Mary Ellen Thomason of Washington, D.C.

• Science News, 89:302 April 23, 1966

## ANIMAL BEHAVIOR

### Deer Followers Studied In Follow-the-Leader

► IN A GROUP of social animals, one individual invariably responds faster than others to crises or events.

The actions of this leader influence the behavior of the whole group.

Although leadership has been studied in species such as man, apes, wolves and ducks, until now no one has studied the behavior of the followers.

Two scientists, Barrie K. Gilbert and Jack P. Hailman of Duke University, Durham, N.C. and the Institute of Animal Behavior, Newark, N.J., have been studying the followers in a group of six fallow deer, *Dama dama*. Deer, when frightened, tended to follow their leader in a line sequence that became more variable the farther they were from the leader, they reported in *Nature*, 209:1041, 1966.

The place in line a follower takes may depend on factors such as his ability to see, hear and respond sharply.

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