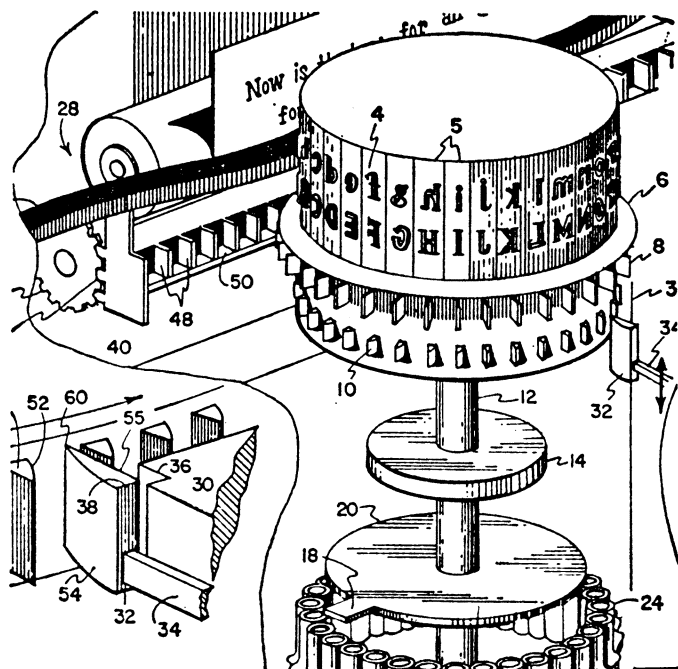


# Current Patents

## FLUIDICS

### New Typewriter Works on Air



Typewriters that work by compressed air have been designed since the early years of this century. The major drawback has been that they can't keep up with a fast typist.

Now, with the developing art of fluidic logic circuits, an air-powered typewriter has been patented that, the inventor claims, can operate at speeds up to 720 words per minute, faster than any typist can type.

The new typewriter has immovable keys with air holes in them. The typist's finger closes the hole, activating the mechanism. It was invented by Arnold Schonfeld of Sperry Rand Corporation's Univac Division. He assigned patent No. 3,315,775 to Sperry Rand Corp., New York.

The typewriter uses jets of air to push the type against the ribbon and paper. Between the keys and the type bank are fluid logic circuits, which have no moving parts and are cheap and easy to construct.

Type faces on the new machine are contained in a cylinder mounted on a flexible shaft. A motor drives the shaft at about 1,800 revolutions per minute.

The jet of air pushes a lever that knocks the shaft toward the paper, printing the desired letter.

Sperry Rand spokesmen said that no model of the machine had been built yet but that an active program was being carried on at Univac to develop the concept.

## NOVELTIES

### Toy Fits Drinking Straw

If gurgling a straw in his milkshake doesn't satisfy your little boy, a newly patented invention may make the grade. It's a propeller that fits on the end of the straw and spins in the drink when the straw is sucked on.

Inventor Arthur L. Hoffer of Woodbridge, N.J., claims his toy is the only one that doesn't need a special straw. Any ordinary straw will do.

The patent, issued last week, is No. 3,315,405.

## POLLUTION CONTROL

### Three-Stage Air-Cleaner

An air-pollution system that can handle both large and small dirt particles was patented last week by A. P. de Seversky, who assigned the patent to Electronatom Corp. of New York.

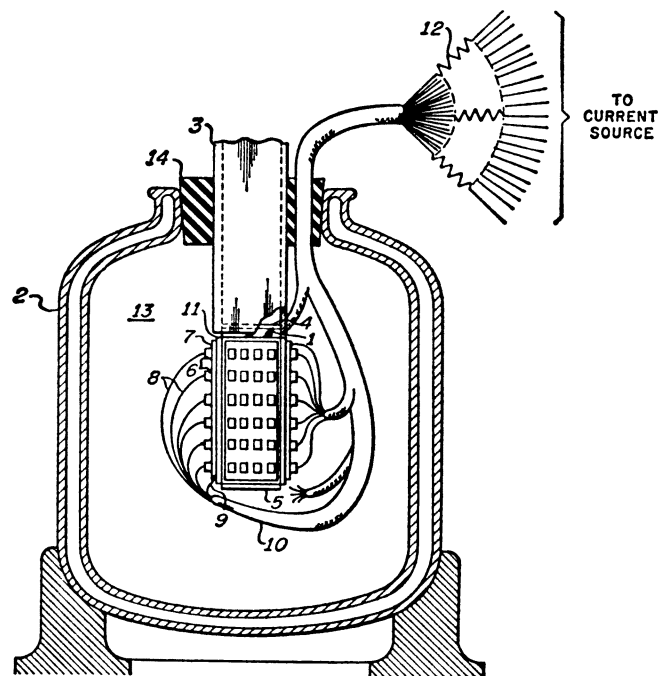
The cleaner consists of three stages. The first, a scrubber, wets the air flow and swirls it about, causing the larger particles to stick to the sides of the pipe, where they can be washed out.

The small particles are removed by an electrostatic stage. An electric charge on plates in the flow tube picks up the tiny particles the way a blue serge suit picks up lint.

In between the two cleaning stages is a mist-eliminator. One major problem in previous attempts to combine scrubbers and electrostatic cleaners has been that the scrubbers wet the gas and swirl it around, while the electrostatic systems need relatively dry, smoothly flowing air. The mist-eliminator in patent No. 3,315,445 takes water out of the air and smooths the flow.

## LASERS

### Pump Matches Solid State Crystal



Solid state crystals are one common source of laser beams. Usually the crystals are excited by radiation from gas discharge lamps, which are inefficient, cause heat problems and don't match the frequency of light put out by the solid state crystal.

A new method of stimulating solid state laser crystals, using a gallium arsenide diode as a pump, was patented last week by Roger Newman of Sperry Rand Corp. The whole system operates at minus 196 degrees C., eliminating the heat problem.

Another advantage of the solid state pump is that its radiation frequency matches that of the neodymium calcium tungstate crystal that puts out the laser beams. This means that energy losses from mismatched frequencies are reduced.

Newman assigned Sperry Rand patent No. 3,316,500.