The Washington Post BUSINESS & FINANCE

SUNDAY, SEPTEMBER 3, 1978 C1

Something's Happened to Yankee Ingenuity

By Bradley Graham
Washington Post Staff Writer

It's been 89 years since Angus Campbell put the first automatic cotton picker to work, 70 years since Henry Ford gassed up his first Model T, 39 years since Du Pont introduced a super fiber called nylon and 30 years since Edwin H. Land marketed the first instant-picture camera.

All of which helps recall a time America's inventive spirit seemed unbounded and unceasing. Ideas flowed to the marketplace as fast and furious as mountain rapids flow downhill.

But what was once thought to be an endless stream of U.S. inventions has of late been trickling out less startling and less competitive products. Meantime, adding pain to the drain, the inventive powers of foreign nations have been in ascendance. The question, once raised in a whisper, is now asked in loud and urgent tones: Has American enterprise lost its innovative touch?

Consider these facts:

- The number of U.S. patents issued per year to U.S. inventors reached a peak in 1971 and has declined steadily since. But the number granted to foreign inventors has increased steadily since 1963. In 1977, foreigners claimed 35 percent of all patents issued in the U.S. across a broad range of fields.
- The U.S. balance of trade has worsened, due not only to increased oil imports, but also to more imports of foreign manufactured goods.
- Productivity, which is partly a function of technological innovation, has slumped severely. In the past decade, the rate of growth in U.S. productivity has averaged only half of what it was the previous 20 years. In contrast, productivity growth rates in Europe and Japan have been on the rise.
- From 1953 to 1966, U.S. investment in research grew at an impressive rate of 10 percent annually in inflation-adjusted dollars. However, investment in research by all sectors in the U.S. over the past 10 years has shown essentially no growth in constant dollars. Further, a number of major U.S. corporations have announced recently they intend to spend even less on long-term basic research and more on development of short-term, quick-profit products.

In a world where power and progress are often measured in terms of technological breakthroughs and scientific prowess, such trends are indeed disturbing.

For a nation that has always prided itself on its tinkerers—on those lone souls who brought forth from their garages and basement labs such revolutionary devices as power steering, the office copier and the zipper—they are downright depressing.

From boardroom to research lab, there is a deepening sense that something has happened to the once unchallengeable Yankee ingenuity. Just what, though, no one quite knows.

There is today a pervasive perception that the dynamic vitality of the U.S. economy is faltering. This perception appears to be founded on two concerns: first, that America is not as productive as it used to be; and second, that we are somehow not as inventive either. This is the first of two articles this month which will examine these concerns.

Some insist it is in rapid decline, choked by an unfavorable economic climate, government regulation and, perhaps, by the lethargy and shortsightedness of big business. Others say it has simply taken new forms, becoming more subtle and incremental in nature than grand and revolutionary. Either way, the country's genius for invention does not appear, at least, to be what it once was.

Alarm bells are going off all over. First, Michael Boretsky, a senior policy analyst in the Commerce Department: "All the indicators imply that the rate of U.S. innovation is measurably down. It's very disconcerting."

Next, Dr. Alden Bean, director of research for the National Science Foundation: "There's no solid evidence to suggest that the U.S. is going to hell in a handbasket in science and technology. But there is serious cause for concern about some trends we've seen."

After several years of arm-waiving and shouting about waning U.S. innovation, the nation's research establishment finally caught the ear of the White House. Several months ago, the Carter administration launched a major policy review of things to be done to foster innovation in private industry. The study is being coordinated by the Commerce Department and involves more than 15 agencies. A final report, including recommendations for the president, is expected by April.

But many experts say another study is hardly necessary. The worrisome state of innovation in America has been assessed and reported on many times since the first major policy review conducted by Commerce in 1967. In the interim, the problems only have become more obvious.

For one, the economic climate for innovation is poor. The financial incentives that in the past encouraged the rich and the bold to risk their money on slim-chance projects no longer exist, thanks to increases in the capital gains tax and tighter rules on stock options. Inflation, too, has put the squeeze on capital investment by existing corporations.

Also, with the winding down of space and defense programs, government support of industrially performed research has diminished. Throughout the 1950s, the government annually supported more than one-third of industrial research activity. This level of support reached almost 40 percent in 1962, but has been falling consistently and is 25 percent today.

Increased government regulation, too, has increased operating costs and shrunk the share of profits formerly available for research. So has the higher cost of energy.

Together, these developments have forced a shift in industrial research activities from the offensive to the defensive. "Major effort is being diverted into defensive research," said Howard Nason, president of the Industrial Research Institute in St. Louis. "Much more emphasis is being placed on short-term cost reductions than on long-term product and process improvements."

But as important as such external economic factors may be in explaining the innovation slump, there are certain features about the internal structure of corporate America today which some say have had a debilitating effect on innovation.

Writing in the July-August issue of the Harvard Business Review, Alfred Rappaport, professor of business at

See INNOVATE, C2, Col. 1