

aimed at cutting the estimated 20 percent administrative overhead on welfare programs. Even so, the price tag could be as high as \$5 billion a year.

"If we get a national standard now," says Prof. Piven, "it will make life a little easier for those who have stayed in the South, many of whom are old or sick, but it won't affect migration much."

Prof. Piven believes that there is now enormous pressure on the financial structures of northern cities and states in welfare expenditures, and that the Federal Government will have to relieve them in some way. Mike Monroe, assistant to Presidential urban affairs adviser Daniel Patrick Moynihan, acknowledges that the problem is under intense study. "I expect some pretty dramatic developments in the next couple of weeks," he says. ◇

## HALOTHANE

### Side effects again

The once controversial anesthetic, halothane, is back in trouble again.

It has been popular because it is nonexplosive, allows easy control of consciousness during an operation and induces little nausea in the wakened patient.

Because it is chemically similar to dangerous substances such as chloroform and carbon tetrachloride, halothane has been carefully scrutinized for dangerous side effects.

After a massive study by the National Academy of Sciences examined 856,000 patients in 34 hospitals over a four-year period, the anesthetic was pronounced safe.

**Now, however,** new evidence—including the illnesses of an anesthetist—throws doubt on the substance. In a few patients halothane damages the liver.

The anesthetist, who suffered from hepatitis whenever he gave the anesthetic, is a 44-year-old physician with a history of hay fever and asthma. After repeated admissions to Columbia-Presbyterian Medical Center, he was referred to Yale-New Haven Hospital for investigation, and a second examination revealed cirrhosis of the liver. After changing jobs to a hospital where it would not be necessary to administer halothane, he no longer became ill.

Physicians say his hepatitis attacks were attributable to hypersensitivity. His history of allergy before he became an anesthetist may have possible importance. Each time he was at home or hospitalized, the hepatitis cleared.

Drs. Gerald Klatskin of the Yale University School of Medicine and Daniel V. Kimberg of Columbia University College of Physicians and Surgeons report in a recent issue of the *NEW ENG-*

*LAND JOURNAL OF MEDICINE* that "additional strong evidence that halothane induces liver damage is provided by reports in the literature of at least eight cases in which recurrent episodes of jaundice have appeared after separate exposures to halothane."

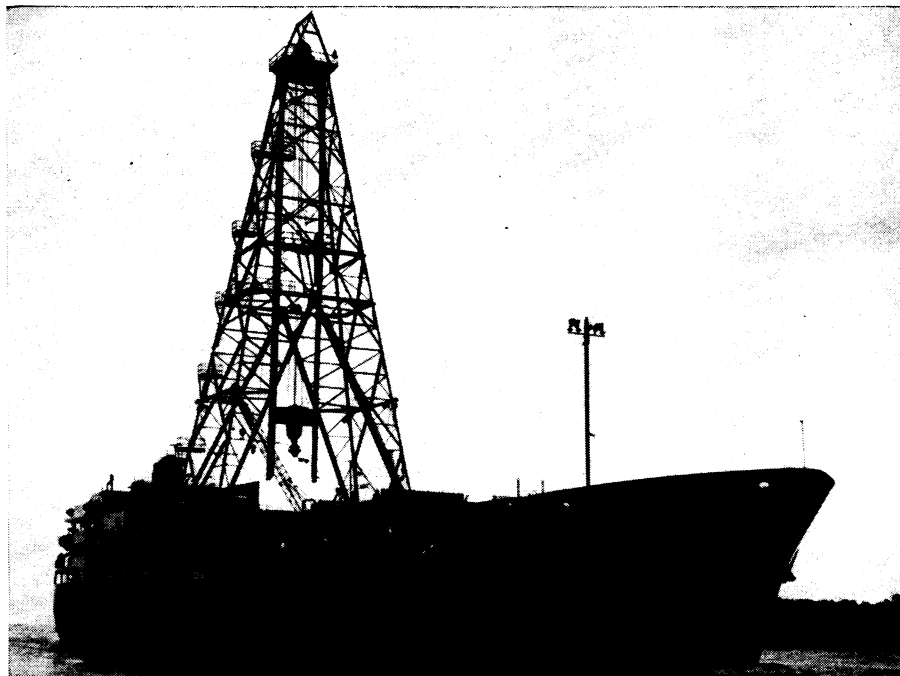
The researchers say the current status of halothane liver damage has gone beyond the question of whether it exists. "It is now necessary to obtain information about the frequency of this

complication" and its overall contribution to post-operative illness and death. They believe liver damage is undoubtedly higher than published mortality figures indicate.

Drs. Klatskin and Kimberg point out that danger from an occasional exposure to halothane may not be limited to anesthetists but may include surgeons, other operating room personnel and industrial workers who manufacture and package the anesthetic.

## CONTINENTAL DRIFT

### Time for a theory



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*The Glomar Challenger: Evidence of sea-floor spreading from deep drilling.*

Hypotheses of a continental drift were first put forward 50 years ago by scientists who noticed how well certain continents would fit together. They got some support from paleontology, which found fossils of the same animals in different continents (SN: 3/23, p. 280), and from geology, which found structures and mineral deposits on different continents that fitted together like lines in a jigsaw puzzle.

**But the idea** went into disfavor because it was hard to imagine what would generate the large forces that would cause such motion. Another objection was that if such large forces were operating within the earth, they would have damped the earth's rotation and brought it to a stop by now.

The forces are still hard to imagine, and this appears to be an area that needs extensive study. Nevertheless, the evidence that the motion is going on is building up to convincing levels.

It is time for hypotheses of sea floor

spreading, continental drift and plate tectonics to be accepted as a basic theoretical model in geophysics, says Dr. Lynn R. Sykes of Lamont-Doherty Geological Observatory. He finds it as well established today as continental glaciation was in the 19th century when it was accepted.

The theory of continental drift was once very highly debated, he says, "but we now have a great deal of evidence from several disciplines, and we are beginning to have a fairly complete picture of major displacements on a global scale."

**Until recently,** Dr. Sykes feels, geophysicists were in a data-gathering stage, trying to sort out what was happening from masses of measurements. Now, he says, a model is emerging, a model that can and should be used to make predictions, even possibly predictions of earthquake activity.

Nowadays people generally use the term plate tectonics to describe the

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