

droplets of cream (the oil).

Now two independent researchers have discovered ways to use water-oil mixtures as a fuel, which apparently burns more efficiently and cleanly than straight petroleum.

Eric C. Cottrell, a mechanical engineer who has formed his own company, the Tymponic Corporation of Plainview, N.Y., has prepared an ultrasonic fuel emulsifier that will mix water and oil in a 1:3 ratio for use in the campus heating plant at Adelphi University. No major changes in the heating plant burners will be required and the school expects to realize a 20 percent saving in fuel cost, while producing less pollution. Cottrell also runs his car on a mixture with 19 percent water—increasing mileage by one third.

Meanwhile, the head of the University of Oklahoma's aerospace, mechanical and nuclear engineering department, Walter J. Ewbank, has prepared a water-gasoline mixture system for trucks, which is undergoing a four-month test at a nearby Postal Service facility. Ewbank says no engine adjustment is needed so long as the emulsion does not contain more than 15 percent water. The Postal Service trucks, however, which will use a 30 percent water mixture, will need some carburetor modification.

The principle of operation in both cases is using the water to "spread out" or increase the surface area of oil droplets. Just as a newspaper burns faster when fanned out than when rolled tightly, because of greater area exposed, so do the tiny oil droplets, created by interspersing droplets of water, burn more quickly. The water also helps transfer heat within the burning mixture, again speeding the reaction time. Faster burning in this case means more complete burning, and therefore fewer pollutants, which are usually the products of incomplete combustion.

Cottrell says ultrasonic fuel emulsifiers or "reactors" could be made for home use for between \$100 and \$200. □



Lane/ESN

"Ladies and gentlemen, due to circumstances beyond our control the talk on the energy crisis will be cancelled."

Gay liberation at the APA

*I know not whether laws be right,
Or whether laws be wrong;
All that we know who lie in gaol
Is that the wall is strong . . .*

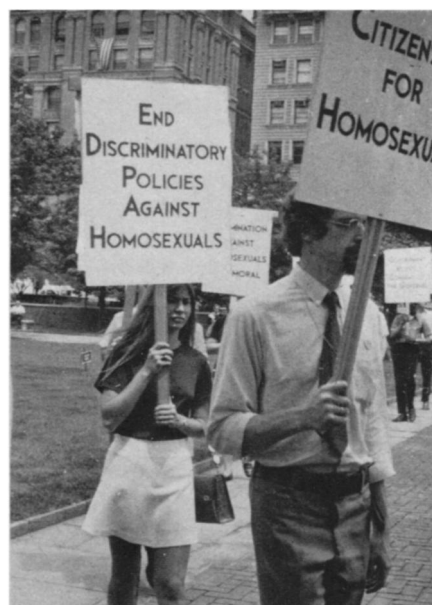
So wrote Oscar Wilde in 1898 after spending two years at hard labor in Reading Gaol—where he was sent because he was a homosexual. But the laws and walls that held him are slowly tumbling down. Last year the American Psychological Association removed homosexuality from its "abnormal psychology" category. Last week the American Psychiatric Association's board of trustees voted to remove homosexuality from its Diagnostic and Statistical Manual of Mental Disorders (the official nomenclature followed by all medical groups in North America).

The change came after years of debate and under pressure from several gay liberation groups that have been demonstrating at the APA's annual meetings. Groups such as the National Gay Task Force charged that "the diagnosis of homosexuality as an illness has been the cornerstone of oppression for a tenth of our population." This labeling, they say, forced many young women and men to think of themselves as freaks. It has burdened their families and friends with fear and guilt. It has been used as a tool of discrimination in the private sector, and in the civil service, military, immigration and naturalization service, health services and adoption and child-custody courts. It is, they go on, the rationale for perpetuating the sodomy laws of 43 states.

But all of this is going to stop, feel the optimistic representatives of the gay movement who were present when the APA announced its change. "A psychiatric turnaround," "the greatest gay victory," "a major socio-historic change" and an "instant cure for 20 million gays," they said.

What the APA actually did was replace the term "homosexuality" with "sexual orientation disturbance." This category, says the APA, is for individuals whose sexual interests are directed primarily toward people of the same sex and who are either bothered by, in conflict with, or wish to change their sexual orientations. The APA does not say that homosexuality is normal, but it does say that it is a form of sexual behavior and like other forms of sexual behavior, not a psychiatric disorder.

In addition, said the APA, homosexuality per se implies no impairment in judgment, stability, reliability or general social or vocational capabilities; and, therefore, there should be no public or private discrimination against homosexuals in such areas as employment, hous-



Nancy M. Tucker

Gay demonstrations force a change.

ing, public accommodations or licensing. The APA board of trustees also said that it supports and urges the repeal of all legislation making criminal offenses of sexual acts performed by consenting adults in private. □

'Catch 22' of psychopharmacology

Statistics suggest that anxiety is on the rise in most parts of the world, thanks to one war after another; terrorist murders, bombings, muggings and knifings; drastic shortages in food, fuel, lumber, paper and other products; blacks versus whites, young versus old; a decaying moral and physical environment. . . . The poet W. H. Auden appropriately dubbed the twentieth century the "Age of Anxiety."

An upsurge in anxiety is also reflected in the rapid rise in the use of antianxiety drugs (minor tranquilizers) over the past eight years, as Barry Blackwell reported in the Sept. 24 JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. In 1972 minor tranquilizers were prescribed by physicians 144 million times, accounting for about six percent of national drug use. Over 70 million prescriptions were written for two of the most popular tranquilizers, at an estimated cost of \$200 million. Blackwell is a member of the University of Cincinnati College of Medicine's psychosomatic unit, one of the few such units in the United States. Psychosomatic medicine deals with psychological conflicts and how they relate to bodily symptoms and diseases. It's a hairy business since psyche and soma, as any good mystic or physician knows, are intricately intertwined.

Blackwell concluded in his JAMA article that while minor tranquilizers are being appropriately used for anxiety, or for anxiety mixed with depression, such drugs tend to be overused. But Black-