An improved scavenger box for the cryoprobe

To the Editor:

Some cryosurgical systems use nitrous oxide, and it has been pointed out that cryoprobe leakage produces excessive nitrous oxide concentrations in the OR,¹⁻³ with N₂O levels as high as 900 ppm.³ Scavenger devices have been recommended,^{1,2} and one scavenger box reported reduces the N₂O concentrations by more than 50 per cent.³ However, even with the scavenger box, N₂O concentrations near the anaesthetist were in the range of 150 to 300 ppm,³ considerably higher than NIOSH recommendation of 25 ppm.⁴

FIGURE Scavenger box with flexible diaphragm.

We have modified the cryoprobe scavenger box, and were able to reduce the N₂O concentrations to an acceptable level. The concentrations measured just above the scavenger box were about 10 ppm. The object of the modification was to avoid pressure buildup within the box, producing leakage of N₂O from the box. A large oval opening was made to the solid lid as shown on the figure and the opening was covered from inside with a flexible transparent plastic sheet made from a refuse bag. With this simple modification, leakage of nitrous oxide from the scavenger box became negligible.

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REFERENCES

- 1 Gonzalez ER. N₂O exhaust from cryosurgical units may affect physician performance. *JAMA* 1979; 242: 2379.
- 2 Wray RP. A source of nonanesthetic nitrous oxide in operating room air. *Anesthesiology* 1980; 52: 88-9.
- 3 Marcus DF, Gawecki S. Nitrous oxide levels during retinal cryosurgery. *Arch Ophthalmol* 1981; 99: 457-9.
- 4 Criteria for a Recommended Standard—Occupational Exposure to Waste Anesthetic Gases and Vapors. National Institute for Occupational Safety and Health, U.S. Department of Health, Education, and Welfare, March 1977, Publication #77-140.

Respiratory depression following epidural morphine

To the Editor:

We read with interest the case report of Robinson, Lewis and Elliot (*Can Anaesth Soc J* 1984; 31: 594-5) which demonstrates the remarkable tolerance of some patients to epidural narcotics. In spite of a massive overdose of narcotic (50 + 50 mg of morphine and 25 mg of meperidine within 16 hours), only moderate respiratory depression occurred (maximum PaCO₂ 54). We would like to report a recent case which demonstrates the reverse, in that marked respiratory depression occurred after a rather small dose of an epidurally administered narcotic.

A healthy 60 kg 49-year-old man was scheduled for an L4-5 laminectomy and discectomy. Premedi-