

67140

United States Patent [19]

Tompa et al.

[11] **4,389,265**
[45] **Jun. 21, 1983**

64106

[54] **BREAKDOWN OF SOLID PROPELLANTS
AND EXPLOSIVES, RECOVERY OF
NITRAMINES**

[75] Inventors: **Albert S. Tompa, Indian Head, Md.;
David M. French, Alexandria, Va.;
Billy R. White, Oxon Hill, Md.**

[73] Assignee: **The United States of America as
represented by the Secretary of the
Navy, Washington, D.C.**

[21] Appl. No.: **283,709**

[22] Filed: **Jul. 16, 1981**

[51] Int. Cl.³ C06B 45/10

[52] U.S. Cl. 149/109.6; 149/92;
149/124; 264/3 R

[58] Field of Search 149/19.92, 109.6, 92;
264/3 R; 142/124

[56] **References Cited**
U.S. PATENT DOCUMENTS

3,909,497 9/1975 Hendry et al. 149/19.4
4,018,636 4/1977 O'Neill et al. 149/19.92
4,057,442 11/1977 Shaw et al. 149/19.92
4,098,627 7/1978 Tompa et al. 149/109.6
4,229,382 10/1980 Frosch 149/19.92
4,293,352 10/1981 Lee et al. 149/92

Primary Examiner—Edward A. Miller
Attorney, Agent, or Firm—R. S. Sciascia; A. L.
Branning; R. D. Johnson

[57] **ABSTRACT**

Processes for reclaiming nitramines from propellants by dissolution of the crosslinked propellant binder by heating the propellant with either (1) a mixture of 2-aminoethanol, an aromatic solvent, and optionally a second low molecular weight alcohol, or (2) a mixture of a mineral acid (HCl, H₂SO₄, and H₃PO₄, but not HNO₃), a organic solvent which is acetone, methyl ethyl ketone, ethylene glycol monomethyl ether, tetrahydrofuran, or mixtures thereof, and water.

8 Claims, No Drawings