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5223666 73,685 Apparatus for clearing mines

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Abstract

An abstract is provided which is capable of clearing encased explosives such as land mines. This apparatus combines a shaped charge jet with a plate penetrator. A depression is formed in a column of a first explosive material. The depression is provided with a metal liner such that detonation of the first explosive material forms a shaped charge jet. The shaped charge jet passes through a hole in a plate penetrator and exits the device without detonating a second explosive material. The shaped charge jet strikes the ground and imparts kinetic energy. As the energy in the shaped charge jet is consumed, the second explosive material detonates and drives the plate penetrator to supersonic velocities. Since shaped charge jet velocity exceeds the detonation velocity of the second explosive material, the shaped charge jet clears a path ahead of the plate penetrator. This results in higher velocity when the plate penetrator impacts the encased explosive, and consequently a greater chance of inducing explosion and neutralization.