

## PROTECTIVE CONTAINER PACKAGE FOR A ROCK DRILL BIT ASSEMBLY

The container assembly having a boxed shaped lower section with a cover shaped upper section positionally indexed and removably fixed thereto, both sections when mated together forming a defined common cavity therewithin particularly adapted for receiving and retaining a rock drill bit assembly.

The box shaped lower container section has an exterior horizontal bottom based surface with vertical ascending walls integrally attached thereto defining an outer octagonal wall shaped surface with its upper top surface parallel to the horizontal base surface and adapted to receivably seat its mating cover container section, and an internal cavity surface configuration particularly adapted to conformally receive the lower body portion of said rock drill bit assembly.

The mating cover container section has an exterior horizontal top surface parallel to its bottom surface, and a peripheral surface adapted for forming the octagonal exterior portion of the container assembly and vertically stepped for positionally keying with and to be fixedly removable from its mating box container section, as well as having external surface recesses for rapidly separating the cover from the box and for handling ease, and an internal cavity surface adapted to receive the upper body portion of said rock drill bit assembly.

Shrinkable plastic sheet envelope placed over the fully closed container assembly is shrunk conformally over same, thereby providing a substantially waterproof encapsulated package which serves to exclude moisture and abrasives from contact with the enclosed said rock drill bit assembly.

Strapping thereafter applied, as an individual vertical tie band wrapped around the encapsulated package, further reinforces and holds the encapsulated two piece container assembly firmly together, and thus prevents separation of the cover section from its lower box container section which would tend to expose said rock drill bit assembly to potential physical and environmental damage.

### BACKGROUND OF THE INVENTION

#### 1. Field of the Invention

This invention pertains to a novel container package, and more particularly, to a protective container package primarily adapted for shipping a rock drill bit assembly.

#### 2. Prior Art

Conventional packaging of a rock drill bit assembly for subsequent shipping or storage has previously consisted of placing the rock drill bit assembly in a wooden or cardboard box containing wooden or plastic inserts to secure and protect the rock drill bit assembly from movement and potential damage during storage or transit. Materials such as wood and cardboard have the inherent characteristic of rapidly absorbing moisture which is deleterious to the ferrous drill bit assembly and bearing elements contained therein. Furthermore, the wood and cardboard shipping container consists of numerous components which makes packaging costly and complex, and this type of packaging material when combined with the weight of the rock drill bit assembly results in a relatively heavy shipping package which

increases shipping costs and makes it more difficult to handle the encased rock drill bit assembly.

Oftentimes during transit or storage, the packaged rock drill bit assembly is subject to rain, abrasion, and dirt. Once the conventional cardboard or wooden container is punctured or broken, moisture and dirt enter the package enclosure and both these elements corrode and contaminate the rock drill bit assembly, thereby adversely affecting rock drill bit assembly reliability.

Additionally, cardboard and wooden containers are difficult to handle because of their bulky configuration. Absorption of moisture by the cardboard and the wood container further adds to the weight of the encased rock drill bit assembly. Because the interior of the cardboard or wooden box does not substantially conform to the rock drill bit assembly, there is a tendency for the rock drill bit assembly to move about within the confines of the encased package which, when combined with the bulky configuration and heavy weight, makes handling of the shipping package difficult and dangerous.

Accordingly, the industry has long recognized the need for a new strong, lightweight, weatherproof, easy to handle packaging container adapted for the shipping and the storing of a rock drill bit assembly. The inventor, as an answer to this need, has devised a rock drill bit assembly protective container shipping package with a cavity therein which conforms to the exterior shape of the rock drill assembly and securely restrains it. The protective container package comprises a new two piece container assembly which is relatively lightweight and which is constructed with thin walls where strength is not required so as to reduce package weight, and with substantially thicker wall sections where container strength is required.

After the rock drill bit assembly is enclosed within the two piece container assembly, a shrinkable plastic envelope is placed around the container assembly, and heat is applied to shrink the envelope conformally around the container thereby encapsulating it so as to provide a seal against moisture and dirt and also to protect the rock drill bit assembly from other deleterious environmental elements.

Additionally, a reinforcing strap is wrapped vertically around the encapsulated package to further add strength and also to aid in transporting or lifting the encapsulated rock drill assembly protective package by permitting a person's fingers to be inserted under the strapping to assist in lifting or handling said protective package.

Accordingly, the present invention reduces the weight of the protective shipping container, improves transportability, affords more complete protection of the rock drill bit assembly during shipment and storage, and eliminates reboxing.

### SUMMARY OF THE INVENTION

A novel protective container package particularly adapted for a rock drill bit assembly which is lightweight, weatherproof, easy to transport, and of relatively low cost, and which comprises a two piece plastic container with an internal cavity contained therein to conformally receive a rock drill bit assembly, shrinkable plastic sheeting shrunk around said container thereby encapsulating the container with a rock drill bit assembly enclosed therewithin, and a reinforcing strap wrapped around the encapsulated container to further