

METAL FACE SEAL

Abstract of the Disclosure

A metal face seal for an earth boring drill bit where the drill bit has a bit body, at least one bit leg, a bearing pin on each bit leg, and a cone rotatably mounted on each bearing pin. The metal face seal is located in the cavity formed between the interior surface of the cone and the bearing pin. The metal face seal consists of a rigid seal ring having a forward surface that engages a rotating seal surface of the cone. An energizer ring biases the rigid seal ring toward the rotating seal surface. A secondary seal engages the bearing pin surface, the energizer ring, and the rigid seal ring. The secondary seal ring has a protuberance on its forward side for filling void spaces between the energizer ring, the rigid seal ring, and the secondary seal ring.

Figure 2