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ABSTRACT

MULTIPLE FUNCTION ENCODER WHEEL FOR CARTRIDGES UTILIZED IN AN ELECTROPHOTOGRAPHIC OUTPUT DEVICE.

Disclosed is a cartridge having an encoder wheel thereon for encoding EP supply cartridge characteristic information for an electrophotographic machine, the cartridge comprising, a sump for carrying an initial amount of toner. A shaft is mounted for rotation in said sump, and an agitator or paddle is mounted thereon in such a manner that when the shaft rotates, the paddle rotates into, through and out of engagement with toner carried by the sump. A single encoder wheel is mounted on the shaft, external of the sump, the encoder wheel positioned for proximate mating coaction with a coded wheel reader when the cartridge is mounted in position in the electrophotographic machine. A drive means, and a variable torque flexible coupling connects the drive means to the shaft to effect rotation thereof. The encoder wheel is configured for indicating, in conjunction with said coded wheel reader, a component of resistance to paddle movement through the portion of said sump having toner therein to give an indication of the amount of toner remaining in said sump. Other portions of the wheel, in a portion thereof which confronts the reader during a substantially constant velocity of rotation thereof, carries additional characteristic information of the cartridge to permit proper operation of the machine as well as increased efficiency of operation thereof.

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