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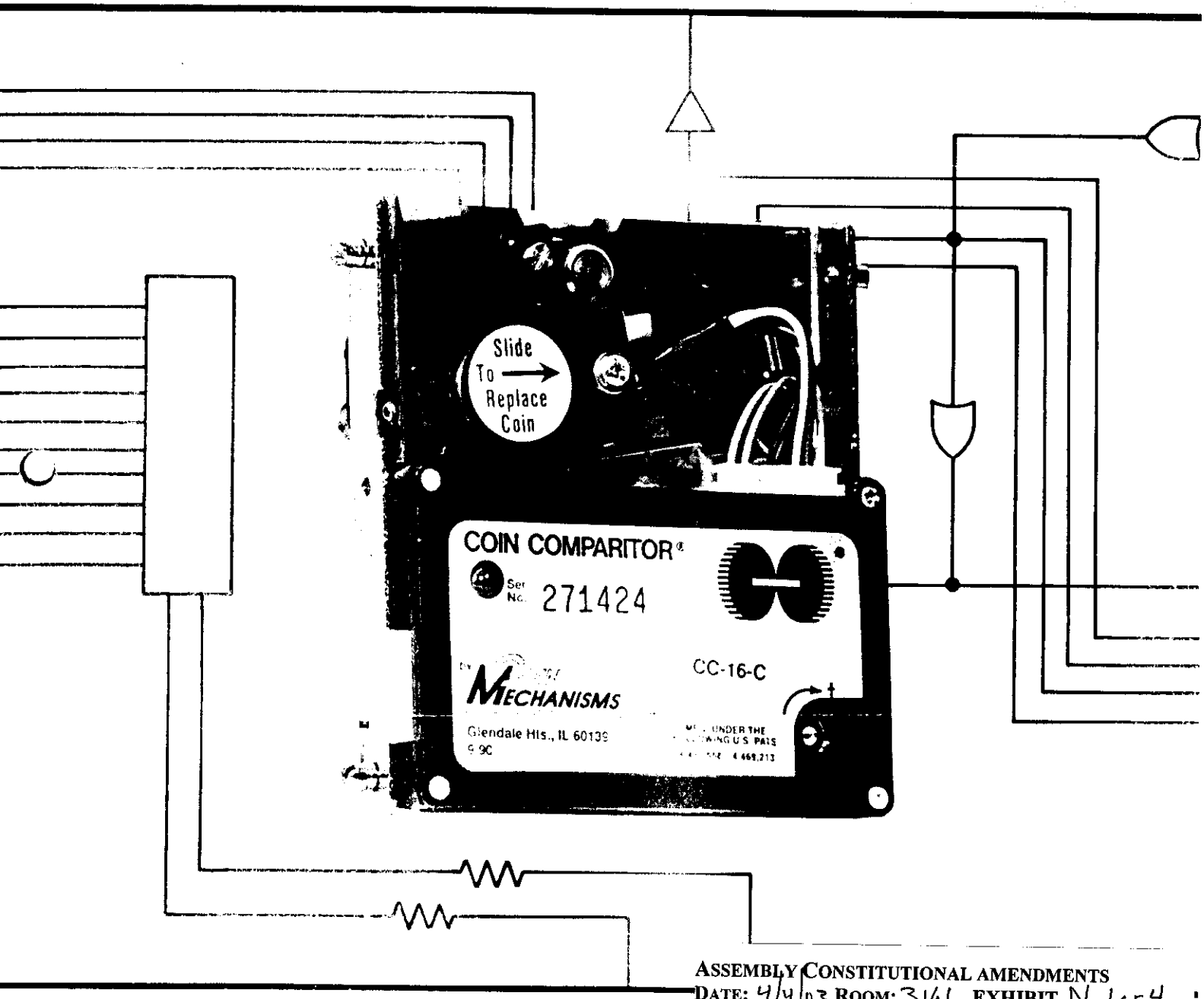
COIN COMPARITOR®
MODEL
CC-16



ASSEMBLY CONSTITUTIONAL AMENDMENTS
DATE: 4/4/03 ROOM: 3161 EXHIBIT N 1 OF 4
SUBMITTED BY: DAVID HORTON

COIN MECHANISMS INC.

400 Regency Drive • Glendale Hts, IL 60139 • (708) 924-7070

CC-16 COIN COMPARITOR WITH SIDE CONNECTOR

THEORY OF OPERATION

The Comparitor is an electronically controlled coin tester which positions a sample coin in a magnetic field, then passes a test coin through a similar magnetic field to create a null in the sensor coils (ie., Comparing the fields). The presence of the test coin is detected by sensing the quality of the null whereby the test coin is accepted in response to the duration of the null. The spiked signal source used in the sensor coils is comprised of an oscillator for producing a square wave voltage, means for differentiating the square wave consisting of a capacitor connected in series between the oscillator and the exciter coils. Differentiation creates a spiked signal having a plurality of frequencies spanning the range to include what can be characterized as high frequencies and low frequencies. The low frequencies are at about the oscillator frequency. The high frequencies are the actual spikes created by differentiating the edges of the square wave. The multiple frequency signal is an important element in distinguishing coins of similar but different material. It is found that some materials typically those which are poor conductors such as lead, attenuate higher frequencies to a greater extent than low frequencies, while other materials, typically good conductors such as silver, attenuate in just the opposite fashion. Since the signal which drives the exciter coils has both high and low frequencies at different respective amplitudes, during some portion of the frequency band when a test coin of similar size but different material than the sample coin is passing through the magnetic field it will be unable to attenuate the spiked signal to the same degree as the sample coin, and succeding circuitry will respond to that by rejecting the coin. With a sample coin in place and no test coin in the field, the detector coil senses a large unbalance which drives an amplifier to saturation. This amplifier output is actually following the spiked wave form coupled from the exciter coils to the detector coil, but the actual nature of the output depends on the material of the sample coin, as to whether primarily the high frequencies or low frequencies are reproduced. The null detector and timers are insensitive to the large output from the amplifier in this quiescent mode. When a test coin passes through the magnetic field in the gap, if it matches the sample coin, at some point during its travel it will create an interference in its gap which matches the interference created by the sample coin in its gap. As a result, the output of the amplifier will decrease toward zero as the null is approached and then return to its high quiescent level after the coin passes through. The null detector senses that null and if its quality matches certain predetermined standards indicating the test coin matches the sample it activates a one-shot multivibrator to energize the coil and draw the armature in, thereby accepting the coin into the cash box.

COIN SIZE SPECIFICATION

Coin diameter range .705" thru 1.575" (17.9mm thru 40 mm).
Note: For dia, of 1.205" 1.575" (30.61mm thru 40 mm), a plug spacer is recommended.
Recommended maximum thickness of coin: 100" (2.54mm).
Coin Entry slot control is necessary for oversize protection beyond .040" (1.02mm) of coin in sample holder.

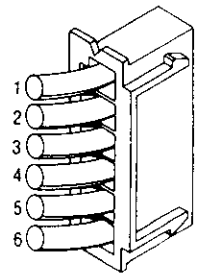
VOLTAGE

The operating voltage for the CC-16 Comparitor is established by the Power Cord. Normally each unit is shipped with a standard power cord containing the four wires necessary for each voltage range. This allows the operator the ability to choose the range he requires. After determining the operating voltage, the unused lines (wires) should be removed from the connector. The three ranges are:

15 thru 20 Volts A.C. or D.C.*
20 thru 30 Volts A.C. or D.C.
50 Volts A.C. or D.C.
*12 VDC operation requires a regulated power supply and pcb mod

Current Demand: Idle 40 mAmps
Peak 140 mAmps

1. —
2. —
3. 50V
4. 24V
5. 12V
6. Ground



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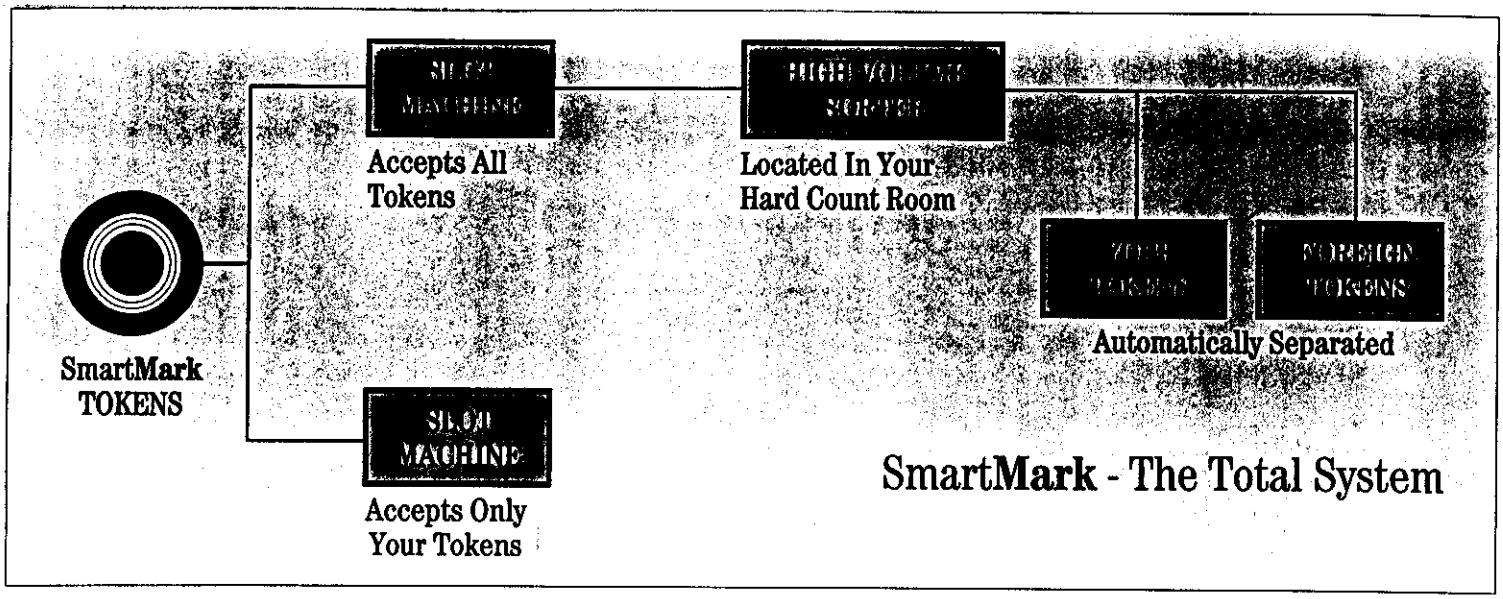

SmartMark®, developed by the Olde Philadelphia Mint, is a revolutionary patented system that completely eliminates losses of counterfeiting. In the slot machine industry, Nevada and New Jersey have reported substantial losses in revenue due to counterfeiting - and losses will continue to increase as new casinos open.

SmartMark is a total preventative system:

- In addition to their value and source, **tokens are directly imprinted with an identifying mark or "bar code".** This exclusive ridge marking, has an angle depth and distance of .001 of an inch precision.
- **An electronic, laser-like circuit with microprocessor** is added to the token acceptor in your slot machine. This new mechanism, developed jointly by The Olde Philadelphia Mint and Coin-Mechanisms, Inc. (the leading manufacturer of slot token acceptors in the U.S.), **fits easily into your existing acceptor, enabling it to accept only those tokens with your SmartMark identification.**
- For those who do not wish to limit token play to their own casino's tokens, **a lead-detecting acceptor and new high-speed sorting machine** are available to complete the system. **The new electro-mechanical sorter**, developed by The Olde Philadelphia Mint and the Columbia Machine Works (a major producer of presses for token manufacturers), can be easily installed in the hard count area of your casino where it will **search for your SmartMark tokens and automatically separate "foreign" tokens from them.**

The SmartMark Advantage:

- Counterfeit reproduction becomes too difficult and costly an effort
  *– The extreme precision of **SmartMark's** distinctive bar code cannot be duplicated*
- Lead "slugs" are detected and rejected
  – The acceptor's electronic circuit with built-in microprocessor accepts only your casino's tokens
- If desired, all casino tokens can be played
  – The new high-speed sorter can be installed in your hard count area to separate "foreign" tokens after they've been played
- Higher denomination tokens - $5, $10, $25, $100 and $500 - can all be made from the same low-cost nickel / silver material
  *– **SmartMark's** unique bar codes and electronic reader acceptors eliminate the need to use exotic materials like gold and silver to differentiate denominations. And two-piece **SmartMark** tokens can be made for a more upscale, prestigious look*

Other Applications:

In addition to the gaming industry, **SmartMark** can save thousands of dollars in lost revenue for public transportation, toll roads, amusement parks, arcades and vending machines. A study of transit systems of a number of major cities shows **significant losses** due to counterfeiting. Plus, in the transportation industry, where image is secondary to economy, **SmartMark** eliminates the need for expensive two-piece tokens.

The **SmartMark** system can be easily added to your current data collection system for tracking token activity. The world's first **SmartMark** is presently working at Washington National Airport where taxicab drivers use tokens to gain entrance into the airport loop.

Since 1986, The Olde Philadelphia Mint (formerly JaniMint) has been licensed to supply slot machine tokens in New Jersey and Nevada. In addition to this valued business, we supply commemorative medallions to direct mail marketing companies, fund raising organizations, athletic organizations, and the advertising specialty industry. As a full service minting facility, we house a complete tool and die shop with automatic and manual coin presses, and engraving and electroplating capabilities for gold, copper and nickel.

Over the past few years, we have earned a reputation for quality, service, delivery and innovative technological solutions. The Olde Philadelphia Mint:

- was the first mint to produce two-piece high denomination tokens – and is the only mint to manufacture these more "elegant" tokens from non-precious metals.
- was the first mint to work with casinos to find a solution to the acceptor / token materials specification problem. As a result of our efforts, we were able to supply millions of tokens to casinos with complete materials certification. In the five years that these tokens have been circulating, no mechanical problems have been encountered.

Now, we are proud to introduce **SmartMark** – the newest way to counter the losses of counterfeiting. For more information contact Ed Levin at: **(800) 346-8206** or FAX **(215) 789-7628.**

SmartMark®
from
The Olde Philadelphia Mint
17 Mifflin Avenue, Havertown, PA 19083

Summary of Invention

The invention concerns a coin-like token of the type used to operate vending machines, slot machines, subway turnstiles, sorting apparatus and other check-controlled devices. The token invention has encoding marks minted directly into the surface of the token when struck, for identifying the token regarding its value, source or the like.

These encoding marks may comprise annular ridges that have their surface inclined relative to the plane of the token. The presence or absence of individual ridges that can be detected by paired illumination source and detectors. The detectors aligned to respond only to passing surfaces at the required angle as successive ridges passes the detector while falling through a slot. Alternately, the individual inclined surfaces can be inclined at an angle relative to one another. Arranged such that plurality of the inclined surfaces reflects incident light to a detector at a point. The encoding preferably occurs on both sides of the token, and the lines or ridges on one side can correlate with those on the other side, whereby the ridges on one side are used to interpret those on the reverse side.

Similarly, the ridges on one side can be positioned at a phase shift relative to the other side such that the ridges on said one side form timing correspondence marks for comparison with ridges on the other side. The invention allows for a large number of variations to be encoded during minting. Whereas the sensed surfaces are inclined, wear which occurs when tokens impact against one another when handled in bulk affects the highest edge of each ridge, but the sensed surfaces are protected.

Accordingly, the tokens can be discriminated accurately even for a large number of variations and even when simply dropped past a detector through a feed slot.