

TITLE: A TURNTABLE EQUIPPED WITH ELECTRICAL OUTLET**Field of Invention**

This invention relates to a turntable, more particularly, a turntable
5 equipped with electrical outlet thereon.

Background of Invention

Most Chinese food restaurants are equipped with big round dining
tables having turntables on top of them so that people can pick food from
10 various dishes without requiring to stand up to reach the dish or asking
someone's favour to pass food. The turntable has therefore, got a nick
name "Lazy Susie".

One of the many popular Chinese dishes is so called "fire pot"
15 which uses a pot to boil water for people to cook vegetables or raw meat
in it for themselves to eat. Such a pot has two ways to boil water, one of
which uses solid fuel and the other of which uses an indoor electrical wall
outlet. The fuel can be burned for only a limited period and needs to be
replenished. The electrical outlet (as shown in Fig.10) requires a length
20 of electrical cable and most of the time requires an extension cable. The
cable may cause inconvenience to the person seated next to it and may
even cause an accident if someone accidentally kicks the cord and pulls
over the pot, spilling the soup everywhere.

25 SUMMARY OF THE INVENTION

It is the primary object of the present invention to provide a
turntable equipped with an electrical outlet which has an electrical socket
for a pot to be plugged-in, providing convenience and reliability.

DISCLOSURE OF THE INVENTION

This invention relates to a turntable equipped with electrical outlet comprising:

- 5 a round turntable having at least one electrical socket on the periphery with one end being connected in parallel to three conductor discs; said conductor discs being isolated and partitioned by insulators from outside and from each other; each conductor disc having a plurality of springs on a top portion for constantly urging said conductor discs
- 10 downward and a carbonaceous disc attached thereunder, a bracket frame having three conductor discs and an extension cable; said conductor discs being isolated and partitioned by said insulators from outside and from each other; said conductor discs being arranged in such positional relation as to be capable of engaging with said conductor discs of said turntable
- 15 and being connected in parallel with one end of said extension cable which other end can be plugged into a wall outlet.

BRIEF DESCRIPTION OF THE DRAWINGS

- Fig 1 is a perspective view of a first preferred embodiment;
- 20 Fig 2 is a cross sectional view taken along line A-A of Fig. 1;
- Fig 3 is a fragmentary view of conductor discs of a turntable of Fig 1;
- Fig 4 is a perspective view of Fig 1 in use;
- Fig 5 is a perspective view of a second embodiment of the present
- 25 invention;
- Fig 6 is a fragmentary view of Fig 5;
- Fig 7 is a cross sectional view taken along line B-B of Fig 5;
- Figs 8a, 8b & 8c are cross sectional views taken along line B-B of Fig 5 showing operation of a lid;
- 30 Fig 9 is a perspective of the present invention in use; and

Fig 10 is prior art.

Referring to Figs 1 & 2 there are shown a panel 1 attached to a turntable 2, which is rotatably seated on top of a bracket frame 3 by means of plural steel ball bearings 4.

The panel 1, the turntable 2 and the bracket frame 3 are of round shape. The turntable 2 has an electrical socket 21 at one side with its electrical cable 22 extending therein to an insulator 23, a switch 24, and an aperture 25 at a central portion. The insulator 23 is formed with an isolating element 213 at its outer portion and has plural layers of conductor discs 232, 234 and 236, each of which is separated by isolating elements 233 and 235. Each of the conductor discs 232, 234 and 236 has a number of springs 232a, 234a and 236a attached thereon and a carbonaceous disc 232b, 234b and 236b attached thereunder.

The bracket frame 3 has also an insulator 31 formed therein, a plurality of conductor discs 312, 314 and 316 being separated by isolating elements 311 and 313. The isolating elements and the conductor elements of the bracket frame 3 are aligned with respect to the turntable 2 and the top portions of each of the conductor discs 312, 314 and 316 is in contact with the carbonaceous disc of each of the conductor discs 232, 234 and 236 of the turntable 2. The bracket frame 3 has a reel 32 to wind an electric cable 321 which has one end connected in parallel to each conductor element respectively, the other end comprising a plug to be plugged into a wall outlet. The centre portion of the bracket frame 3 has a post 317 extending upwardly and is aligned with the aperture 25 of the turntable 2. When the turntable 2 is placed on top of the bracket frame 3, the post 317 will project out through the aperture 25 of the turntable 2. A snap ring may be used to secure the turntable 2 onto the bracket frame

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In use, a fire pot, or any other pot that requires electric power to warm or to cook food, is placed on the turntable 2 and plugged into the receptacle 21. The cable 321 of the bracket frame 3 is plugged into a wall outlet and the switch 24 may be turned on/off as shown in Fig.4.

The turntable illustrated in Figs 5 to 9 differs from the turntable shown in Figs 1 to 4 in that the socket 21 of the turntable 2, for example, is neither on the side of the turntable 2 nor on top of the panel 1 but hidden in the turntable 2. This embodiment comprises a panel 1, a turntable 2, a bracket frame 3, a plurality of steel ball bearings 4, insulators 23,31, the switch 24, the aperture 25 as well as the reel 32 as shown in Figs 1 through 4 and will not be described hereinafter.

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Figs 5 and 6 show the panel 1 and the turntable 2 having an aperture 11 at centre, a receptacle 6 and a lid 5. A blind bore 12 is formed at the inner end of the aperture 11. The lid 5 has a magnetic block 51 fixedly attached thereunder, a lug 52 at one side projecting out of the periphery, two female threaded bores 53 facing downward, and a notch 54.

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The socket 6 has a magnetic plate 61 on top which enables the socket 6 to be attached securely to the magnetic block 51 of the lid 5, and an electrical cable 62. Two posts 55 have a threaded end 551 at each top portion, a reduced diameter end 553 at each bottom portion and a detent 552 at the immediate upper portion of each reduced diameter portion 553. Each reduced diameter portion 553 is sleeved into a spring 554.

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Two plate springs 13, each of which has a ratchet 131, is engaged

with the detent 552 of each post 55. The top portion of each of the plate springs 13 is fixed to a blind hole by means of a screw.

To assembly, the magnetic plate 61 is attached to the magnetic
5 block 51 of the lid 5, the threaded ends of the two posts 55 are threaded
into the female thread bores 53 of the lid 5, the lug 52 of the lid 5 is
inserted into the recess 12 and the lid 5 is then passed downward until the
detent 552 has engaged with the ratchet 131 of the plate spring 13. The
lid is securely closed as shown in Fig 7. When it is desired to open the
10 lid 5, the lid 5 is pressed downwardly and then released immediately (as
shown in Figs 8a and 8b), so that the posts 55 press the springs 554
downward and the detents 552 are detached from the ratchets 131. When
the pushing force is released, the springs 554 instantly push the posts 55
upwardly, so that the detent 552 is detached from the ratchet 131 and the
15 notch 54 is lifted above the level of the turntable 2 (as shown in Fig 8c)
permitting a finger to be inserted therein to pull the lid 5 upwardly. When
the lid 5 is pulled up and detached from the aperture 11, the lid is turned
upside-down so that the receptacle faces upwardly and is ready for use (as
shown in Fig 9).



CLAIMS

1. A turntable equipped with electrical outlet comprising:
 - a round turntable having at least one electrical socket on the
5 periphery with one end being connected in parallel to three conductor
discs; said conductor discs being isolated and partitioned by insulators
from outside and from each other; each conductor disc having a plurality
of springs on a top portion for constantly urging said conductor discs
downward and a carbonaceous disc attached thereunder, a bracket frame
10 having three conductor discs and an extension cable; said conductor discs
being isolated and partitioned by said insulators from outside and from
each other; said conductor discs being arranged in such positional relation
as to be capable of engaging with said conductor discs of said turntable
and being connected in parallel with one end of said extension cable which
15 other end can be plugged into a wall outlet.
2. A turntable equipped with electrical outlet, as claimed in Claim 1,
wherein said turntable has an aperture at a central position, and said
bracket frame has a post at a central position projecting out through said
20 aperture when said turntable is placed on top of said bracket frame to
secure said turntable and said bracket frame by means of a snap ring.
3. A turntable equipped with electrical outlet, as claimed in Claim 1,
wherein said bracket frame has a reel to wind said extension cable.
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4. A turntable equipped with an electrical outlet, as claimed in Claim
1, wherein said turntable has an aperture having a recess at its inner
periphery; a lid having a magnetic block securely attached thereunder to
hold the socket, a lug at the periphery for location in said recess, two
30 female threaded bores facing downward to accept two posts, and a notch;



said socket having a magnetic plate at one side to be attached with said magnetic block of said lid, and an electrical cable; each of said posts having a threaded end at a top portion to be threaded into said female threaded bores, a reduced diameter at a bottom portion to be sleeved into a spring, and a detent immediately above said reduced diameter portion to be engaged with a ratchet of a plate spring to function as a latch for said lid.

5. A turntable equipped with an electrical outlet, substantially as herein described with reference to Figs 1 to 4, or Figs 5 to 8c.