

DRYING MECHANISM FOR A MOP HEAD

BACKGROUND OF THE INVENTION

Field of the Invention

This invention relates to a drying mechanism for a mop head,
5 and more particularly to one that uses a driving gear meshing with a
driven gear to spin a basket at a high speed for drying the mop
head efficiently.

Description of the Prior Art

There are a few drying devices for a mop head on the market.
10 One of which is patented by ROC PTO Publication Number
M338634, as shown in Fig. 7, which comprises a transmission unit
A, a mounting unit B, and a push rod C. The transmission unit A
comprises a linear gear A1 with gear teeth A11 thereon, a first gear
A2, a second gear A3, and a third gear A4. The linear gear A1 is
15 mounted to a groove B1 of the mounting unit B, which is urged by a
guiding wheel B2 and a guiding rail B3 to work with the push rod C
for driving the first gear A2, the second gear A3, and the third gear
A4 to rotate. This design uses too many gears to drive the rotation,
which is complicated and not cost-effective.

20 In view of the above shortcomings, a renovated design is
described hereinafter.

SUMMARY OF THE INVENTION

According to the present invention, there is provided a drying
mechanism for a mop head, comprising:

25 a base comprising a connecting seat composed of a pair of
parallel plates, the pair of parallel plates each having a through hole

for a pivot pin to insert therethrough;

a case having a hollow body disposed on the base, the case having at least one portion spaced from the base;

a basket pivotally connected to the case;

5 a driving gear pivotally connected to the base, the driving gear having one end axially provided with a worm;

a driven gear pivotally connected to the base, the driven gear having one end axially provided with a swivel shaft, the swivel shaft being inserted through case and secured to the basket, the driven

10 gear being driven by the driving gear;

a driving member having a worm hole therein and at least one protruding post at one side thereof, the worm of the driving gear being inserted through the worm hole, the driving member being movable with respect to the worm of the driving gear, the driving

15 gear being driven to turn by movement of the driving member;

a resilient member inserted on the worm, the resilient member having two ends to engage with the driving member and the case, respectively; and

a pedal having a fork-shaped portion extending from one end thereof, the fork-shaped portion being pivotally connected to the driving member.

Preferably, the fork-shaped portion is formed with at least one slot for insertion of the protruding post of the driving member, the pedal further having an extension portion formed with a connecting

25 hole corresponding in position to the through hole of the connecting seat, the extension portion of the pedal being located between the pair of parallel plates of the connecting seat, the pivot pin being inserted through the through hole of the connecting seat and the

connecting hole of the pedal for connecting the pedal to the connecting seat.

Preferably, the driving gear meshes with the driven gear.

It is the primary object of the present invention to provide a
5 drying mechanism for a mop head, which utilizes a driving gear meshing with a driven gear to spin the basket at a high speed for drying the mop head.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is an exploded view of the present invention;

10 Fig. 2 is a perspective view of the present invention;

Fig. 3 is a side cross-sectional view of the present invention;

Fig. 4 is a partial cross-sectional view of the present invention;

Fig. 5 is a view similar to Fig. 3 showing the present invention in operation;

15 Fig. 6 is an enlarged view of Fig. 5; and

Fig. 7 is an exploded view of a conventional drying mechanism for a mop head.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

A drying mechanism for a mop head of the present invention, as
20 shown in Figs. 1-5, comprises a base 10, a case 20, a basket 21, a driving gear 11, a driven gear 12, a driving member 13, a resilient member 14 and a pedal 15.

The base 10 comprises a connecting seat 16 which is composed of a pair of parallel plates each having a through hole
25 161 thereon for a pivot pin 162 to insert therethrough.

The case 20 is hollow and disposed on the base 10. The case 20 has at least one portion spaced from the base 10. The basket 21

is pivotally connected to the case 20.

The driving gear 11 has one end pivotally connected to the base 10, and the other end of the driving gear 11 is axially provided with a worm 111.

5 The driven gear 12 has one end pivotally connected to the base 10, and the other end of the driven gear 12 is axially provided with a swivel shaft 121. The swivel shaft 121 is inserted through case 20 and secured to the basket 21. The driven gear 12 is driven by the driving gear 11.

10 The driving member 13 is a block having a worm hole 131 therein. At least one protruding post 132 is provided at one side thereof. The worm 111 is inserted through the worm hole 131, and the driving member 13 is movable with respect to the worm 111. By the movement of the driving member 13 on the worm 111, the
15 driving gear 11 is driven to turn.

The resilient member 14 is inserted on the worm 111, and has two ends to engage with the driving member 13 and the case 20, respectively.

20 The pedal 15 has a fork-shaped portion 151 extending from one end thereof. The fork-shaped portion 151 is pivotally connected to the driving member 13. The fork-shaped portion 151 is formed with at least one slot 152 for insertion of the protruding post 132. The pedal 15 further has an extension portion. The extension portion is formed with a connecting hole 153 corresponding in
25 position to the through hole 161 of the connecting seat 16. The extension portion of the pedal 15 is located between the pair of parallel plates of the connecting seat 16, and the pivot pin 162 is inserted through the through hole 163 of the connecting seat 16

and the connecting hole 153 of the pedal 15, so that the pedal 15 is pivotally connected to the connecting seat 16.

The driving gear 11 meshes with the driven gear 12.

When the pedal 15 is stepped downward, as shown in Fig. 5,
5 the driving member 13 will be brought to move upward. The worm
hole 131 and the resilient member 14 will be linked to force the
worm 111 to spin in one direction, as shown in Fig. 6. The turning
of the driving gear 11 will link the driven gear 12 to turn
simultaneously in an opposite direction. Because the driving gear
10 11 has a larger size with more teeth than those of the driven gear
12, this rotation will link the basket 21 in the case 20 to spin at a
high speed and dry the mop head effectively. The construction of
the present invention is simple, which lowers the cost and simplifies
the assembly.

WHAT IS CLAIMED IS:

1. A drying mechanism for a mop head, comprising:
 - a base comprising a connecting seat composed of a pair of parallel plates, the pair of parallel plates each having a through hole
 - 5 for a pivot pin to insert therethrough;
 - a case having a hollow body disposed on the base, the case having at least one portion spaced from the base;
 - a basket pivotally connected to the case;
 - a driving gear pivotally connected to the base, the driving gear
 - 10 having one end axially provided with a worm;
 - a driven gear pivotally connected to the base, the driven gear having one end axially provided with a swivel shaft, the swivel shaft being inserted through case and secured to the basket, the driven gear being driven by the driving gear;
 - 15 a driving member having a worm hole therein and at least one protruding post at one side thereof, the worm of the driving gear being inserted through the worm hole, the driving member being movable with respect to the worm of the driving gear, the driving gear being driven to turn by movement of the driving member;
 - 20 a resilient member inserted on the worm, the resilient member having two ends to engage with the driving member and the case, respectively; and
 - a pedal having a fork-shaped portion extending from one end thereof, the fork-shaped portion being pivotally connected to the
 - 25 driving member.

2. The drying mechanism for a mop head as claimed in claim 1, wherein the fork-shaped portion is formed with at least one slot

for insertion of the protruding post of the driving member, the pedal further having an extension portion formed with a connecting hole corresponding in position to the through hole of the connecting seat, the extension portion of the pedal being located between the pair of
5 parallel plates of the connecting seat, the pivot pin being inserted through the through hole of the connecting seat and the connecting hole of the pedal for connecting the pedal to the connecting seat.

3. The drying mechanism for a mop head as claimed in claim
10 1, wherein the driving gear meshes with the driven gear.