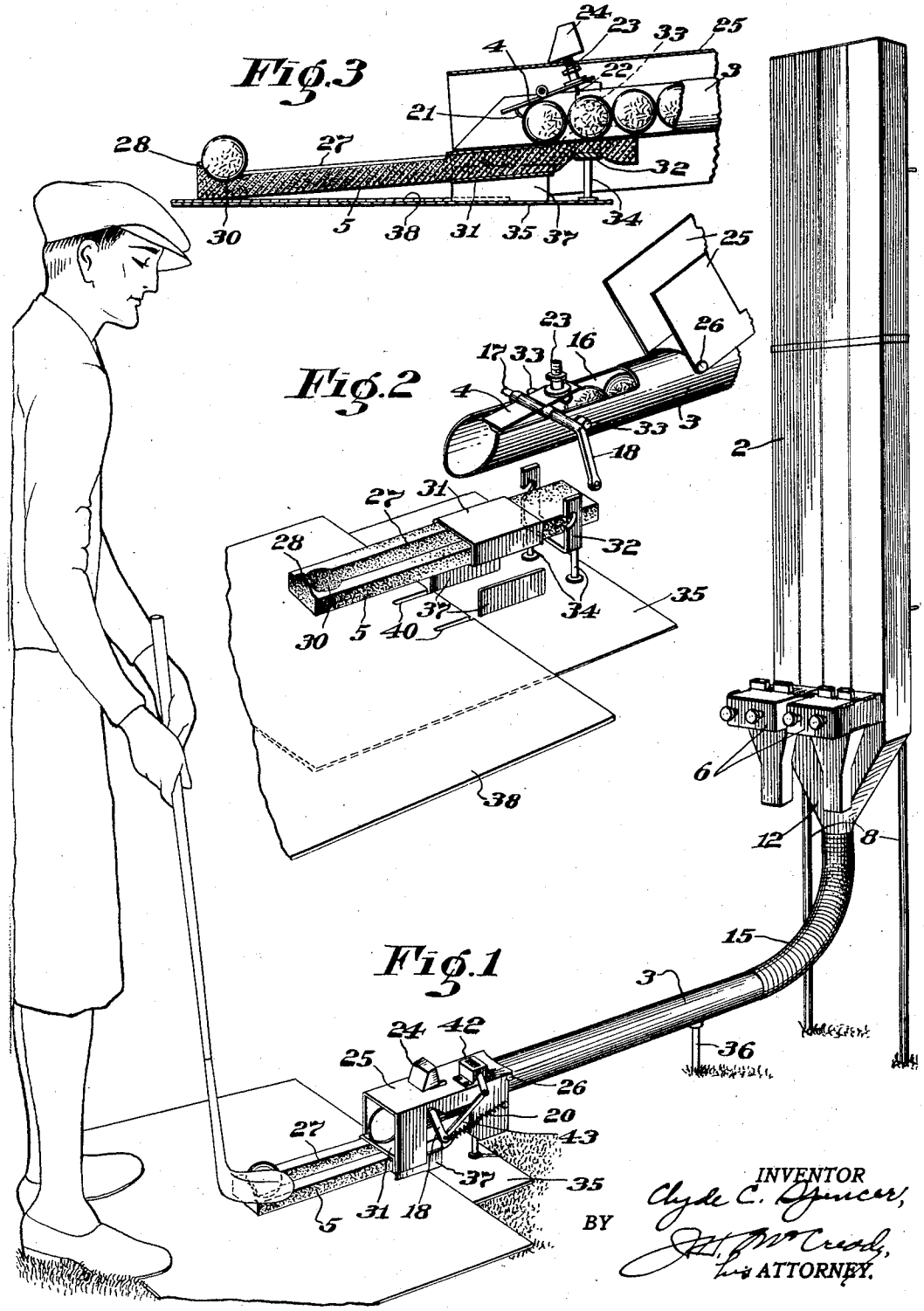
July 19, 1932. C. C. SPENCER 1,868,261

APPARATUS FOR DISPENSING AND TEEING GOLF BALLS

Filed June 25, 1930 2 Sheets-Sheet 1



July 19, 1932. C. C. SPENCER 1,868,261

APPARATUS FOR DISPENSING AND TEEING GOLF BALLS

Filed June 25, 1930 2 Sheets-Sheet 2

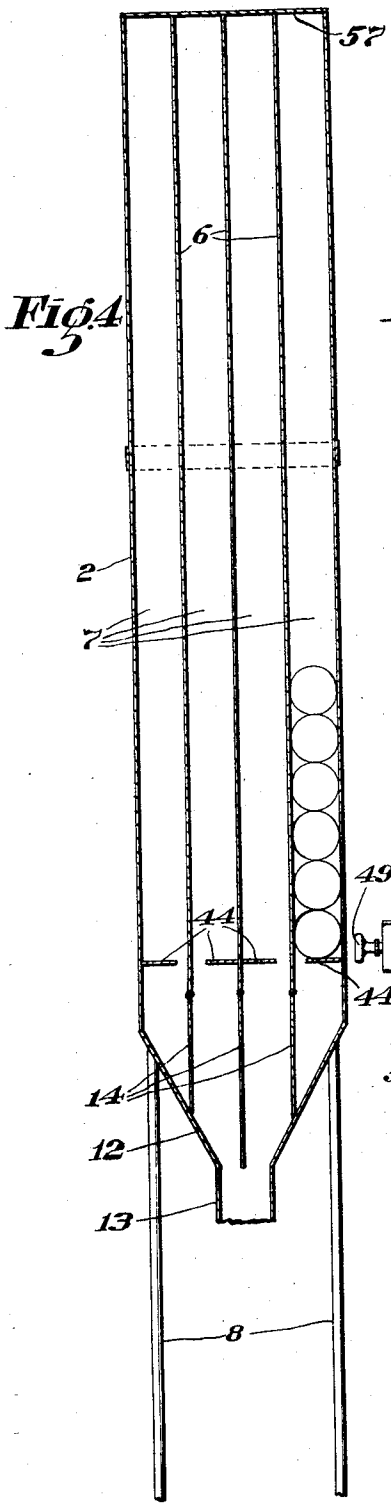


Fig. 4

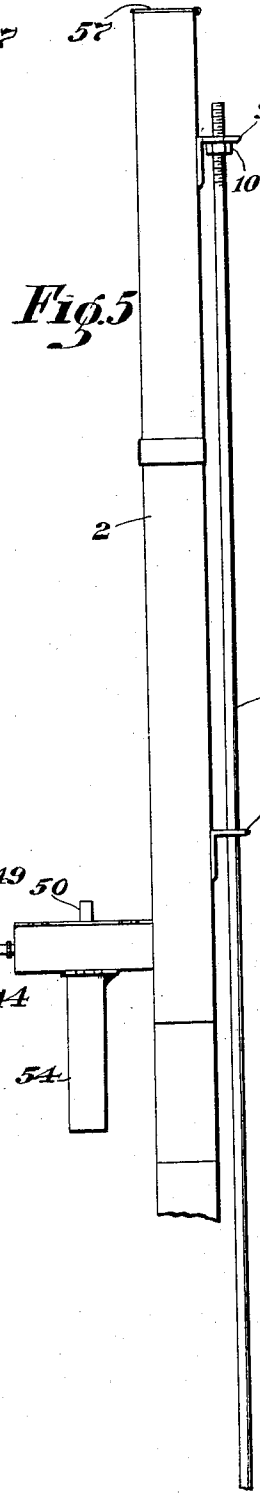


Fig. 5

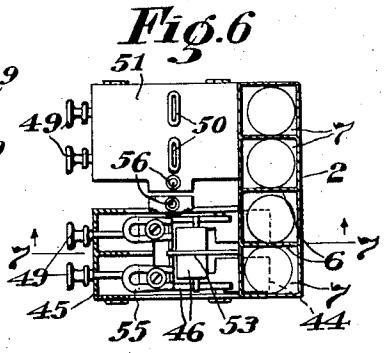


Fig. 6

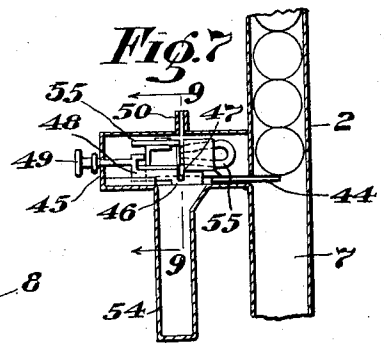


Fig. 7

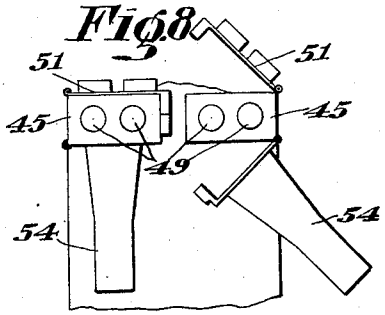


Fig. 8

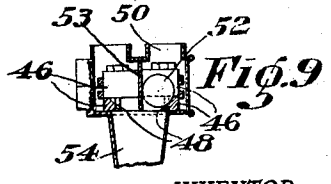


Fig. 9

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UNITED STATES PATENT OFFICE

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APPARATUS FOR DISPENSING AND TEEING GOLF BALLS

Application filed June 25, 1930. Serial No. 463,644.

This invention relates to apparatus for facilitating the practice of driving golf balls.

Both the novices in this game and also the more experienced players like to practice driving, partly for exercise and more particularly to correct faults in this part of their game and to improve their distance. Such practice is continued indoors in suitable cages through the winter. In the summer much more attention is given to it, and for this purpose special driving fields often are established and in recent years have become quite common.

The present invention is especially concerned with the requirements of apparatus for facilitating practice of this kind. It aims to devise an organization for conveniently presenting the balls in position for driving, for dispensing a given number of balls to a customer, and for reducing the labor involved in caring for and operating a practice cage, driving field, or the like.

The nature of the invention will be readily understood from the following description when read in connection with the accompanying drawings, and the novel features will be particularly pointed out in the appended claims.

In the drawings,

Figure 1 is a perspective view of an apparatus constructed in accordance with this invention;

Fig. 2 is a similar view of a part of the apparatus showing certain details of construction on a larger scale;

Fig. 3 is a vertical sectional view through the part of the apparatus at and adjacent to the tee;

Figs. 4 and 5 are sectional and side views, respectively, of the hopper;

Fig. 6 is a plan view, partly in section, showing the coin controlled mechanism for releasing the balls from the hopper;

Fig. 7 is a sectional view approximately on the line 7—7, Fig. 6;

Fig. 8 is a front view of the coin controlled mechanism above mentioned; and

Fig. 9 is a partial sectional view on the line 9—9, Fig. 7.

Briefly stated, the apparatus shown comprises a hopper or magazine 2 for holding a supply of golf balls, a chute 3 for guiding the balls away from the lower end of the hopper, a gate 4 for controlling the escape of the balls from the delivery end of the chute, a guide or tee 5 for guiding the balls into position to be driven and supporting them in said position, and coin controlled mechanisms 6 for preventing the discharge of the balls from the hopper except upon deposit of the required fee. A detailed description of the several elements of the apparatus will be taken up in substantially the order in which they have just been mentioned.

Referring first to Figs. 1, 4, 5 and 6 it will be seen that the hopper 2 is divided by partitions 6 into a series of compartments 7 each adapted to hold a series of golf balls. The hopper is supported in an approximately upright position by two rods 8—8 driven into the ground, the hopper having perforated ears 9 projecting rearwardly therefrom and sliding on the rods 8. The upper pair of ears rests on nuts 10, Fig. 5, threaded on the upper ends of the rods 8—8. At its lower end the hopper is tapered, as shown at 12, Fig. 4, and terminates in a short spout 13.

As the balls run out of the compartments toward the spout 13 they are likely to jam in the tapered section 12 of the hopper, and in order to prevent such an occurrence flaps 14 are hinged to the lower ends of the respective partitions 6 and hang loosely in the tapered section 12 of the hopper. These flaps are readily deflected to one side or the other by the travel of the balls past them into the spout 13, but they prevent the crowding of the balls into the tapered part of the hopper where they would jam.

A short length of flexible tubing 15, Fig. 1, connects the spout 13 with the inclined chute 3 and conducts the ball into the latter. Near the discharge end of the chute the entire line of balls is stopped by the gate 4, Figs. 2 and 3, which extends into a slot 16, Fig. 2, formed in the upper part of the chute. This gate is secured rigidly on a shaft 17 mounted to rock in bearings carried by the chute, and the rock shaft is provided at one side of the chute with a bent arm 18, Fig. 1, to which a spring 20

is connected, the spring serving to hold the gate normally in its tipped position as shown in Figs. 2 and 3. In this position a lug or finger 21 extending downwardly from the forward end of the gate engages the foremost ball in the chute and prevents it from rolling out of the chute. By tipping the gate in a clockwise direction, Fig. 3, the finger 21 may be made to release the ball which it engages, but this tipping movement brings another finger 22 into engagement with the second ball and stops it. A stud 23 secured rigidly to the plate carries a knob 24 for operating the gate.

Normally the parts just described are protected by a cover 25 which is hinged to the chute at 26, the cover having a slot through which the stud 23 projects. The knob 24 is threaded on to the stud so that it may conveniently be removed to permit the swinging of the cover into an open position affording access to the gate.

A ball released by the gate 4 rolls out of the end of the chute on to the guide or tee 5. This guide or tee is made of some flexible material, such as rubber, sponge rubber being preferred. It consists of a strip of fairly thick sponge rubber provided with a groove 27 in its upper side and also with a stop 28 at the end of said groove. The groove may be enlarged somewhat immediately in front of said finger to provide a socket 30 for holding a ball in position to be driven. The tee is slightly inclined and it performs two functions: first, to support the ball in driving position, and second, to guide the ball by gravity into said position. It should be thick enough at the socket 30 to hold the ball at the desired elevation.

Preferably the tee or guide 5 is detachably secured to the chute and for this purpose it is led through a sheet metal guide 31 of rectangular cross-section, Figs. 1 and 2, and its rearward end portion is clamped between the chute 3 and a U-shaped bracket 32 which embraces the lower end of the chute, the legs of the bracket being notched to form hooks and being engaged with pins 33 which project rearwardly from the opposite sides of the chute. The arrangement is such that the end portion of the rubber tee is greatly compressed, as shown in Fig. 3, and is thus held securely to the chute.

The U-shaped bracket 32 is mounted on posts 34 which are rigidly secured in a metal base plate 35. This plate rests on the floor or turf and supports the lower end of the chute, a leg 36, Fig. 1, being provided to support the opposite end of this member. Short plates 37 which project upwardly from the base plate 35 are spaced apart to receive the guide 31 between them, this guide cooperating with the plates to position the tee properly with reference to the discharge end of the chute 3. Usually it is preferable to cover the forward part of the plate 35 with a sheet of some material more resilient than metal such, for example, as linoleum. Such a linoleum sheet is shown at 38 and it is provided with slots 40 to engage the lugs 37 and hold it properly alined with reference to the tee.

In using the apparatus so far described a series of balls is released from the hopper 2, allowed to roll down through the chute 3 and are stopped at the gate 4. The knob 24 is pressed backwardly to release the gate and the foremost ball rolls out of the chute, down the groove 27 into the socket 30 where it is stopped by the projection 28. The ball now is in position to be driven. The player stands in front of the apparatus, addresses the ball, and drives it. He watches the flight of the ball, observing any characteristics of its movement which may be caused by faults in his driving. He then pushes against the knob 24 with his club, thus releasing the next ball which rolls down into driving position automatically, these operations being performed without requiring any change of position or stance on the part of the player. This ball likewise is driven, and these operations are repeated so long as the player desires or until the supply of balls is exhausted.

It should be observed that when a player has once taken his position it is not necessary for him to change it in order to release or tee a ball, the ball being automatically teed by gravity immediately after being released and such release being effected simply by pushing against the gate operating knob with the golf club. If the player should strike the end of the tee 5 with his club in attempting to drive the ball, the tee would simply be deflected by the blow and would return automatically to its proper position again due to its inherent resiliency. It is so light in weight that there is no danger of the club being broken by its impact with the tee.

In using an apparatus of this character on a driving field or in a cage which is operated for profit, it is preferable to provide some means for indicating the number of balls used by a player. For this purpose the counting device 42, Fig. 1, such, for example, as a Veeder counter, is secured to the cover 25 and is connected by a link 43 to the arm 18 for operating the gate. Preferably an irreversible counter is used so that it is entirely out of the control of the players or the attendants. Since one ball is released at each operation of the gate the number of balls delivered to the tee will be registered on the counter 42. Such a register enables an attendant to charge the player for the number of balls which he drives.

When an apparatus of this kind is used in some locations it is desirable to equip it with some kind of a coin controlled apparatus for releasing the balls. The drawings show an

arrangement suitable for this purpose, it being understood that other coin controlled mechanisms can be substituted for it. Referring to Figs. 4 to 9, it will be observed that each of the compartments 7 is equipped with a lock for preventing the release of the balls from the respective compartments. Each lock comprises a plate 44 mounted in a housing 45 which is secured rigidly to the hopper 2, the plate being arranged to slide partly across its respective compartment 7 as shown, for example, in Figs. 6 and 7. In this position it prevents the balls from rolling out of said compartment. This plate is secured rigidly to a slide 46 having a slot 47, Fig. 7, formed partly through it. A plunger 48 equipped with a knob 49 is mounted to slide immediately beside, but independently of, the part 46 and it also has a slot to register with the slot 47. A coin slot 50, Fig. 7, is formed in the cover 51 for the casing 45 in line with the slots in the slide 46 and plunger 48 when these parts are pushed inwardly. Consequently, when a coin of the proper size, as for example a quarter of a dollar, is dropped into the coin slot 50, it falls into the slots in the two slidable members 46 and 48 and mechanically connects them together. Such a coin is indicated in Fig. 9 at 52. If now the plunger 49 is pulled outwardly it will carry the plate 44 with it, thus releasing the entire series of balls resting on said plate and allowing them to run out of the hopper. The coin 52 is held in the slots in the parts 46 and 48 by a short partition 53, Figs. 6 and 9, but soon after the withdrawal movement of the slide 46 starts the coin is carried past the end of the partition 53 and it then drops into a coin box 54, the plate 44 in the meantime having moved far enough to release the balls. When the plunger 49 is moved forward again it carries the slide 46 and plate 44 forward with it. The slide 46 may be equipped with magnets 55 to prevent the use of slugs made of magnetic metal. Preferably the coin box 54 and cover 51 are hinged to the casing 45 and are both locked in their closed positions, the locks for the two covers and their cooperating coin boxes being indicated at 56 in Fig. 6. The hopper 2 may also be equipped with a cover 57 which may be locked in any suitable manner. In fact, the hopper or magazine may take a great variety of forms.

In the event that a coin controlled mechanism is provided for releasing the balls from the hopper, the counter 42 still is useful in affording a check on the returns made by the attendant. The coin control mechanism, however, reduces the work of the attendant and enables a single attendant to perform a wider range of duties.

While I have herein shown and described a preferred embodiment of my invention, it will be understood that the invention may be embodied in other forms without departing from the spirit or scope thereof.

Having thus described my invention, what I desire to claim as new is:

1. In an apparatus of the character described, the combination of a chute for holding a series of golf balls in position to roll toward one end thereof, a flexible guide at the latter end of said chute for receiving said balls, a part at the end of said guide for positioning a ball for driving, said guide serving to conduct the balls one at a time by gravity to said driving position, and means for controlling the delivery of the balls to said guide.

2. In an apparatus of the character described, the combination of a chute for holding a series of golf balls in position to roll toward one end thereof, a flexible guide at the latter end of said chute for receiving said balls, a part at the end of said guide for positioning a ball for driving, said guide serving to conduct the balls one at a time by gravity to said position, and means for detachably fastening said guide in its operative relationship to said chute.

3. In an apparatus of the character described, the combination of a chute for holding a series of golf balls in position to roll toward one end thereof, a flexible guide at the latter end of said chute for receiving said balls, a part at the end of said guide for positioning a ball for driving, said guide serving to conduct the balls one at a time by gravity to said position, and a gate near the discharge end of said chute arranged to be operated by the player for controlling the delivery of the balls from said chute to said guide.

4. In an apparatus of the character described, the combination of a chute for holding a series of golf balls in position to roll toward one end thereof, a flexible guide at the latter end of said chute for receiving said balls, a part at the end of said guide for positioning a ball for driving, said guide serving to conduct the balls one at a time by gravity to said position, and a manually operable spring controlled gate for controlling the delivery of the balls from said chute to said guide.

5. In an apparatus of the character described, the combination of a hopper for holding a supply of golf balls, a tee for supporting a ball in position to be driven, connecting means between said hopper and said tee for guiding said balls by gravity to said position, and means under the control of the player for governing the delivery of said balls to the tee.

6. In an apparatus of the character described, the combination of a hopper for holding a supply of golf balls, means for supporting said hopper, an inclined chute for conducting balls from said hopper, means at the end of said chute for receiving the balls one at a time and automatically positioning

each ball by gravity in position for driving, and a gate under the control of the player for governing the delivery of balls from said chute to said means.

7. In an apparatus of the character described, the combination of a hopper having a plurality of compartments each adapted to hold a supply of golf balls, an inclined chute for conducting balls from said hopper, means at the end of said chute for receiving the balls one at a time and guiding each ball by gravity into position for driving, means for controlling the passage of the balls from said chute to said position, and coin controlled locks for said respective compartments serving normally to prevent the discharge of the balls from said compartments.

8. In an apparatus of the character described, a tee made of flexible material and having parts for supporting a golf ball in driving position and a groove for guiding a ball into said position.

9. In an apparatus of the character described, a flexible rubber tee having a socket for supporting a ball in position to be driven and a groove for guiding a ball to said socket.

10. In an apparatus of the character described, a tee having a part for supporting a ball in position to be driven and a flexible rubber guide for conducting a ball to said part.

11. In an apparatus of the character described, a tee comprising a strip of sponge rubber having a socket in one end thereof for holding a ball in position to be driven and provided with a groove for guiding a ball to said socket and also with a stop to prevent the ball from rolling off the end of the tee.

12. In an apparatus of the character described, the combination of a chute for holding a series of golf balls in position to roll by gravity toward one end thereof, a flexible tee at the latter end of said chute for receiving said balls one at a time, said tee having a part at the end thereof remote from said chute for holding a ball in position for driving and being constructed also to guide the balls one at a time to said position, means for controlling the delivery of the balls to said driving position, and means for detachably fastening said tee in its operative relationship to said chute.

13. In an apparatus of the character described, the combination of a chute for holding a series of golf balls in position to roll by gravity toward one end thereof, a flexible rubber tee at the latter end of said chute for receiving said balls one at a time and guiding each ball into position for driving, means for controlling the delivery of the balls to said driving position, and means for fastening said chute and said tee together in their cooperative relationship including means for releasably clamping the tee in position.

14. In a golf teeing deivce, a flexible resilient member anchored at one end and extending laterally over the surface of the ground, the upper face of said member being fashioned to form a runway for the ball, a stop at the outer end of said member for arresting movement of the ball, means extending upward to a convenient height for receiving a plurality of balls and constituting a magazine for holding the same, said means being adapted to feed the balls to the anchored end of said flexible member, and a trip for successively releasing single balls.

15. In an apparatus of the character described, the combination of a hopper for holding a supply of golf balls, a tee for supporting a ball in position to be driven, means for guiding the balls to cause them to roll by gravity from said hopper to said position, and means under the control of the player for governing the delivery of said balls to said tee.

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