April 30, 1935. R. ATTI 1,999,647

GOLF BALL MARKING MACHINE

Filed March 16, 1932 2 Sheets-Sheet 1

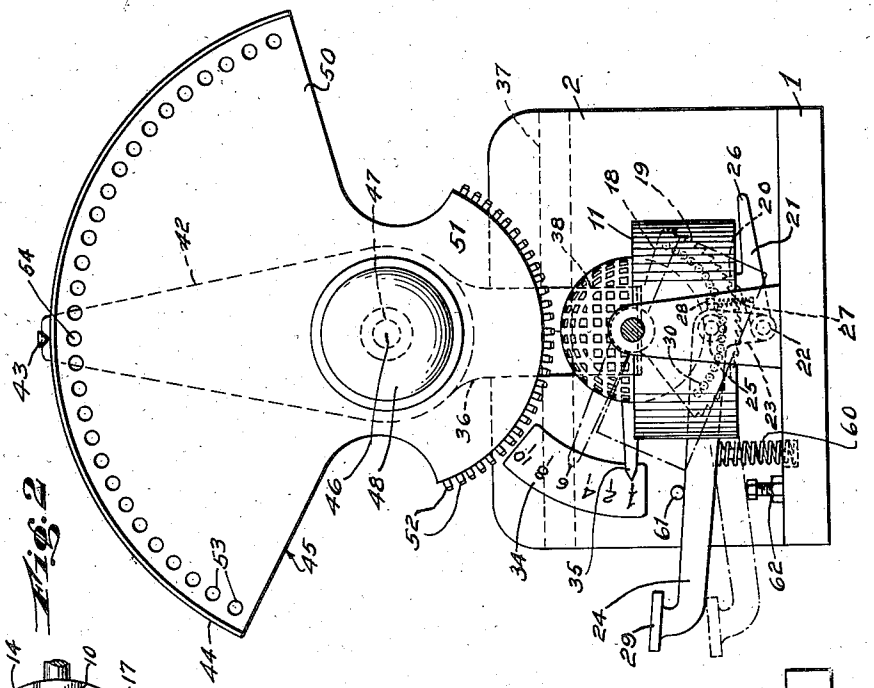


Fig. 2

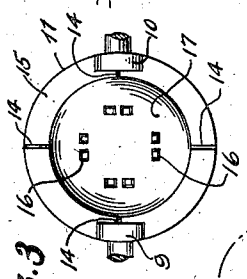


Fig. 3

Fig. 1

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GOLF BALL MARKING MACHINE

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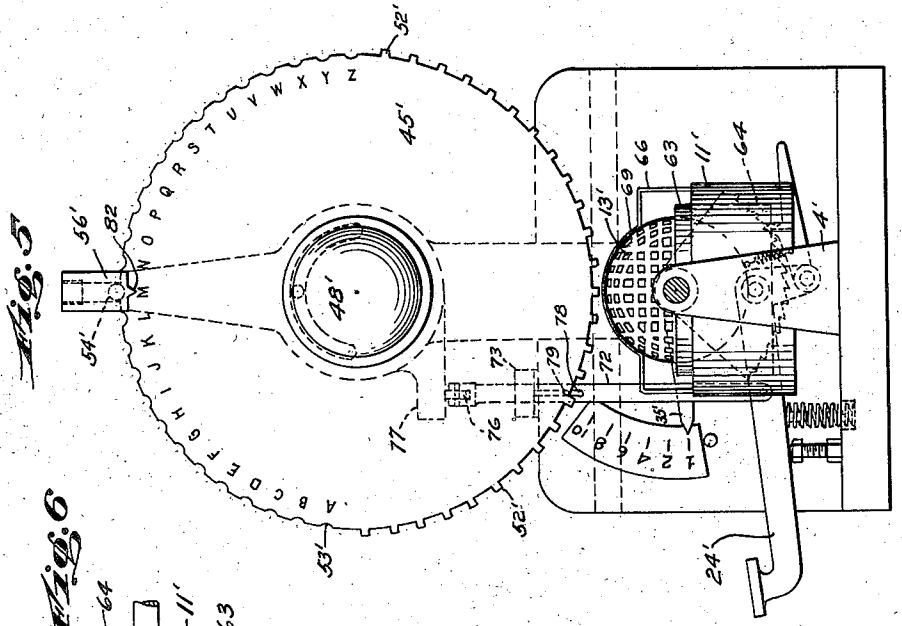


Fig. 5

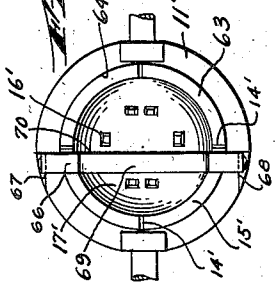


Fig. 6

Fig. 4

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GOLF BALL MARKING MACHINE

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4 Claims. (Cl. 197—47)

This invention relates to golf ball marking machines in general and more especially to machines for impressing a row of characters on a golf ball.

Recently it has become the custom to form on golf balls a mark to identify the player of a particular golf ball. In other words, the player when purchasing a set of golf balls will have the same marked with identifying marks so as to facilitate distinguishing his ball from those of the other players. This custom has been found to be of considerable value in preventing confusion, especially resulting when the golf balls of a group of players come to rest on the field close to one another.

To this end the present invention aims to provide an improved golf ball marking machine which can be operated by the average dealer or golf ball professional at the time the golf ball is purchased and while the purchaser is waiting for the same.

Specifically the present invention aims to provide a golf ball marking machine which is self-contained, that is the type or characters to be used are all part and parcel of the same machine and only require positioning of the machine preparatory to forming the character desired.

It is still another object of the present invention to provide a golf ball marking machine which is self-contained and may with facility be set to produce the mark desired.

It is still another object of the present invention to provide an improved golf ball marking machine in which a series of characters forming a particular mark may with facility be successively set and operated with a minimum loss of time in operation.

It is still another object of the present invention to provide an improved golf ball marking machine in which the several characters of a particular mark may be successively impressed on the ball and the ball accurately positioned for each successive mark and similarly that each successive character be set preparatory to operation with a minimum loss of time.

These and other features, capabilities and advantages of the invention will appear from the subjoined detail description of specific embodiments thereof illustrated in the accompanying drawings in which

Figure 1 is a side elevation of a machine made according to one embodiment of the present invention with parts thereof broken away and shown in section;

Fig. 2 is an end elevation of the same;

Fig. 3 is a plan view of the ball receiving cup separated from the machine of this embodiment;

Fig. 4 is a side elevation of another embodiment of the present invention with parts thereof broken away and shown in section;

Fig. 5 is an end elevation of the embodiment shown in Fig. 4; and

Fig. 6 is a plan view of the ball receiving cup portion of this embodiment.

In the embodiment illustrated in Figs. 1, 2 and 3, there is provided a bracket having a base 1 with an upwardly extending wall member 2. The bracket may have formed thereon two standards 3 and 4 which in the present instance are shown as secured to the base 1 by the screws 5 and 6 respectively.

The upper ends of the standards 3 and 4 are provided with journals to receive the pivot pins 7 and 8 respectively extending through the ears 9 and 10 respectively of the cup 11. The pin 8 is preferably provided with a knurled handle 12 whereby the cup 11 may be turned according to the position desired. The cup 11 is provided to receive the golf ball 13 to be marked and has quarter marks 14 formed on the annular edge 15 and guiding conformations 16 in the concave face 17 of the cup which are complemental to the design conformations of the ball to be marked, either of the mesh type, dimple design or any other design.

In the present instance, the ball 13 is illustrated as provided with the mesh design.

The pin 7 has also formed thereon the toothed segment 18, the teeth 19 of which are adapted to cooperate with the tooth 20 of the pawl 21, pivotally connected at 22 to the arm 23 of the lever 24, pivotally connected at 25 to the wall 2. The pawl 21 is preferably provided with a finger 26 whereby the tooth 20 may be removed from engagement with the teeth 19 against the tension of the spring 27 which connects the pawl 21 with the abutment 28 formed on the rear end of the lever 24. The segment 18 is fixed to the pin 7 which in turn is fixed to the cup 11 so that any actuation of the segment 18 will in turn actuate the cup 11. The teeth 19 are spaced apart the distance from center to center of adjacent characters of a mark so that if the fingerpiece 29 is depressed, it will cause the pawl 21 to advance the segment the space of a tooth and thereby turn the cup 11 the space of a tooth along an arc described by the teeth when moving about the pin 7 as the center.

The segment 18 further is provided with a plurality of depressions or recesses 30 formed in

a row adjacent to the teeth 19, one depression 30 for each tooth to receive the ball 31 which partly extends out of the recess 32 being urged outwardly by the spring 33 in such recess 32 to frictionally anchor the ball 31 in any one of the depressions 30. This ball 31 will thus cooperate with the depressions 30 to frictionally anchor the segment 18 in the position to which advanced by the lever 24.

In order to facilitate alining a mark consisting of a row of characters according to the number of characters in the mark, the graduated plate 34 is provided secured to the wall member 2 to one side of the standards 3 and 4 and preferably arc shaped, and as illustrated in the present instance, is composed of six numerals, 1, 2, 4, 6, 8 and 10 to correspond to the number of characters to a mark.

To cooperate with this plate 34 and the numerals thereon, there is provided the indicator 35 which is fixed on the pin 7 and thus moves with the cup 11 and therefore may as is here intended indicate the position of the cup by cooperation with the graduations on the plate 34. The cup 11 and indicator 35 will so be fixed relative to one another that if a single character is to be formed at the pole of the ball, the indicator will register on the plate 34 with the number "1", which position will define the location of the cup as indicated in Fig. 2, where its annular surface 15 will be substantially horizontal. If a mark is intended to be impressed which consists of two characters, before starting the printing operation, the cup 11 will be moved around to the position where the indicator will register with the numeral "2". After each printing or punching operation, the lever 24 will be depressed to cause the segment and pawl 21 to move the cup and the ball therewith one notch downward in the direction of the lever 24.

The position of the cup 11 when the indicator 35 registers with the numeral "2" will be such that the first character impressed at such position will be to one side of the pole and then, after depressing the lever 24, the indicator will again drop to the position where it will register with the numeral "1" and the cup will be in position to receive the second punch or impression directly at the pole.

If the mark consists of three characters, the starting position may also coincide with the position of the indicator 35 in registration with the numeral "2" since the position of the third character will in that case be preferably impressed on the other side of the pole so that we have a three character mark having the middle character on the pole and each of the other characters to one side of the pole.

If the mark is to consist of four characters in which case two characters of the mark will be positioned to one side of the pole, the indicator 35 in its initial position need only be moved up another notch to register with the numeral "4". It will then be apparent that with the depression of the lever 24 after each punching operation, the indicator 35 will register with the horizontal or neutral position indicated "1" after the lever 24 has been depressed twice so that the third punching operation will cause the character to be printed at the pole. Furthermore the ball will then be in position so that upon a third depression of the lever 24, the ball will have been rotated so that it will be in position to receive the fourth character in the position immediately to the other side of the pole.

The punching apparatus consists essentially of a pivoted bracket 36 pivoted on the shaft 37 extending through the wall member 2 preferably above the level of the pins 7 and 8. The bracket 36 preferably has a limiting projection 38 extending between wall portions of the wall member 2 to cooperate with the end of the screw 39 mounted in the bracket 40 secured to the wall 2. This screw 39 may be positioned to determine the depth of the punching stroke.

For normally maintaining the printing bracket out of impression creating position, there is provided the spring 41 tensed between the projection 38 and the bracket 40 and preferably as indicated mounted on the screw 39.

The bracket 36 preferably has an upwardly extending arm portion 42, at the upper end of which there is provided an indicator 43 to register with the characters on the flange 44 of the segmental disc shaped member 45. The characters in the present instance are shown as the letters of the alphabet although the flange 44 is long enough in the present instance to accommodate three additional characters, and the flange 44 may of course be made still longer or shorter depending upon the use to which the device is to be put.

The flange 44 is arcuate in shape having a radius corresponding to the line extending from the flange to the pivotal center of the member 45 at 46 which is the center of the screw 47 forming the pivot pin for the device 45, such screw extending through the bracket 36 into the handle member 48 as indicated. The screw in the present instance is screw threadedly connected to the handle member 48 and is preferably pinned thereto by the pin 49 indicated.

The member 45 consists of a segment 50 on the edge of which is formed the flange 44 and a short segment 51 on the edge of which are formed the type or dies 52 corresponding to the letters on the flange 44, a letter mark on the flange 44 corresponding to the die which is disposed diametrically opposite to it.

The periphery of the segment 51 and in turn the type or dies 52 will be disposed in an arc, the radii of which extend to the center 46 which is the center of the arc coinciding with the flange 44. The handle 48 is used not only to cause the type or dies 52 to be reproduced on the golf ball 13 but also to set the member 45 for the character to be produced. So that the device 45 will remain in the position set by the handle 48 before the printing or punching operation takes place, a suitable anchoring device is provided which in the present instance consists of a plurality of openings 53 formed in the member 45 concentric with the flange 44 and preferably adjacent to the same as indicated, one opening 53 for each type or die 52 and its corresponding character indication on the flange 44.

These openings 53 are provided to cooperate with the ball 54 located in the recess 55 formed in the head 56 of the arm 42 and resiliently pressed outwardly by the spring 57, the spring 57 causing the ball 54 to partly protrude into the opening 53 in alinement with it.

It is of course understood that the segmental device 45 will be mounted to rotate with its face 58 slidably engaging the face 59 of the arm 42 so that the ball 54 will with facility cooperate with the openings 53.

From the foregoing, it will be seen that assuming the mark to be impressed consisted of the letters A B a two character mark, the cup will

first be positioned by causing the indicator 35 to register with the numeral "2" on the plate 34, then the handle 48 will be turned until the letter "A" on the flange 44 registers with the indicator 43, and then the handle 48 pressed downwardly with sufficient force to cause the character to be punched into the ball 13 mounted in the cup 11. The lever 24 will thereupon be depressed to position the cup and contained ball 13 for the succeeding punching operation and then the handle 48 will again be rotated to cause the letter "B" on the flange 44 to register with the indicator 43 whereupon the handle 48 may again be depressed with sufficient force to cause the character "B" to be stamped onto the ball 13.

The position of the ball 13 will be determined by positioning the ball by means of the quarter marks 14 and the design conformations 16 so that the equator of the ball will register with the upper edge of the cup and the conformations 16 register with the complemental conformations on the ball 13.

In order normally and yieldably to maintain the lever 24 in the raised position indicated in Fig. 2, the spring 60 is provided, being tensed between a pocket formed in the base 1 and the lower face of the lever 24, such spring 60 normally maintaining the lever 24 in its raised position in engagement with the stop pin 61 extending from the wall member 2. To limit the downward movement of the lever 24 from its uppermost position, see the dash and dot line position shown in Fig. 2 so that the throw of the lever 24 will be sufficient to actuate the pawl 21, one tooth space at a time and no more than one tooth space at a time, the stop pin 62 is provided extending upwardly from the base 1 to cooperate with the lower face of the lever 24 as shown.

The embodiment illustrated in Figs. 4, 5 and 6, is substantially identical to the embodiment illustrated in Figs. 1, 2 and 3, except in the respects now to be described.

In this embodiment, the ball 13' instead of being supported in the cup 11' pivotally connected by the pivot pins 7' and 8' to the standards 3' and 4' is mounted in a separate cup 63 having a lateral cylindrical face and plane bottom surface to fit in a corresponding opening 64 formed in the cup 11'. The cup 11' here also preferably has a central opening 65 at its lower end in communication with the plane lower surface of the secondary cup 63.

The secondary cup 63 in this instance is provided with the quarter marks 14' on its upper annular edge 15' and the guiding conformations, to wit the guiding conformations 16', in this instance are formed in the concave face 17' of the cup 63.

Furthermore, to anchor the secondary cup 63 in the holding cup 11', there is provided the bail or strap 66, the ends of which are pivotally connected in the recesses 67 and 68 of the holder 11' and the inner surface of the area 69, the surface of which conforms substantially to the curvature of the ball 13' to be anchored and the position of the pivotal pins of the strap 66 is such that its edge 70 will as clearly indicated in Fig. 4 just clear the arcuate area 71 of the ball 13'. To clear the path of movement of the type or dies 52' on the disc 45', it is of course obvious that when the strap 66 is moved to the left with regard to Fig. 4, it will clear the ball 13' and permit the ball 13' freely to be withdrawn from the secondary cup 63.

In another respect this embodiment differs from the embodiment illustrated in Figs. 1 to 3. Here the ball will be automatically positioned by the actuation of the lever 48' during the printing operation. In other words, the lever 24' in this instance is connected to the link 72 which is guided in the opening formed in the arm 73 extending from the upper end of the wall member 2'.

This link 72 consists of a telescopic device having an outer cylindrical portion 74 in which the plunger 75 is reciprocably mounted, being urged into its outer position by the spring 76 disposed between the inner end of the cylindrical chamber and the inner end of the plunger 75.

The upper end of the plunger 75 is provided with a roller 76 to engage the lower face of the projection 77 extending from the side of the arm 36'. To anchor the plunger 75 in the cylindrical portion 74, the cylindrical portion is provided with a vertically extending slot 78 in which the projection 79 on the plunger is slidable, such projection 79 being disposed below the arm 73 so that the plunger 75 and consequently the link 72 is limited in its upward movement by the cooperation of the stop 78 with the arm 73.

The disc 45' in the present instance differs from the corresponding device 45 in the embodiment of Figs. 1, 2 and 3 in the respects now to be described.

The disc 45' is substantially circular, the type or dies 52' being formed on one half of the periphery and the notches 53' being formed along the other half of the periphery, each notch in the present instance being provided with a letter formed on the side of the disc 45', which letter corresponds to the type 52' diametrically opposed thereto. The recesses 53' in the present instance cooperate with the ball 54' disposed in the vertically extending slot 55' of the overhanging portion 56' of the arm 36', the ball 54' being urged into the recess 53' registering therewith by the spring 57' disposed in the recess 55', such spring in the present instance abutting the screw 80 formed at the outer end of the recess or opening 55' to close the outer end thereof. The other end of the spring 57' engages the ball 54' as aforesaid to urge it yieldably into engagement with the notch 53' registering therewith.

In this embodiment, the indicator 35', see particularly Fig. 4, is bent outwardly at 81 in order to clear the link 72.

In this embodiment, the overhanging portion has formed thereon the flared indicator 82 which extends over the disc 45' to register with the letter corresponding to the recess 53' engaged by the ball 54'. The letter disposed adjacent to the indicator 82 will of course indicate that the die 52' diametrically opposite thereto will carry the same letter, to wit the letter "M" in Fig. 5.

It is obvious that various changes and modifications may be made to the details of construction without departing from the general spirit of the invention as set forth in the appended claims.

I claim:

1. The combination with a frame, of a bracket pivotally mounted thereon, a plate pivotally mounted on said bracket consisting of two segments on opposite sides of a line passing through the pivotal axis of said plate, a plurality of type formed on the periphery of one of said segments, a plurality of corresponding notations formed on the periphery of the other segment,

the corresponding type and notations of said two segments being disposed diametrically opposite to one another, an indicator on said frame cooperating with said notations, said plate being operable to cause said indicator to register with the notation of the type to be impressed, a support for a ball to be marked by the type on said plate, and a handle on said plate to be engaged for actuating said bracket about its pivot in turn to impress the type on the ball positioned by said support, said handle being fixed to said plate to facilitate rotating said plate about its axis when selecting the type to be impressed, the position of said type and notations on opposite supplemental segments facilitating the selection of the type for any group and the actuation of the bracket for the type impressing action without removing the hand from the handle.

2. The combination with a frame, of a bracket pivotally mounted thereon, a plate pivotally mounted on said bracket consisting of two segments on opposite sides of a line passing through the pivotal axis of said plate, a plurality of type formed on the periphery of one of said segments, a plurality of corresponding notations formed on the periphery of the other segment, the corresponding type and notations of said two segments being disposed diametrically opposite to one another, an indicator on said frame cooperating with said notations, said plate being operable to cause said indicator to register with the notation of the type to be impressed, a support for a ball to be marked by the type on said plate, a handle on said plate to be engaged for actuating said bracket about its pivot in turn to impress the type on the ball positioned by said support, said handle being fixed to said plate to facilitate rotating said plate about its axis when selecting the type to be impressed, the position of said type and notations on opposite supplemental segments facilitating the selection of the type for any group and the actuation of the bracket for the type impressing action without removing the hand from the handle, a projection on said bracket, and a limiting stop on said frame cooperating with said projection to determine the impressing movement of said bracket.

3. The combination with a frame, of a bracket pivotally mounted thereon, a disc rotatably mounted on said bracket having a plurality of recesses on one half of its periphery and a like number of type on the other half of its periphery, there being a character designation formed on the face of said disc adjacent to each recess, the designation of each recess corresponding to the type diametrically opposed thereto, a handle for rotating said disc to select the type to be impressed, a spring pressed ball on said bracket cooperating with the recess in registration therewith to anchor the disc against accidental displacement, an indicator formed on said bracket to cooperate with said designations to indicate the type selected, a holder pivotally mounted on said frame, a ball receiving cup mounted in said holder, means for positioning said holder in turn to position said ball relative to said disc, and a bail pivotally connected to said holder to be swung into position to anchor said ball against displacement in said cup.

4. The combination with a frame, of a bracket pivotally mounted thereon, a plate pivotally mounted on said bracket consisting of two segments on opposite sides of a line passing through the pivotal axis of said plate, a plurality of type formed on the periphery of one of said segments, a plurality of corresponding notations formed on the periphery of the other segment, the corresponding type and notations of said two segments being disposed diametrically opposite to one another, an indicator on said frame cooperating with said notations, said plate being operable to cause said indicator to register with the notation of the type to be impressed, a support for a ball to be marked by the type on said plate, a handle on said plate to be engaged for actuating said bracket about its pivot in turn to impress the type on the ball positioned by said support, said handle being fixed to said plate to facilitate rotating said plate about its axis when selecting the type to be impressed, the position of said type and notations on opposite supplemental segments facilitating the selection of the type for any group and the actuation of the bracket for the type impressing action without removing the hand from the handle, a row of depressions on said segmental plate corresponding to the type formed thereon, and a spring pressed ball on said bracket cooperating with said depressions frictionally to anchor said segmental plate after a type has been selected during the type impressing operation.

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