May 28, 1935. R. ATTI 2,002,847

GOLF BALL PRINTING MACHINE

Filed March 11, 1932

Fig. 1

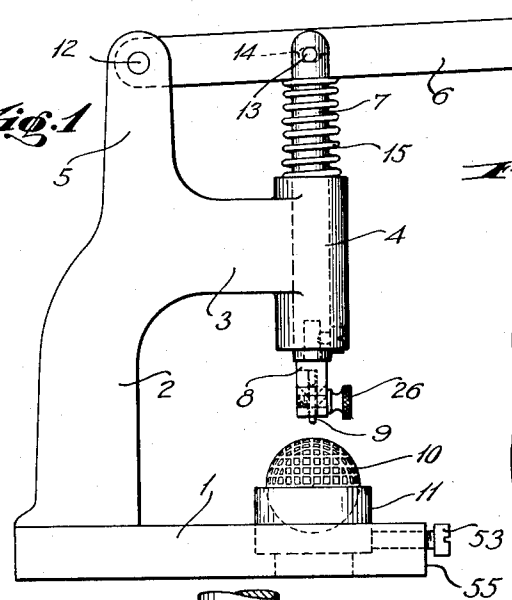


Fig. 2

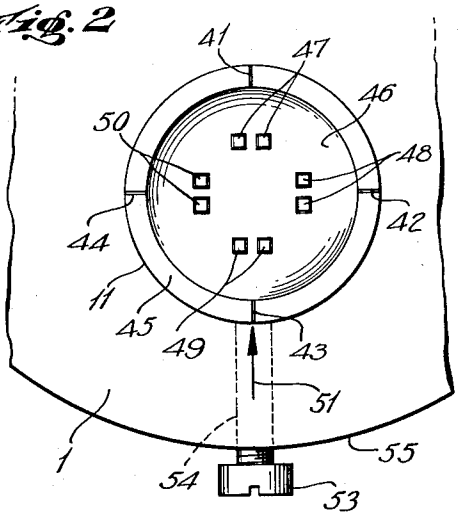


Fig. 3

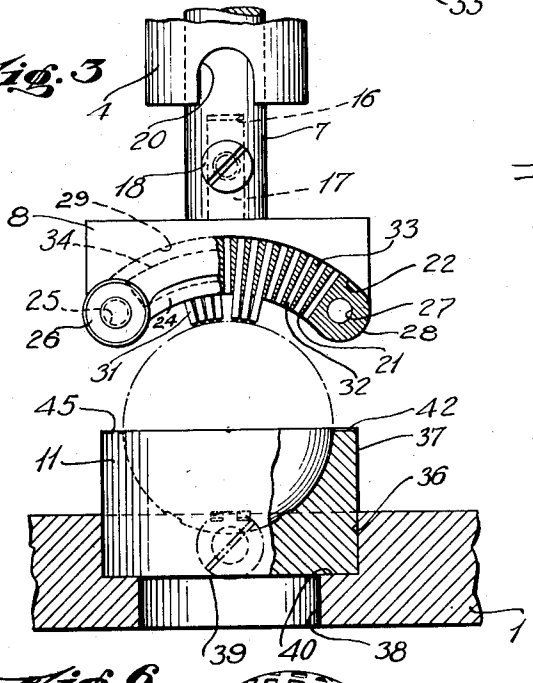


Fig. 4

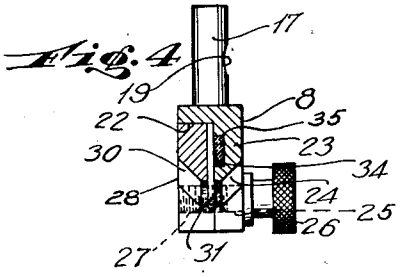


Fig. 5

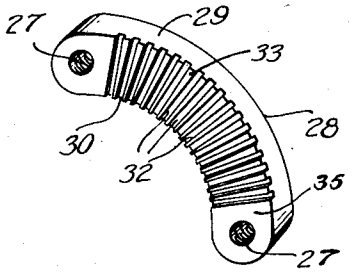
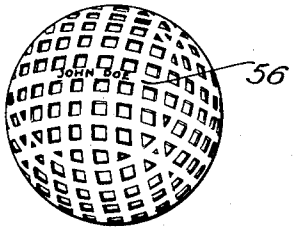


Fig. 6



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Patented May 28, 1935 2,002,847

UNITED STATES PATENT OFFICE

2,002,847

GOLF BALL PRINTING MACHINE

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Application March 11, 1932, Serial No. 598,171

4 Claims. (Cl. 101—381)

This invention relates to golf ball printing machines in general and more especially to machines for impressing a line of characters in the surface of a golf ball after the golf ball has been formed.

It is old to form at the poles of golf balls, a line of characters such as the trade-mark or name of a manufacturer, during the molding of the ball, preferably by intaglio or recessed letters.

More recently the custom has arisen of impressing on the poles of golf balls an identifying mark for an individual player. At first there was merely added to the trade-mark of the manufacturer, a separate number so that one player might have a "Silver King 1" and another "Silver King. 2". This custom was quickly accepted by the players as of considerable value. For instance, if the members of a foursome were all using one make of ball formerly considerable confusion existed in distinguishing one player's ball from the other, especially when the balls would come to rest close to one another, and consequently even before this numbering system was started, players were already marking their golf balls with identifying marks by means of pencil, ink or the like.

With the system more recently practiced, the dealer, golf ball professional and the like went a step farther and impressed a mark consisting of several letters, such as the initials or name of the player or other individual identifying row of characters onto the ball. The result produced with the latter practice has however been more or less crude resulting in poorly alined notations and impressions that were both variable in clearness and intensity.

In view of the foregoing, the present invention aims to provide an improved golf ball marking machine according to which a line of characters consisting of leters and/or other identifying marks may with facility be impressed on a certain predetermined portion of the golf ball with the several characters of a mark substantially identical to one another both in clearness and intensity.

Specifically the invention aims to provide an improved machine for properly alining the ball with respect to the characters to be received and in turn also to aline the line of characters with respect to the ball so as to facilitate the accurate and proper formation of the several characters of a mark on a certain predetermined portion of the golf ball.

Specifically it is still another object of the present invention to provide a type or die holder by means of which the type or dies selected to form a mark may with facility be secured in place in the holder and in turn with facility be removed when desired.

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

Figure 1 is a side elevation of a machine made according to the present invention;

Fig. 2 is an enlarged fragmental plan view of a portion of the machine showing the means for alining the golf ball;

Fig. 3 is an enlarged fragmental end elevation partly in section of the machine;

Fig. 4 is a rear elevation partly in section of the type or die holder;

Fig. 5 is a perspective of a portion of the type or die holder; and

Fig. 6 is a perspective view of a golf ball showing the marking produced by the present invention.

The machine consists essentially of a supporting platform 1 having an upright 2 extending therefrom with a lateral arm 3 having a tubular guide 4 at the end thereof and a vertical arm 5 having a lever 6 pivotally connected thereto which in turn is pivotally connected to the plunger 7 slidable in the guide 4 at the end of which is formed the type or die holder 8 to receive the type or dies 9 to be brought into marking engagement with the golf ball 10 positioned in the cup 11 secured to the platform 1.

The lever 6 is pivotally connected to the upright arm 5 by the pin 12 in any well known manner. The upper end of the plunger 7 is preferably bifurcated and has a pin 13 pivotally connecting such bifurcated end of the plunger 7 with the lever 6 at a comparatively short distance from the upright arm 5, the longest portion of the lever 6 extending beyond the pin 13.

The opening 14 in the lever 6 to receive the pin 13 is slightly arcuate shaped to permit the pin freely to cooperate with the lever 6 while the plunger 7 is definitely guided in the tubular guide 4. The plunger 7 is normally maintained in its raised position as indicated in Fig. 1 by the spring 15 mounted on the plunger 7 and disposed between the upper end of the tubular guide 4 and the lower edge of the lever 6.

The lower end of the plunger 7 is preferably provided with an extended recess 16 to receive the plug 17 of the die holder 8. The lower end of the plunger 7 is also provided with a set screw

18 to engage the plug 17 when positioned in the recess 16 and anchored in place. The plug 17 may have a recess 19 formed therein as indicated in Fig. 4 to receive the inner end of the set screw 18 so as to facilitate positioning the holder 8 relative to a predetermined position.

In order to clear the set screw 18 and thus afford a greater throw for the movement of the plunger 7, the lower end of the tubular guide 4 is preferably provided with a recess 20 as shown in Fig. 3 which recess 20 of course also cooperates as a limiting stop with the screw 18.

The holder 8 consists essentially of a laterally extending block having a lower arcuate surface 21 conforming substantially to the curve of the average golf ball and in addition thereto has a recess 22, the upper surface of which conforms substantially to the arcuate surface 21 and preferably is disposed parallel thereto as shown in Fig. 3.

The lower end of the downwardly extending portion 23 remote from the recess 22 is preferably cut off to form the inclined arcuate face 24, see Fig. 4. In the ends of the holder 8 and emerging in the recess 22, there are provided the openings 25 to receive the set screws 26 which extend through the screw threaded openings 27 at the ends of the clamping bar 28.

This clamping bar 28 has two parallel arcuate faces 29, 30 conforming substantially to the arcuate upper face of the recess 22 and the arcuate face 21 of the holder 8 so that the clamping bar 28 may fit into the recess 22 and thus form a type holder substantially similar in conformation on both sides. The lower outer end of the clamping bar 28 likewise is cut off to form the inclined face 30 corresponding to the inclined face 24 of the lower end of the holder 8.

The clamping bar 28 is used to clamp the type or dies 31 in place. For this purpose, and this forms an important part of the invention, the clamping bar is provided with a plurality of recesses 32 corresponding in width to the width of the type or dies 31 to receive the same. Such recesses 32 are formed in an arcuate path radial to a common center with the intervening wall portions 33 tapering inwardly toward the lower arcuate face 30.

By means of this arrangement of the recesses 32 as will appear from Fig. 3, the impression faces of the type or dies 31 may be disposed in an arc conforming to the arc of the golf ball to be marked. It will also appear that this arrangement will permit alining the impression faces of the type or dies 31 accurately to conform either to the arc of the smaller ball formerly used, to wit 1.62 or the larger ball today extensively used, to wit 1.68.

As shown in Fig. 4, there is preferably provided an arcuate gasket 34 preferably composed of rubber or other like resilient cushion forming substance positioned in the arcuate recess 35 extending inwardly from the recess 22, to accentuate the frictional engagement with the type or dies 31 when the clamping bar 28 is secured in place by the set screws 26 and also to serve as a compensator for the variations in thickness of the several dies 31 of a set and thus insure them against accidental displacement and especially against displacement when subjected to the pressing action hereinafter to be described.

The platform 1 is preferably provided with a cylindrical recess 36 conforming substantially to the cylindrical surface 37 of the cup 11. The cylindrical recess 36 may as indicated in Fig. 3 communicate with the smaller cylindrical recess 38. The lower face 39 of the cup 11 is preferably plane resting on the plane annular shoulder 40 adjacent to the recess 38. The cup 11 is formed to facilitate guiding the ball into alinement for a predetermined impression. For this purpose, the cup is preferably provided with quarter notches 41, 42, 43, 44 on the annular place face 45 of the upper edge of the cup.

The inner face 46 of the cup is preferably semi-spherical as indicated to conform to half of the surface of the ball to be marked. The semi-spherical face 46 is also provided with at least a few of the dominating pattern marks of the ball to be marked. If the ball is a mesh ball, the type illustrated in Fig. 6, the semi-spherical face 46 will have formed thereon at least four sets of raised polygonal projections, to wit the sets of projections 47, 48, 49 and 50. These sets preferably are disposed in alinement with the quarter marks 41 to 44 inclusive respectively as indicated in Fig. 2.

The platform 1 is further provided with an arrow 51 formed thereon. After selecting the cup desired according to the pattern of the surface of the ball to be marked, the cup will be placed in the recess 36 and then turned until one of its quarter marks 41, 42, 43 or 44 register with the arrow 51, as indicated in Fig. 2 and then the set screw 53 turned frictionally to anchor the cup 11 in place in the recess 36, the set screw 53 having its screw threaded stem 54 in screw threaded engagement with the platform 1 and extending inwardly from the front face 55 thereof.

After a cup has so been anchored in the platform 1 and the desired type or dies are selected and clamped by the clamping bar 28 against the gasket 34, as for instance the type required to make up the name "John Doe" and the holder 8 alined relative to the center line corresponding to the quarters 44 and 42, then the ball will be placed in the cup 11 until its equator alines with the upper face 45 of the cup and its quarter marks register with the quarter marks 41, 42, 43 and 44 and furthermore the design projections 47 to 50 register with similar polygonal shaped recesses on the ball.

The ball will be ready to receive the impression on the area 56 which will aline with the quarter marks 44 and 42 forming a substantial equator band at this location. The lever 6 may then be swung downward into marking engagement with the ball to produce the impression desired, in this instance, the name "John Doe". This impression will of course be in the form of recessed or intaglio letters. The dealer or golf ball professional will then as a rule brush a desired paint or the like across this portion of the ball whereupon the recessed letters will be filled up with the paint and thereupon the surface of the ball brushed off leaving the paint or the like in the recessed letters to produce the name in the form illustrated in Fig. 6.

Of course, when desired any number of impressions may be made on the ball at other locations than the pole of the ball as here described, although as a rule they will be formed at, at least one pole of the ball and at most, at two opposite poles of the ball.

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. A type or die holder consisting of a main block and a clamping bar having a plurality of type receiving slots formed therein and extending radial to a common center, type mounted in said slots, a gasket, and set screws for securing said gasket between said clamping bar and type on one side and said block on the other side.

2. In a type holder for producing a marking on a golf ball consisting of a block having a lower concave surface, a clamping bar having a lower concave surface, a gasket, there being a plurality of type receiving slots in said clamping bar facing said gasket and extending radially to a common center in the direction of said concave surface, the type being arranged in said slots in radial direction to a common center with their impression forming faces arranged in an arc conforming to the arc of the golf ball to be marked, and set screws for clamping said gasket between said clamping bar and said block after the type has been properly arranged in said clamping bar.

3. A type holder consisting of two clamping members having a plurality of type receiving slots extending radially to a common center to receive the type with the impression forming faces facing in the direction of said center arranged in an arc conforming to the arc of the golf ball to be marked, a cushion forming gasket disposed adjacent to the type, and means for clampingly securing said gasket in clamping engagement with said type between said clamping members.

4. In a type holder having a printer for producing a row of characters on a golf ball, the combination with two clamping members, there being a recess in one of said clamping members, of a cushion forming friction producing gasket disposed in said recess, and means for clampingly securing said gasket in clamping engagement with said type between said clamping members.

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