Sept. 25, 1962 L. R. MAETZOLD 3,055,029

DEVICE FOR CLEANING GOLF TEES

Filed Dec. 19, 1960

FIG. 1

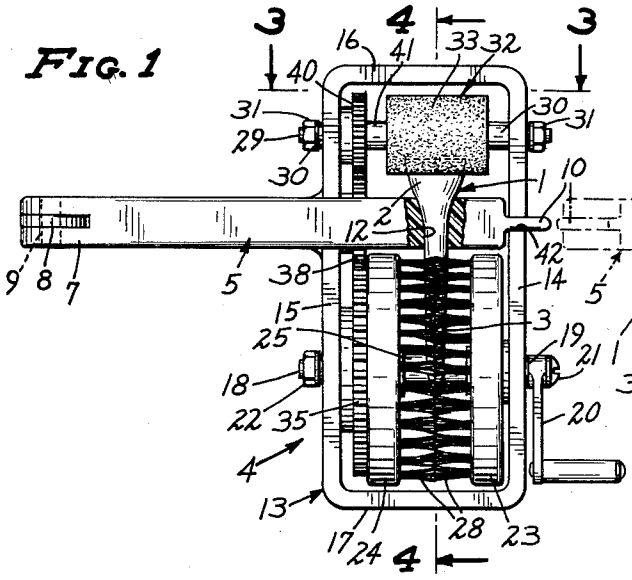


FIG. 2

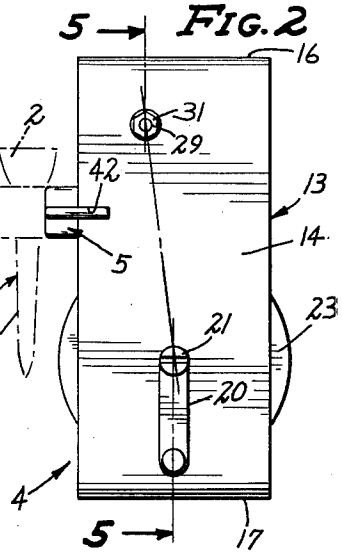


FIG. 3

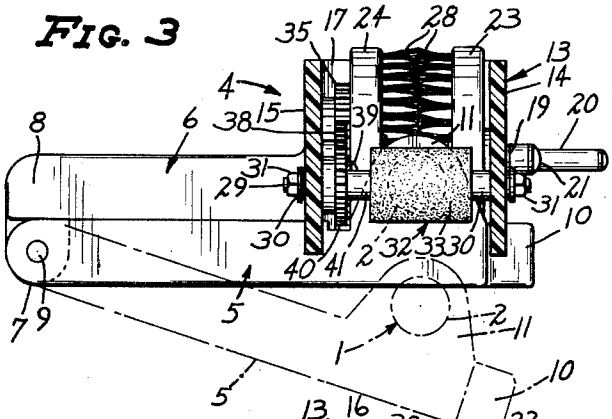


FIG. 4

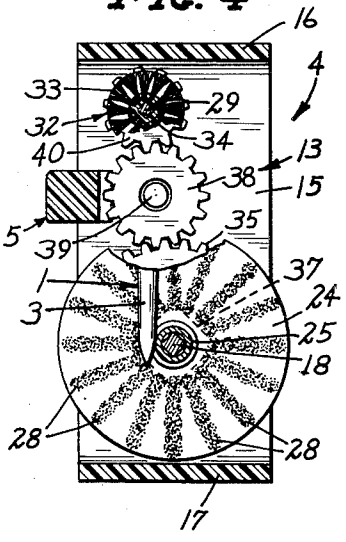
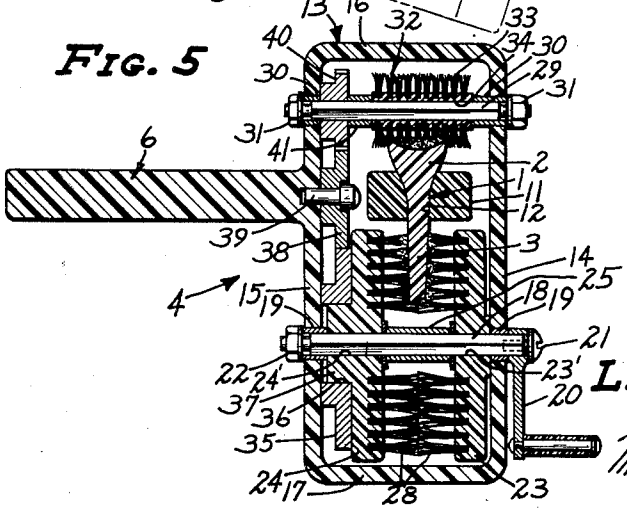


FIG. 5



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DEVICE FOR CLEANING GOLF TEES

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This invention relates generally to brushing and cleaning devices, and more particularly it relates to a device for cleaning golf tees.

Generally speaking, this invention includes a pair of levers pivotally connected for angular movements with respect to one another, one of the levers defining a golf tee holder adapted to receive and support a golf tee in position to be brushed and cleaned by the brush carrying housing defined by the other of the levers.

An object of this invention is the provision of a device for cleaning golf tees in which the golf tee to be cleaned may be easily held in position to be cleaned by the gripping action of one hand while the cleaning brushes are manually actuated by the user's other hand.

Another object of this invention is the provision of a cleaning device for golf tees in which the brushes and other moving mechanism are generally enclosed within a housing so as to greatly reduce the possibility of any scuffing contact with the hands of the user.

Another object of this invention is the provision of a cleaning device for golf tees which is compact and may therefore be easily carried on the person of the user, which is easy to use, and with which an effective cleaning action is obtained.

A still further object of this invention is the provision of a device for cleaning golf tees which is of extremely simple construction and which is capable of functioning efficiently for quickly cleaning golf tees.

The foregoing and other objects and advantages of this invention will become apparent from the following detailed specification, appended claims and attached drawings.

Referring to the drawings wherein like reference characters indicate like parts or elements throughout the several views:

FIG. 1 is a view in side elevation of my invention, some parts being broken away and some parts shown in section;

FIG. 2 is a view in end elevation thereof as seen from the right end of FIG. 1 and showing a portion of my invention in another position by broken lines;

FIG. 3 is a sectional view taken on the line 3—3 of FIG. 1 and also showing a portion of my invention in another position by broken lines;

FIG. 4 is a view in section taken on the line 4—4 of FIG. 1, some parts being broken away; and

FIG. 5 is a view in section taken substantially on the line 5—5 of FIG. 2, some parts being broken away.

Referring with a greater particularity to the drawings, the reference numeral 1 represents generally a golf tee, which comprises a head portion 2 and a depending shank portion 3, and the reference numeral 4 represents in its entirety the cleaning device which comprises the present invention. The cleaning device 4 comprises a first lever 5 and a second lever 6. The first lever 5 defines a slotted end 7 which is adapted to receive the tab defining end 8 of the second lever 6, the same being pivotally connected together by means of the pivot pin 9 for angular movements thereof about the pivotal connection therebetween.

The other end of the first lever 5 defines a generally flat tongue 10 which is generally perpendicular to the axis of the pivotal connection between the first and second levers 5, 6. Also, the first lever 5 defines adjacent its tongue defining end a holder portion 11 which is adapted to receive and dispose a golf tee 1 with its longitudinal axis in general parallelism with the axis of the

pivot pin 9. The holder portion 11 comprises a circular generally frusto-conical aperture 12 which is adapted to so receive the golf tee 1 that the lower shank portion 3 thereof will be disposed on the lower side of the first lever 5 and the head portion 2 of the golf tee will be disposed on the upper side of the first lever 5. It is noted that the terms upper and lower are used for ease of explanation, and are not intended to be limitation upon the disclosure of my invention since the same may obviously be used in any desired position.

In accordance with my invention, a generally box-like housing, represented generally by the reference numeral 13, is defined at the free end of the second lever 6 in generally spaced relation to the holder portion 11 defined by the first lever 5. It is noted that the first and second levers 5, 6 and the housing 13 may be formed from a rigid material such as metal or plastic, and are preferably formed by a molding process, in which case the housing 13 may be integrally formed with the second lever 6. The housing 13 comprises spaced generally parallel side walls 14, 15 which extend generally transversely on opposite sides of and generally normal to the longitudinal axis of the second lever 6. The housing 13 also comprises a top wall 16, and a bottom wall 17, the front and back of the housing 13 being open so as to define a recess therein. Referring particularly to FIGS. 4 and 5, a cross-sectionally generally square lower shaft 18 is journalled within the lower portion of the housing 13 for rotation about an axis generally parallel to and spaced in a downward direction from the longitudinal axis of the second lever 6. The lower shaft 18 is provided with bearing inserts 19, and a crank 20 rigidly secured to one end of the shaft 18 adjacent the side wall 14 of the housing 13, the shaft 18 being held in position by means of a cap screw 21 and a nut 22 disposed on the opposite ends of the shaft 18. A pair of cooperating wheel brushes 23, 24 are secured to the lower shaft 18 in axially spaced relation to one another for rotation with the lower shaft 18. The wheel brushes 23, 24 are separated by a spacing tube 25, and also define generally square axially extending apertures 23', 24' which receive the square shaft 18. The wheel brushes 23, 24 also define opposed inwardly directed bristles 28.

A cross-sectionally generally square upper shaft 29 is journalled within the upper portion of the housing 13 for rotation about an axis which is generally parallel to the axis of the lower shaft 18 and which is spaced in an upward direction from the longitudinal axis of the second lever 6. The upper shaft 29 is also journalled within a pair of bearing inserts 30 and is secured within the housing 13 against axial displacement by means of a pair of nut assemblies 31. A generally cylindrical roller brush, represented generally by the reference numeral 32, and having radially outwardly directed bristles 33, is secured to the upper shaft 29 for rotation therewith. The roller brush 32 defines an axial extending generally square bore 34 which receives the upper shaft 29 so as to secure the brush 32 to the shaft 29. For the purpose of imparting rotation to the upper shaft 29 upon the rotation of the lower shaft 18 by means of the manual cranking thereof, a gear train is disposed generally intermediate the upper and lower shafts 29, 18. The gear train comprises a lower circular gear 35 which defines an axially extending square recess 36 therein for reception on a square hub 37 defined on the wheel brush 24 so as to secure the lower gear 35 to the wheel brush 24 for rotation therewith. The gear train further comprises an intermediate gear 38 which is secured to the side wall 15 of the housing 13 by means of a stud 39 for rotation thereon and for meshing engagement with the lower gear 35. Also, an upper circular gear 40 is disposed in meshing engagement with the intermediate gear 38 and is re-

ceived on the upper shaft 29 for imparting rotation thereto upon the rotation of the lower shaft 18. It is noted that the upper gear 40 is separated from the roller brush 32 by means of a tubular spacer 41.

Having specifically described my invention, the operative simplicity thereof should be easily understandable; however, the operation of my invention might be briefly set forth. After placing the golf tee 1 which is to be cleaned within the holder portion 11 of the first lever 5, the levers 5, 6 are pivotally moved with respect to one another between an open position in angularly spaced relation to one another and a closed cleaning position wherein the golf tee 1 is received within the recess defined by the housing 13. It is noted that when said levers 5, 6 are disposed in said closed position, the tongue 10 defined by the first lever 5 is received within a slot 42 defined in the side wall 14 of the housing 13. Thereupon, the lower shank portion 3 of the golf tee 1 is received intermediate the bristles 28 of the wheel brushes 23, 24 so as to be in brushing contact therewith, and the upper head portion 2 of the golf tee 1 is disposed below the upper shaft 29 in brushing contact with the roller brush 32 so as to clean the golf tee 1 upon the manual rotation of the lower and upper shafts 18, 29 upon the cranking of the crank 20. It should be obvious that the golf tee 1 may be held in brushing contact with the brushes 23, 24, 32 by the manual gripping of the first and second levers 5, 6 with one of the user's hands while the cleaning device 4 is being operated by the rotation of the crank 20.

This invention has been thoroughly tested and found to be completely satisfactory for the accomplishment of the above objects; and while I have shown and described above a preferred embodiment thereof in which the principles of the present invention have been incorporated; I wish it to be specifically understood that the same may be modified without departure from the scope and spirit of the appended claims.

What I claim is:

1. A device for cleaning golf tees comprising a pair of cooperating levers pivotally connected at one end for angular movements thereof about said pivotal connection, one of said levers defining a holder portion adjacent its other end which is adapted to receive and dispose a golf tee with its longitudinal axis in general parallelism with the axis of pivotal connection between said levers and

with its lower shank portion disposed on the lower side of said lever and its head portion disposed on the upper side thereof, a generally box-like housing defined at the other end of the other of said levers in spaced relation to said holder portion of said one of said levers, said housing defining a recess which opens on the side of said housing adjacent said one of said levers, a first shaft mounted within said housing for rotation about an axis generally parallel to and spaced in a downward direction from the longitudinal axis of said other lever, means for imparting rotation to said first shaft, a pair of cooperating wheel brushes secured to said first shaft in axially spaced relation to one another for rotation of said brushes upon the rotation of said first shaft, said wheel brushes having opposed inwardly directed bristles, a second shaft mounted within said housing for rotation about an axis generally parallel to said first shaft and spaced in an upward direction from the longitudinal axis of the said other lever, a generally cylindrical roller brush secured to said second shaft for rotation therewith and having radially outwardly directed bristles, and gear means disposed generally intermediate said first and second shafts for imparting rotation to said second shaft upon the rotation of said first shaft, said levers being pivotally movable with respect to one another between an open position in angularly spaced relation to one another and a closed cleaning position wherein said golf tee is so received within the recess defined by said housing that said wheel brushes are in brushing contact with the shank portion of said tee and said roller brush is in brushing contact with the head portion of said tee upon the rotation of said first shaft.

2. The structure defined in claim 1 in which said means for imparting rotation to said first shaft comprises a manually operated crank rigidly secured to one end of said first shaft and disposed on the opposite side of said housing from the pivotal connection between said levers.

3. The structure defined in claim 2 in which the holder portion defined by said one of said levers comprises an enlarged boss on said lever which defines an aperture therein for receiving and holding said golf tee.

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