March 7, 1939. D. KAHN 2,150,065

PEN DESK SET

Filed Nov. 18, 1937

Fig. 1.

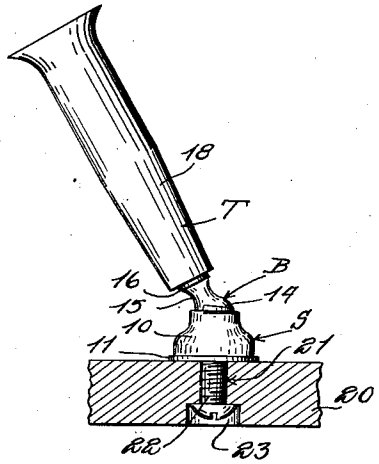


Fig. 2.

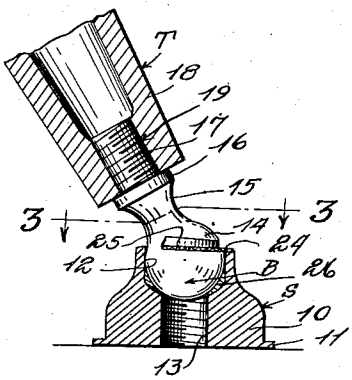


Fig. 6.

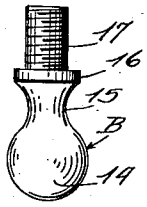


Fig. 4.

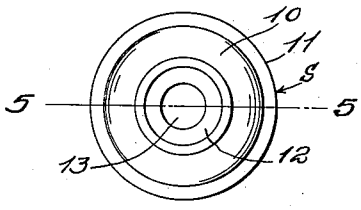


Fig. 3.

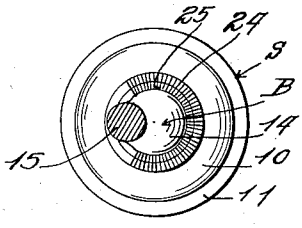


Fig. 7.

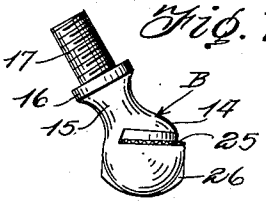
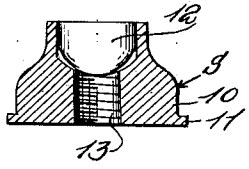


Fig. 5.



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2,150,065

UNITED STATES PATENT OFFICE

2,150,065

PEN DESK SET

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Application November 18, 1937, Serial No. 175,321

4 Claims. (Cl. 120—108)

The present invention relates to a holder for fountain pens of the type commonly carried by desk sets and into which the point of the pen is inserted, the holder forming a cap for the pen.

One important object of the invention is to provide a holder of this type wherein the construction is such as to simulate a holder connected to the base of the set by a ball and socket joint while, at the same time securing the holder to the base to be immovable with respect thereto.

A second important object of the invention is to provide a novel two part construction of ball joint simulating part of the holder whereby the parts may be formed by automatic machinery, such as an automatic turret lathe.

A third important object of the invention is to provide an improved method of assembling the ball joint parts to make a rigid structure wherein one part will be immovable with respect to the other.

With the above and other objects in view, the invention consists in general of certain novel details, construction of parts and methods of assembly hereinafter fully described, illustrated in the accompanying drawing and particularly pointed out in the claims appended hereto.

In the accompanying drawing like characters of reference indicate like parts in the several views, and:

Figure 1 is a side elevation of the improved fountain pen holder as applied to a portion of a desk set base, the latter being shown in section.

Figure 2 is a vertical section on the axis of the holder and in a plane parallel to Figure 1.

Figure 3 is a section on the line 3—3 of Figure 2.

Figure 4 is a plan view of the base or socket section of the holder before assembly.

Figure 5 is a section on the line 5—5 of Figure 4.

Figure 6 is a side view of the upper or ball section of the holder before assembling with the socket.

Figure 7 is a side elevation of the ball section of the holder after going through the assembling operation.

In the embodiment of the invention as illustrated herein, there is provided a socket or base section, a ball section and a tubular pen point receiving section, these parts being indicated in general at S, B and T, respectively.

The socket section S consists of a body 10 of circular external cross-section throughout and having a base flange 11. This body has a cup-shaped socket 12 formed concentrically in its upper part and extending downwardly from the bottom of this socket to open through the bottom of the body is a screw threaded bore 13 also concentric with the body. By reason of this construction the socket section can be turned from a rod of suitable metal in an automatic lathe.

The ball section B has a ball 14 at its lower end and this ball is connected integrally to a neck 15 which has a flange 16 at its upper end. A screw threaded extension 17 forms the upper end of the section B and extends integrally from the flanged portion. The neck 15, flange 16 and extension are all concentric to a common axis which extends radially from the center of the ball 14.

The pen point receiving section consists of a tubular body 18 open at its upper end and having a bore 19 at its lower end concentric to the axis of the body and threaded to fit the extension 17.

The socket section is mounted on a base 20 having an opening 21 therein, the bore 13 being alined with the opening 21. A screw 22 is inserted upwardly through the opening 21 and has its upper end screwed into the bore 13. Preferably, the underside of the base 20 is countersunk as at 23 to receive the head of the screw 22.

The parts S and B are assembled before mounting on the base and before the part 18 is screwed on the extension and it will be obvious that the part B may, like the part S, be manufactured on an automatic lathe or screw machine from a rod of suitable metal.

In assembling the parts S and B, the ball 14 is placed in the socket 12, the relative proportions of the ball and socket being such that the ball seats in the socket for slightly more than its semi-diameter or radius. The axis of the section B is then arranged at a suitable angle to the axis of the section S, an angle of 60° to the horizontal being convenient for the axis of the section B when the axis of the section S is vertical. It is to be understood, however, that any desired arrangement of these angles may be used. By suitable means the rim of the socket is swaged inwardly over the ball, the swaging being such as to produce a series of serrations as at 24. At the same time the ball is swaged arcuately parallel to the axis of section S to drive outwardly an arcuate strip of metal as at 25 to form serrations interlocking with the serrations of the socket edge. It is to be noted that the rear portion of the rim of the socket is lower than the front portion, as clearly shown in Figures 1 and 2, the front portion of the rim being that adjacent to the 60° angle. Proceeding in accordance with

the above, the ball is securely and immovably held in the socket while producing the simulation of a ball and socket joint.

In order to assist in holding the ball a small amount of solder may be used, as at **26**.

It will be noted that each of the members S and B forms a solid of revolutions such as is formed by revolving a plane figure constituting a radial section of the member about the axis of the member.

What is claimed is:

1. A simulated ball and socket joint including a socket member and a ball member having a ball end mounted in said socket, both the ball and socket being provided with serrations forming overlapping interlocking portions whereby the ball is held immovably in the socket.

2. In a holder for pens and the like, a simulated ball and socket joint including a socket member and a ball member having a ball end mounted in said socket, both the ball and socket having interlocking serrations on the major portion of the rim of the socket and on a segmental belt around the ball.

3. In a pen desk set, a base member, an upwardly opening socket fixedly mounted on said base member, a ball member having a ball end mounted in said socket and provided with a rabbet above the center of the ball and extending at least for over one-half the distance around the ball, said rabbet having a substantially vertical face and a horizontal serrated face, a portion of the upper edge of the socket overlapping and engaging in said serrations and the remaining portion of said upper edge being curved inwardly to partially enclose the ball above its center whereby to lock the ball against all movement in said socket.

4. In a holder for pens and the like, a simulated ball and socket joint including a socket member and a ball member having a ball end mounted in said socket, both the ball and socket being provided with serrations forming overlapping interlocking portions whereby the ball is held immovably in the socket, said ball member having a screw threaded portion to receive a tubular pen point receiving member and said socket having a screw threaded portion for fastening the same to a base.

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