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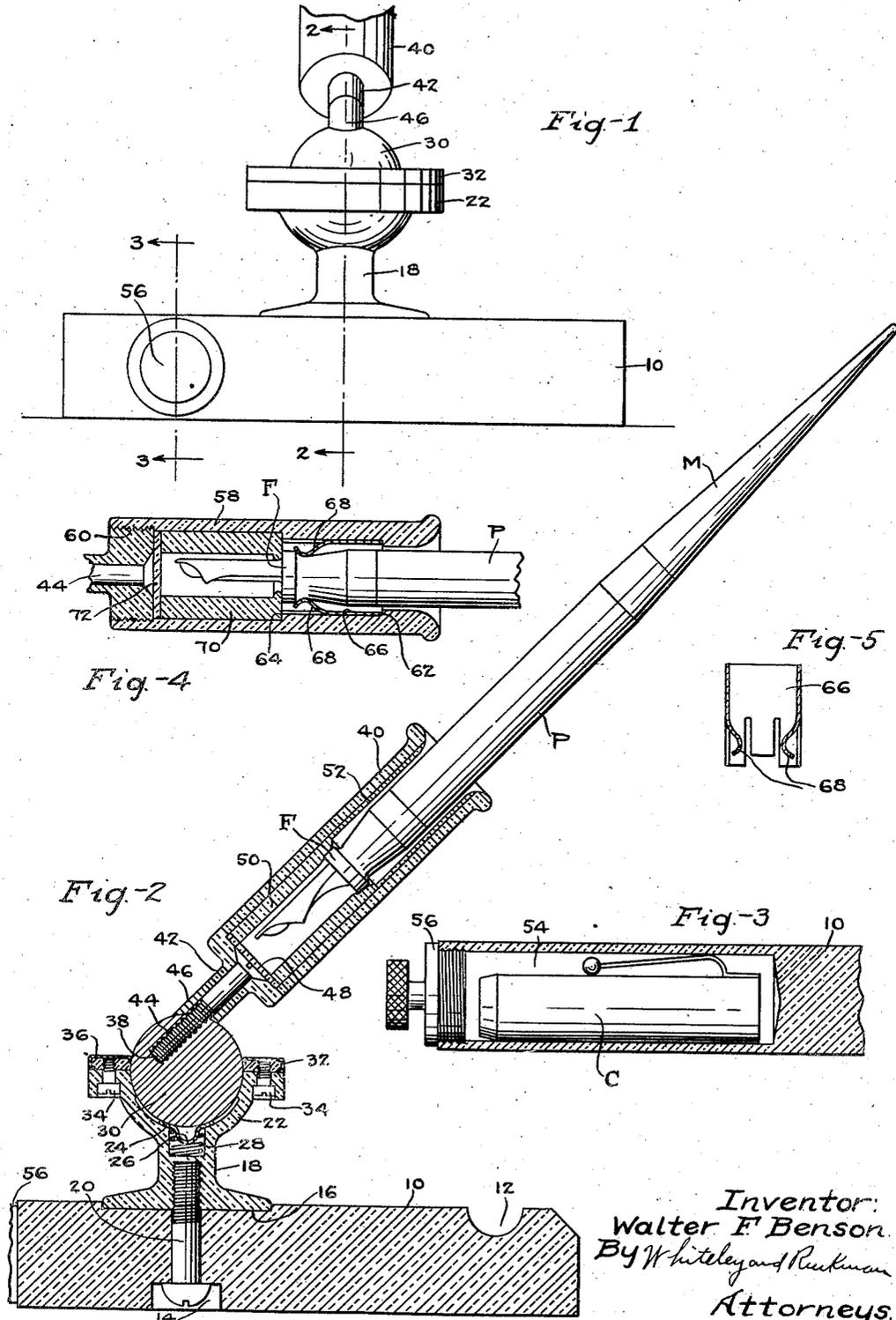
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DESK SET

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UNITED STATES PATENT OFFICE

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DESK SET

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My invention relates to desk sets, and particularly to desk sets for holding fountain pens. Among the objects of the invention are the provision of improved means for supporting a pen receiving tube and the provision of efficient means for sealing the feed portion of the pen after insertion in the tube in order to prevent the ink from drying out and clogging the pen.

The full objects and advantages of my invention will appear in connection with the detailed description thereof, and the novel features of my inventive idea will be particularly pointed out in the claims.

In the accompanying drawings which illustrate the application of my invention,—

Fig. 1 is an elevational view of the device with the upper portion thereof broken away. Fig. 2 is a view in section on the line 2—2 of Fig. 1 and showing a pen in place in the device. Fig. 3 is a view in section on the line 3—3 of Fig. 1. Fig. 4 is a sectional view of a slight modification. Fig. 5 is a sectional view of a spring finger member before it is assembled in the form of device shown in Fig. 4. Fig. 6 is a view of another modification in section on the line 6—6 of Fig. 7. Fig. 7 is a view in section on the line 7—7 of Fig. 6.

As shown in the drawings, I provide a suitable base 10 having a groove 12 in its upper surface. The lower surface of the base is provided with a recess 14 and the upper surface of the base contains a shallower recess 16 which provides a seat for a post 18 preferably made of hard rubber. The recess 14 receives the head of a screw 20 which passes up through the base and is threaded into a screwthreaded hole in the lower end of the post 18. The upper end of this post is made in the form of a socket 22. A cup member or concaved piece of metal 24 is placed in the bottom of the socket and this member 24 has a central downward projection 26 which is surrounded by the upper end of a coiled spring 28 placed in a recess in the post which extends down from the curved surface of the socket. A ball 30 preferably of metal is placed in the socket so as to rest on the member 24 and this ball

is held in place on the socket by means of a ring 32 preferably of hard rubber secured to the upper side of the socket by screws 34. Fig. 2 shows a thin flanged ring 36 sprung over the ring 32. The ring 36 may be made of gold or other high grade material and serves to give an ornamental appearance and to cover the screws 34. The ball 30 is provided with a screwthreaded hole 38 which is off center and extends part way through the ball. Cooperating with the ball 30 there is a hard rubber tube 40 having a nipple 42 extending out from its lower end. A screw 44 which is axially related to the tube 40 passes fixedly through the nipple 42 and through a sleeve 46 having its lower end curved to fit upon the ball 30. The sleeve 46 permits the tube 40 carrying the screw 44 to be turned so that the screw may be turned down into the hole in the ball until the nipple 42 comes firmly into engagement with the sleeve 46. Mathematically stated, the tube and the ball are so positioned relatively to each other that an extension of the axis of the tube coincides with a chord of a great circle of the sphere. As shown, the chord lies substantially midway between the center and the circumference of the circle. For convenience the tube will be referred to as being secured to the ball in offset relation to the center thereof. The tube 40 carries a hard rubber disk 48 in its bottom lying over the head of screw 44. Above the disk 48 there is a soft rubber sleeve 50 which is held in place by a hard rubber sleeve 52 secured in the upper portion of the tube 40 in suitable manner as by sweating it in place. The base 10 contains a recess 54 adapted to be closed by a screw plug 56. In the form shown in Fig. 4, a tube 58 is used in place of the tube 40. The lower end of the tube 58 is internally threaded to receive the externally threaded end of a nipple 60. The interior of the tube 58 is provided with a circumferential shoulder 62 located near the upper end thereof and is provided with a circumferential shoulder 64 about midway of the length of the tube. Before the nipple member 60 is secured in place, a sleeve 66 of resilient material is pushed into the tube from the bottom thereof so as to

engage the shoulder 62. The sleeve 66 is provided with a plurality of spring fingers 68 for a purpose which will appear later. A sleeve of soft rubber 70 is then pushed into the tube so as to engage the shoulder 64. A hard rubber disk 72 is placed against the lower end of the sleeve 70 and then the nipple member 60 carrying the screw 44 is screwed against the disk 72. The tube 58 is obviously secured to the ball in the same manner as the tube 40.

In the form of invention shown in Figs. 6 and 7, there is a suitable base 74 having a groove 76 in its upper surface. The base 74 is shown as being thinner than the base 10 of the form previously described and it is not shown with the recess or compartment 54. The lower surface of the base 74 is provided with a recess 78 and the upper surface of the base contains a shallower recess 80 which provides a seat for a post 82 preferably made of hard rubber. The recess 78 receives the head of a bolt 84 which passes up through the base and through the post 82 into a recess 86 formed in the upper portion of the post which portion is enlarged to produce a socket member 88. A nut 90 screwed on the upper end of the bolt 84 holds the socket member securely to the base 74. A ball 92 preferably of metal is held in the recess or socket of the socket member 88. The socket 86 is not rounded as in the case of the socket previously described but is angular and the ball does not fit down upon the bottom thereof. Different means is, therefore, provided for holding the ball in the socket. As shown, the upper inner edge of the socket member 88 is rabbeted to provide an annular groove which constitutes a seat for a ring 94 preferably of hard rubber which is held in place by an annular plate 96 of gold or other high grade material secured by screws 98. The ball 92 is secured to the ring 94 by two diametrically opposite screws 100 which pass horizontally through the ring and extend radially into the ball. A pen receiving tube 40 is secured to the ball in offset relation to the center thereof. It will be understood that the construction of the tube 40 may be the same as shown in Fig. 2 and further description thereof is therefore unnecessary, the same reference characters being employed to designate the parts which are associated with the tube 40. Attention may, however, be called to the fact that in this form of the invention, the offset screw 44 occupies a 90° relation to the screws 100.

The operation and advantages of my invention will be apparent in connection with the foregoing description. By attaching the tube 40, or the tube 58, to the ball 30 in offset relation to the center thereof, it is evident that the tube carrying a pen P held therein can be turned further in a downward direction than would be the case if the tube oc-

cupied a radial position with relation to the ball. It is also evident that the tube can be turned around horizontally in addition to have an up and down movement in a vertical plane. The spring 28 keeps the ball under sufficient friction so that the tube and pen will be maintained in any desired position. When the pen is in place in the tube, the lower end of the pen carrying the nib and feed is effectively sealed by the soft rubber sleeve. In the form shown in Fig. 2, the circumferential flange F above the pen point is pushed into the upper end of the soft rubber sleeve 50 to make the seal. In the form shown in Fig. 4, the spring fingers 68 engage above the flange F and hold the lower surface thereof firmly in contact with the upper edge of the soft rubber sleeve 70 to make the seal. The recess 54 provides a compartment for receiving a cap C adapted to be fitted upon the pen P when it is desired to carry the same around separately from the base and the holding tube. In order to make it convenient to carry the pen in the pocket or in a handbag, the upper portion of the pen is shown as consisting of a tapered detachable end member M which may be removed when it is desired to thus carry the pen. In the form shown in Figs. 6 and 7, the tube 40 may be swung up and down in a vertical plane since the screws 100 constitute trunnions which are capable of turning in the ring 94. The degree of frictional engagement of the ball and socket is determined according to how firmly the screws 100 are screwed down. The pen-receiving tube can also be turned around horizontally since the ring 94 is capable of rotative movement in its seat.

I claim:

1. A desk set comprising a base, a socket member extending up from said base, a ball held in the socket of said member, and a pen receiving tube secured to said ball in offset relation to the center thereof.

2. A desk set comprising a base, a socket member extending up from said base, a ball held in the socket of said member, said ball having a screwthreaded hole which is off center, a pen-receiving tube, and a screw axially carried by said tube whereby the latter may be secured to said ball in off-set relation to the center thereof.

3. A desk set comprising a base, a socket member extending up from said base, a ball held in the socket of said member, said ball having a screw-threaded hole which is off center, means in said member for keeping said ball and member in frictional engagement with each other, a pen receiving tube, a sleeve having a lower end which is curved to fit upon said ball and having an upper end which is straight transversely, and a screw axially carried by said tube whereby the latter may be secured to said ball in offset relation to the

center thereof upon passing said screw through said sleeve.

4. In a desk set, a base, a ball, means to mount the ball for universal movement, a pen holder, and means to connect the pen holder to the ball to one side of the center of the ball.

In testimony whereof I hereunto affix my signature.

WALTER F. BENSON.

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