Aug. 29, 1939. C. G. ECKHOLD 2,170,966

FORK CONSTRUCTION

Filed April 4, 1938

FIG. 1.

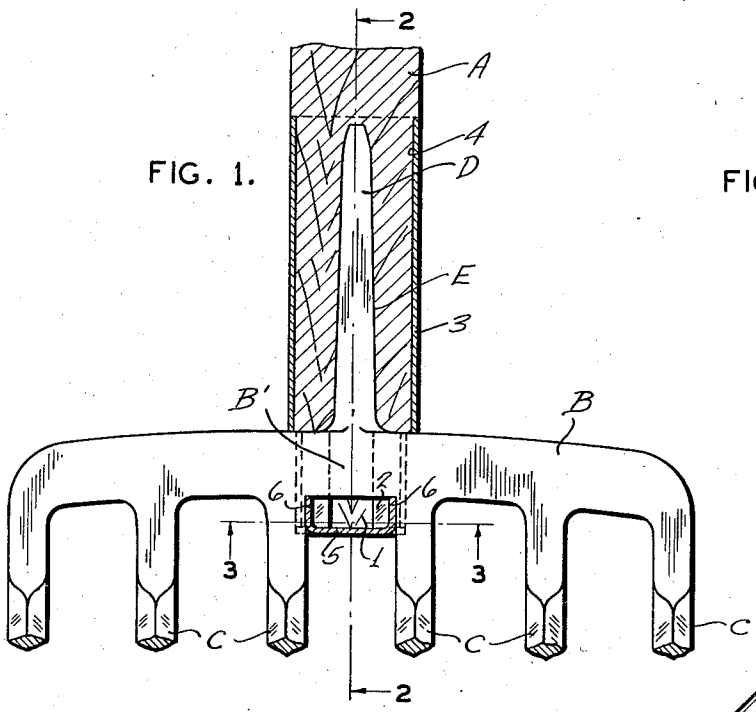


FIG. 2.

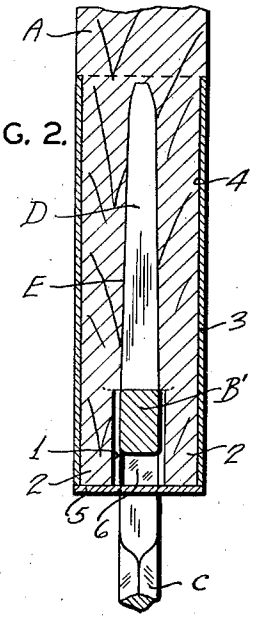
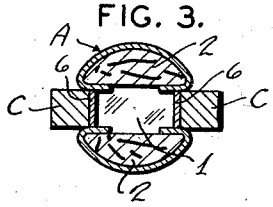


FIG. 3.



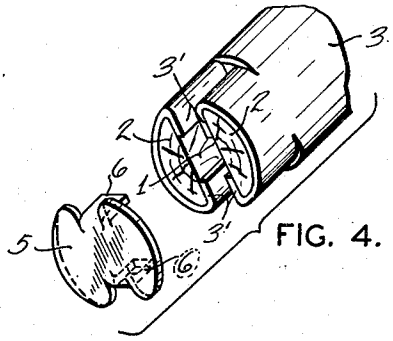


FIG. 4.

FIG. 5.

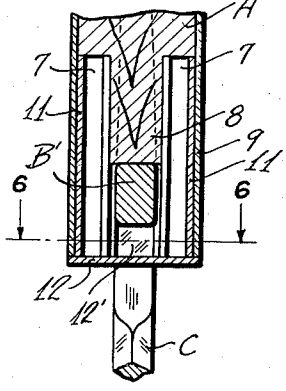


FIG. 6.

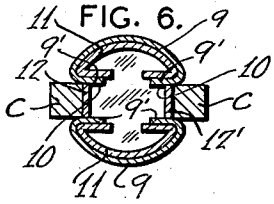


FIG. 7.

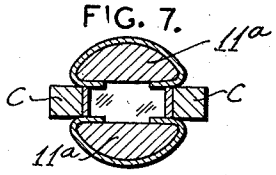
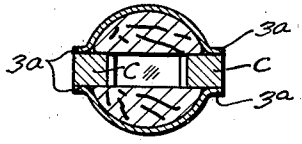


FIG. 8.



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FORK CONSTRUCTION

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Application April 4, 1938, Serial No. 199,803

4 Claims. (Cl. 306—41)

This invention relates generally to forks of the type known as coal forks, coke forks, pitch forks, and by other names, and more specifically to means for securing handles to forks of the type mentioned, the predominant object of the invention being to provide improved means for securing handles to forks so as to eliminate much of the trouble and annoyance heretofore encountered by users of such forks because of handles of forks being broken therefrom.

Forks of the type to which this invention relates ordinarily include each a head provided with tines, and a handle to which said head is attached, the usual mode of attaching the head of the fork to the handle being to provide the head of the fork with a tang which is introduced into an opening formed in the handle. In the use of forks so constructed much trouble and inconvenience was heretofore encountered by users of the forks because of the frequent breaking off of the fork handles due to the tangs snapping off. This was particularly true in cold weather when a fork dropped or thrown to the ground very frequently resulted in the cold tang being snapped off.

The main purpose of the present invention is to provide an improved means for attaching together the heads and handles of forks so that said forks are strengthened at the points where previous to this invention they were usually broken. By attaching the heads and handles of forks in accordance with the present invention much of the strain formerly borne by the tang of the head of the fork is removed therefrom and therefore the likelihood that the tang will be snapped off is largely eliminated.

Fig. 1 is a view partially in elevation and partially in section showing the head and the handle of the fork attached together in accordance with the present invention.

Fig. 2 is a vertical section taken on line 2—2 of Fig. 1.

Fig. 3 is a fragmentary cross-section taken on line 3—3 of Fig. 1.

Fig. 4 is a perspective illustrating the portion of the handle of a fork made in accordance with the present invention to which the head of the fork is attached and showing a portion of the head attaching means in disassembled relation with respect to said handle portion.

Fig. 5 is a fragmentary vertical section illustrating a modified form of the invention.

Fig. 6 is a horizontal section taken on line 6—6 of Fig. 5.

Fig. 7 is a horizontal section illustrating still another form of the invention.

Fig. 8 is a horizontal section showing yet another form of the invention.

In the drawing, wherein are shown for the purpose of illustration, merely, several embodiments of the invention, A designates the handle of a fork and B designates the head of the fork, said head being provided with the usual tines C. The head of the fork is provided with a tang D which is introduced into an opening E formed in the handle A of the fork so as to provide for attachment of the handle to the head of the fork. The end portion of the handle of the fork to which the head of the fork is attached is slotted as indicated at 1 to provide a pair of spaced apart leg portions 2, said slot 1 being open at the end of the handle and being extended from said open end of the handle inwardly a slight distance longitudinally of the handle as shown to the best advantage in Figs. 2 and 4. The end portion of the handle in which the slot 1 is formed has mounted thereon a sleeve 3 which is seated in a depression 4 formed by reducing the diameter of the handle slightly as shown in Figs. 1 and 2. The sleeve 3 is cut longitudinally at opposite sides thereof to the approximate depth of the slot 1 and portions 3′ of said sleeve are turned into said slot 1, as shown to the best advantage in Fig. 4, to provide flanges.

In the assembled condition of a fork constructed in accordance with this invention a portion B′ of the head B of the fork is disposed in the slot 1 of the handle, the thickness of this head portion being substantially the same as the distance between the opposed turned back portions 3′ of the sleeve 3 as shown in Fig. 2. However the depth of the slot is greater than the height of the portion B′ of the head of the fork so that the spaced legs 2 of the handle extend beyond the lower face of the head portion B′ as shown in Fig. 2. The means for securely attaching the handle to the head of a fork made in accordance with the present invention includes a cap 5 which has the general shape of the lower end of the slotted end of the handle A, and said cap includes fingers 6 which comprise integral portions of the cap that are bent at substantial right angles to the main body of the cap. When the cap is in its assembled relation in the fork structure the main body of the cap contacts with the lower face of the slotted end of the handle A with the fingers 6 of said cap extended into the slot 1 of the said handle, and said cap is secured to the sleeve 3 throughout the lower edge of said sleeve, by arc welding or other-

wise. It is to be noted that the fingers 6 are of such length that the top or inner edges of said fingers contact with the lower or outer face of the portion B' of the head B of the fork as shown in Fig. 1, and the width of said fingers are such that the side edges of said fingers contact with the opposed inwardly turned portions 3' of the sleeve 3. Also the fingers 6 are so positioned that the outer faces thereof contact with inner faces of adjacent tines C of the head of the fork as shown in Fig. 1.

When the head and handle of a fork are assembled and connected together in the manner described above very secure attachment of those parts of the fork is obtained, and because much of the strain heretofore borne by the tang of the head of the fork, incident to attachment of the handle to the head of the fork, is absorbed by the improved means for attaching said handle to said head, the likelihood that the tang of the head of the fork will be snapped off is practically eliminated. As a matter of fact even though the tang is broken the improved manner of securing the handle to the head of the fork will retain the handle and head in connected relation.

In Figs. 5 and 6 a slightly different form of the invention is illustrated. Instead of providing the handle A' of the fork with a centrally located slot, such as that designated by the reference character 1 in Figs. 1, 2, 3, and 4, said handle A' is provided with segmental cutaway portions 7 which are located at opposed sides of the handle. The formation of the opposed cutaway portions leaves as a part of the handle a centrally located extension 8 which, of course, is located between the opposed cutaway portions. The sleeve 9 of the form of the invention illustrated in Figs. 5 and 6 extends outwardly beyond the outer end of the extension 8 and this extended end portion of said sleeve is formed just as is the outer end portion of the sleeve 3 illustrated in Figs. 3 and 4. That is to say, the sleeve is cut longitudinally at opposite sides thereof from its outer end to points which coincide with the location of the lower end of the extension 8 of the handle and portions 9' of the sleeve are turned inwardly, as shown in Fig. 6 to provide alined openings 10 in opposed sides of the sleeve.

In assembling the fork illustrated in Figs. 5 and 6 the head portion B' of the head of the fork is introduced in the opposed and alined openings 10 in the sleeve with the upper face of said head portion contacting with the lower face of the extension 8 of the handle. A pair of segmental-shaped inserts 11 are then introduced in the segmental openings 7 of the handle, said inserts being located within the sleeve 9 and the lower portions of said inserts being engaged by the inturned portions 9' of the sleeve in the manner shown in Fig. 6. A cap 12, which is of the same construction as the cap 5 previously described herein, is applied and welded to the end of the sleeve 9 with the fingers 12' of said cap extending into the openings 10 of the sleeve and contacting at their inner edges with the outer face of the portion B' of the head of the fork and with the outer faces of said fingers contacting with inner faces of adjacent tines C of the head of the fork. The inserts 11 shown in Figs. 5 and 6 are formed of sheet metal bent to the desired shape.

The form of the invention illustrated in Fig. 7 differs from the form shown in Figs. 5 and 6 solely because the inserts 11*a* shown in Fig. 7 are formed of solid material such, for instance, as metal, instead of sheet metal as shown in Figs. 5 and 6.

The form of the invention illustrated in Fig. 8 differs from the form shown in Figs. 1, 2, 3, and 4 because the sleeve portions 3' of Figs. 3 and 4 are turned outwardly as indicated at 3*a* in Fig. 8 instead of inwardly as shown in Figs. 3 and 4.

I claim:

1. A fork comprising a head, a handle, a sleeve embracing a portion of said handle, said sleeve being provided with opposed openings open at an end of said sleeve in which a part of said head is disposed, and means for fixedly connecting said head and handle together, said means comprising a cap secured to said sleeve, said cap comprising a disc that closes an end of said sleeve and is secured thereto and is provided with fingers which engage the part of the head disposed in the opposed openings of said sleeve.

2. A fork comprising a head, a handle, a sleeve embracing a portion of said handle, said sleeve being provided with opposed openings open at an end of said sleeve in which a part of said head is disposed, portions of said sleeve being shaped to provide flanges at opposite sides of the opposed openings of the sleeve which define the widths of said opposed openings of said sleeve, and means for fixedly connecting said head and handle together, said means comprising a cap secured to said sleeve and provided with fingers which engage the part of the head disposed in the opposed openings of said sleeve.

3. A fork comprising a head, a handle, a sleeve embracing a portion of said handle, said sleeve being provided with opposed openings open at an end of said sleeve in which a part of said head is disposed, portions of said sleeve being shaped to provide inwardly extended flanges at opposite sides of the opposed openings of the sleeve which define the widths of said opposed openings of said sleeve, and means for fixedly connecting said head and handle together, said means comprising a cap secured to said sleeve and provided with fingers which are disposed between certain of the flanges at the opposed openings of the sleeve and engage the part of the head disposed in said opposed openings of said sleeve.

4. A fork comprising a head, a handle, a tang extended from said head which projects into an opening formed in said handle, a sleeve embracing a portion of said handle, said sleeve being provided with opposed openings open at an end of said sleeve in which a part of said head is disposed, portions of said sleeve being shaped to provide inwardly extended flanges at opposite sides of the opposed openings of the sleeve which define the widths of said opposed openings of said sleeve, and means for fixedly connecting said head and handle together, said means comprising a cap secured to said sleeve and provided with fingers which are disposed between and in contact with certain of the flanges at the opposed openings of the sleeve and engage the part of the head disposed in said opposed openings of said sleeve, said head being provided with spaced tines an adjacent pair of which contact with said fingers.

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