

E. A. WILLEMIN.
 FOLDING KNIFE-FORK-AND-SPOON SET.
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1,372,325.

Patented Mar. 22, 1921.

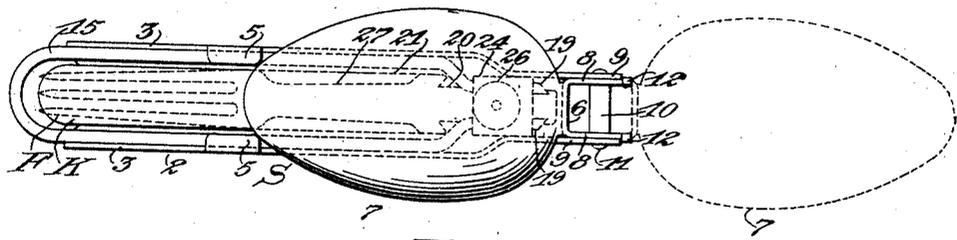


Fig. 1.

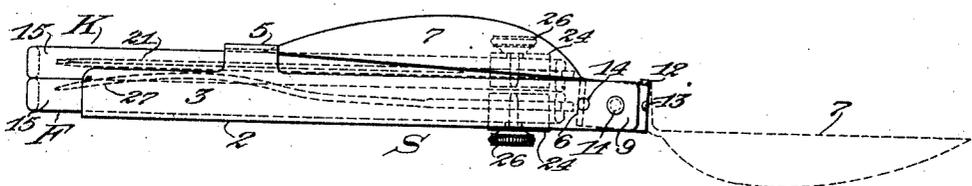


Fig. 2.

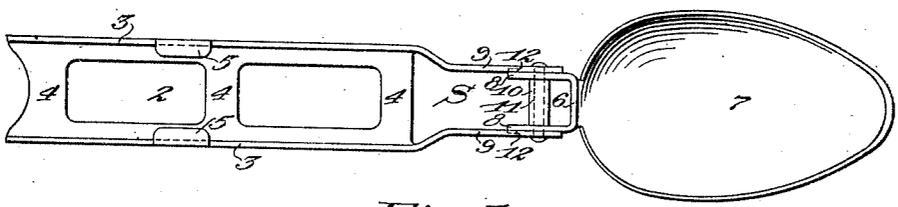


Fig. 3.

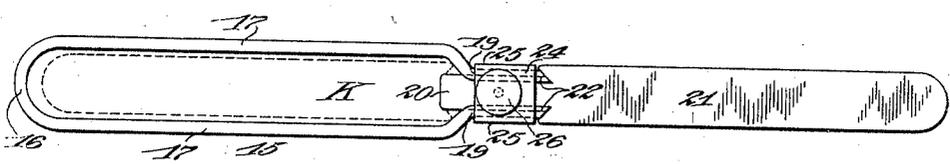


Fig. 4.

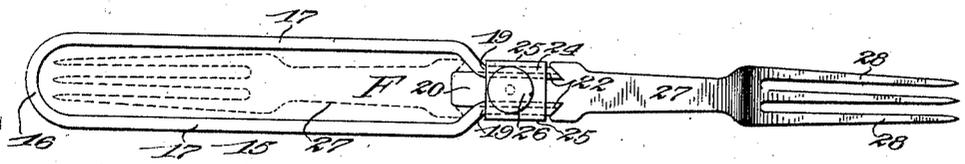


Fig. 5.

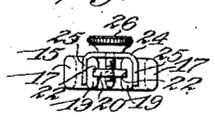


Fig. 6.

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FOLDING KNIFE-FORK-AND-SPOON SET.

1,372,325.

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To all whom it may concern:

Be it known that I, EDWARD A. WILLEMIN, a citizen of the United States, residing at Providence, in the county of Providence, State of Rhode Island, have invented certain new and useful Improvements in Folding Knife-Fork-and-Spoon Sets, of which the following is a specification.

My invention relates to folding knife-fork-and-spoon sets and consists of improvements in the structure and arrangement of the same. The object of my improvement is to provide a combination article of this type in which the several pieces may be folded together in small compass to adapt them to be carried in the pocket; and which, when unfolded may have their parts locked in extended relation to provide stanch, rigid utensils for table use.

The manner and means for carrying out the improvement are fully described in the following specification, illustrated by the accompanying drawings, in which like reference characters designate like parts. In the drawings:

Figure 1 is a plan view of my improved set of utensils, showing them with their parts in folded relation and nested together for carrying;

Fig. 2 is a side view of the same, also showing the parts folded together;

Fig. 3, a plan view of the spoon-element of the set, showing its parts extended for use;

Fig. 4, a plan view of the knife, showing its blade extended and clamped to the handle;

Fig. 5, a plan view of the fork, showing its parts extended and clamped together; and

Fig. 6, an end view of the knife-handle, showing the knife-blade folded therein, to illustrate the detail of the clamping-means which holds it in place.

Referring to Figs. 1 and 2 of the drawings, the spoon S constitutes what may be termed the main element of the combination, it being constructed with a case-like handle 2, see Fig. 3, which is adapted to inclose the knife K and fork F when the latter are folded together and nested within its sides. As shown in Fig. 3, the handle 2 is of skeleton structure, formed with upstanding, parallel sides 3—3 connected by an apertured web 4. Extending above the upper edges of the sides 3—3 are two ears 5—5 which are bent

down at their ends to form retaining-lugs or guides for holding the knife and fork elements in nested relation in the handle 2 after they have been slid into place between its sides. At one end of the handle 2 its sides 3—3 are extended and drawn together in closer relation to provide an open joint for receiving the shank 6 of the spoon-bowl 7. This latter part is struck up from sheet-metal with the shank 6 formed integral with the bowl and provided with two opposite, parallel ears 8—8 adapted to fit within the extensions 9—9 of the handle 2. A tubular bushing 10 extends across the space between the ears 8—8 with a pin 11 inserted through its bore and projecting through holes in the ears 8—8 and extensions 9—9. The ends of the pin 11 are riveted over to provide a pivotal hinge-joint between the parts whereby the bowl 7 may be folded over against the handle 2 with its tip resting between the ears 5—5, as shown in Figs. 1 and 2. On the under edges of the ears 8—8 are lugs 12—12 bent over to adapt them to strike against the under sides of the extensions 9—9 on the handle 2 when the bowl is turned down into extended relation therewith, as shown in Fig. 3. The lugs 12 serve as stops to limit the swinging movement of the bowl 7 whereby to locate it in alinement with the handle 2, and suitable detents are provided for maintaining the parts in this extended relation. Referring to Fig. 2, the ears 8—8 on the spoon-shank 6 are punched out on their sides to form protuberances or teats 13—13 which are adapted to engage holes 14—14 on the sides of the extensions 9—9 when the bowl 7 is in extended relation therewith. The teats 13—13 snap into the holes 14—14 to provide a slight resistance to the turning of the spoon-bowl 7 on its pivot 11, whereby to prevent accidental movement of the bowl when the spoon is in use. This resistance is easily overcome, however, when it is desired to fold the bowl back on the handle.

Referring now to Figs. 4, 5 and 6, the knife K and fork F are identical in structure, as regards their folding arrangement, and it will therefore suffice to describe one of them in detail. As shown in Fig. 3, the knife-handle 15 is constructed of flat-bar stock, preferably formed with rounded edges, and is bent double at 16 to provide two opposite, parallel sides 17—17. At the open end of the loop its sides 17—17 are drawn together in closer relation to provide

opposite clamping-fingers 19—19 which fit around the edges of the narrowed shank 20 of the knife-blade 21. For this purpose the inner sides of the fingers 19—19 are formed with longitudinal grooves 22—22, see Fig. 6, with which the edges of the shank 20 engage. It will also be noted from reference to Fig. 4 that the ends of the clamping-fingers 19—19 are beveled off or pointed to adapt them to slide into register with the angularly notched sides of the blade 21, whereby a smoother and more secure joint is effected between the parts. After the parts of the knife K have been assembled in the manner shown in Fig. 4, the clamping-fingers 19—19 are held in place against the edges of the blade-shank 20 by a U-shaped guard or clamp 24. The clamp 24 consists of a strip of sheet-metal bent down to form opposite arms 25—25 which straddle and embrace the sides of the fingers 19—19. A thumb-screw 26 is inserted through an opening in the top of the clamp 24 with its end screwed into a threaded hole in the shank 20 to bind the parts together. In this way a particularly secure and rigid connection is provided between the handle 15 and blade 21 to prevent the latter from "jackknifing" or springing out of place. As illustrated in Fig. 5, the fork K has the same arrangement of clamping-means between its parts, the only difference in structure being that its extension 27 is formed as a fork with tines 28 at its end.

In folding the parts of the knife K together the thumbscrew 26 is first unscrewed and the clamp 24 removed from the sides of the clamping-fingers 19—19 so that the shank 20 of the blade 21 can be drawn out from the end of the handle 15. The blade 21 is then reversed in position and placed within the sides of the handle 15, as illustrated by the dotted lines in Fig. 4. In placing the blade 21 in this relation with the handle 15 its shank 20 is again inserted in the grooves 22—22 of the clamping-fingers 19—19 by springing the sides of the handle apart to cause them to snap over the edges of the shank. The clamp 24 is then replaced in overlapping engagement with the clamping-fingers 19—19 and the screw 26 screwed down into the blade 21 again, as shown in Fig. 6. The parts of the knife K are thus clamped together in folded relation and the fork F may be disjointed and reassembled in exactly the same manner. The two folded elements K and F may now be sheathed within the spoon-handle 2 by sliding them into place between its upstanding sides 3—3. As illustrated in Figs. 1 and 2, the fork F is first laid in place flat against the web 4 of the handle 2 with its thumb-screw 26 projecting beyond the end of the web to hold it in place. The folded knife K is then slid into position on top of the fork

F and the two pieces are held in place laterally by the overhanging ears 5—5 on the sides of the handle 2. It will also be noted from Fig. 1 that the clamps 24 on the knife K and fork F fit snugly into place between the sides of the extensions 9—9 at the end of the spoon-handle 2, whereby to provide a frictional gripping-effect which tends to hold these elements in place longitudinally of the handle. With the knife K and fork F nested within the handle 2 in this manner the spoon-bowl 7 is folded over against its top, the several parts of the device thus assuming a very compact relation and being combined in a minimum of space.

It will be observed that my improved folding-utensil set is exceedingly simple in construction and arrangement, while being stanch and durable in use. The parts of the several articles may be stamped out from sheet-metal or formed from conventional shapes of bar-stock and are thus easy of manufacture and correspondingly economical in cost. The complete article provides a most convenient set of table-utensils which may be combined together in such small compass as to be easily carried in the pocket or packed in a limited space in a grip. The device is intended for use by tourists, sportsmen, campers or others, and is also well adapted to serve as a part of the mess-kit for soldiers and sailors. A particular feature of improvement in the device consists in the provision for clamping the knife-blade and fork-element in fixed relation with their handles so that they cannot be bent or sprung out of place under stress in use. It is also to be noted that the parts of the knife and fork are securely locked together when folded, so that they cannot become misplaced or lost.

Various modifications might be made in the structure and arrangement of the parts of my improved device without departing from the spirit or scope of the invention, therefore, without limiting myself to the exact embodiment herein shown and described, what I claim is:

1. In a folding knife-fork-and-spoon set, the combination with a case-like handle having a folding spoon-bowl pivoted at its end, of skeleton knife and fork handles adapted to fit within the sides of the spoon-handle, a knife-blade and fork-element attachable to the last-named handles in extended relation therewith and also attachable thereto in folded relation between their sides, and means to clamp said knife-blade and fork-element in rigid connection with their handles in either extended or folded relation thereon.

2. In a folding knife-fork-and-spoon set, the combination with a case-like handle, of a spoon-bowl pivoted at its end to adapt it to be folded against the side of the handle,

or to be turned into extended relation there-
with, resilient detent-means for maintaining
the spoon-bowl in extended relation with the
handle, and folding knife and fork elements
5 adapted to be contracted to nest within the
sides of the spoon-handle.

3. In a folding table-utensil set, the com-
bination with a case-like handle, of a spoon-
bowl pivoted to the handle to adapt it to
10 fold thereagainst or to be extended there-
from, means to limit the movement of the
bowl in relation to the handle to control its
extended position thereon, spring-detents for
holding the spoon-bowl in extended relation
15 with the handle, and folding knife and fork
elements adapted to be nested within the
sides of the spoon-handle.

4. In a folding table-utensil set, the com-
bination with a case-like handle, of a spoon-
20 bowl connected to the end of the handle to
adapt it to be folded thereagainst, a loop-
like knife-handle, a blade adapted to be en-
gaged with the end of the knife-handle in
extended relation therewith and to be re-
25 versed in position to be inclosed between its
sides, clamping-means for securing the blade
in fixed position on the handle, and a fold-
ing fork of the same construction as the
knife, said knife and fork adapted to be
30 sheathed in nested relation in the spoon-
handle.

5. In a folding table-utensil, the combina-
tion with a case-like handle having opposite
parallel sides, of a spoon-bowl provided with
35 a shank having ears fitted between the sides
of the handle, a tubular bushing extending
across the space between said ears, and a
pivot-pin extending through the bore of the
bushing and projecting through holes in the
40 ears and in the sides of the handle with its
ends headed over to hold it in place.

6. In a folding table-utensil, the combina-
tion with a handle having opposite parallel
sides joined together by a web, of a spoon-
45 bowl provided with a shank having ears
overlapping the sides of the handle, a pin
extending across the sides of the handle

through holes in the shank-ears to pivot the
spoon-bowl thereto, and projections on the
ears adapted to snap into holes in the sides 50
of the handle to act as detent-means to hold
the spoon-bowl in extended relation with the
handle.

7. In a folding table-utensil set, the com-
bination with a trough-like handle having 55
opposite upstanding sides with extensions
contracted toward each other at one end, of
a spoon-bowl having a shank pivoted to the
extensions of the handle to adapt it to fold
thereagainst, and folding knife and fork 60
elements adapted to be inclosed within the
handle with the extensions thereof bearing
against their sides to retain them in place.

8. In a folding table-utensil, the combina-
tion with a loop-like handle having oppo- 65
site parallel sides formed with longitudinal
grooves at their ends, of a blade provided
with a shank having its edges adapted to be
received in the grooves of the handle, and
means to clamp the sides of the handle to- 70
gether to hold the blade in place thereon.

9. In a folding table-utensil, the combina-
tion with a loop-like handle having opposite
parallel sides formed with longitudinal
grooves at their ends, of a blade formed with 75
a shank having its edges adapted to be re-
ceived in the grooves in the handle, a clamp
embracing the sides of the handle to hold
them in engagement with the blade, and
means to secure the clamp in place on the 80
handle.

10. In a folding table-utensil, the combina-
tion with a loop-like handle having oppo-
site parallel sides formed with longitudinal
grooves at their ends, of a blade provided 85
with a shank having its edges fitted to the
grooves in the handle, a U-shaped clamp
adapted to straddle the sides of the handle
to hold them in engagement with the shank
on the blade, and a thumb-screw adapted to 90
be inserted through the clamp and screwed
into the shank of the blade.

In testimony whereof I affix my signature.
EDWARD A. WILLEMIN.