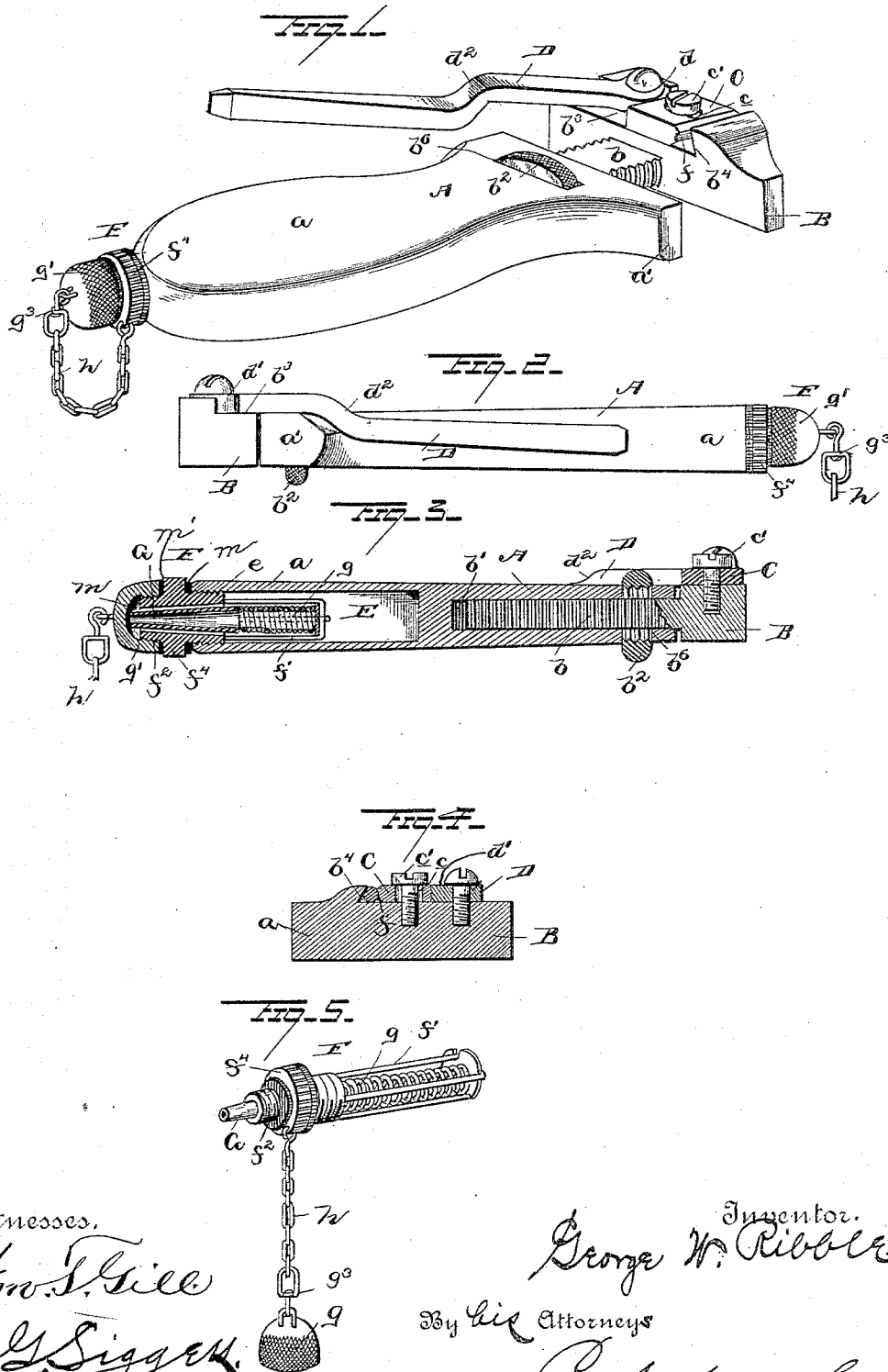


(Model.)

G. W. RIBBLE.
COMBINATION TOOL.

No. 381,724.

Patented Apr. 24, 1888.



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UNITED STATES PATENT OFFICE.

GEORGE WILLIAM RIBBLE, OF HARRISONBURG, VIRGINIA.

COMBINATION-TOOL.

SPECIFICATION forming part of Letters Patent No. 381,724, dated April 24, 1888.

Application filed September 8, 1886. Serial No. 213,033. (Model.)

To all whom it may concern:

Be it known that I, GEORGE WILLIAM RIBBLE, a citizen of the United States, residing at Harrisonburg, in the county of Rockingham and State of Virginia, have invented a new and useful Improvement in Combination-Tools, of which the following is a specification.

This invention relates to combination-tools, more particularly to that class capable of use in connection with bicycles, tricycles, and the like; and it has for its object the provision of an article which, while fulfilling the functions of the larger and more intricate tools of which it takes the place, shall also be efficient and convenient of manipulation, as well as combine the said tools in a small compass.

To these ends the invention consists in the construction, combination, and arrangement of the several parts, substantially as herein-after more fully set forth, and specifically pointed out in the claims.

The invention is illustrated in the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of my improved tool. Fig. 2 is a side elevation showing the wrench closed and the spoke-tightener adjusted in position for use. Fig. 3 is a longitudinal vertical section. Fig. 4 is a transverse section through the clamping-block, and Fig. 5 is a detached perspective view of the oiler.

Referring to the drawings, A designates the wrench, having handle *a* and fixed jaw *a'*.

B designates a sliding jaw provided with the screw-threaded shank *b*, which enters a slot or opening, *b'*, in the handle *a*. A circular nut, *b''*, is disposed horizontally in said handle *a* within an opening, *b''*, and has a milled exterior edge to provide for its manipulation by hand. A portion of the milled edge of the nut projects beyond the handle at each side, so as to allow for the necessary operation. The nut works on the shank of the sliding jaw. The sliding jaw B is preferably made thicker than the handle *a* or jaw *a'*, and is recessed on one of the faces or sides, as at *b''*, the edge of the recess nearest to the jaw proper being undercut or dovetailed, as seen at *b''*.

C designates a clamping-block slotted at *c*.

Through slot *c* extends a screw, *c'*, for securing the block to the jaw B in the recessed portion *b'*. This slot is elongated to permit of the transverse sliding movement or adjustment of the block.

D designates a lever pivoted at *d* and provided with cam *d'*, which bears against the side of the block C. This lever-arm is bent inward, as at *d'*, to bring it on a plane parallel to edge of the wrench, whereby power is gained in the clamping operation. The side of the clamping-block C opposite the lever D is beveled and provided with a groove, *f*, to catch the spoke.

I will describe each tool or element of the combination as it is reached. As is well known, the spokes of a bicycle or tricycle constantly become loose by the jarring of the machine over rough roads, and it often becomes necessary to tighten them. This operation with my improved spoke-grip is as follows: The wrench is placed parallel with the spoke and the latter gripped between the edge *b'* of the recess *b''* and the adjacent beveled edge of the clamping-block C, the groove *f* of the latter serving to bite the spoke. The lever D is then forced toward the edge of the wrench-handle, which causes the cam *d'* to engage with the block C, which in its turn clamps the spoke firmly. The implement is then turned to loosen or tighten the clamped spoke. Heretofore a separate tool has been provided for this purpose.

The operation of the wrench, of course, need not be described.

E designates the oil-receptacle, which is merely the hollowed-out portion of the handle *a*, and the opening *e* to this oil-cup is screw-threaded to receive the oiler.

F designates the oiler, having the screw-threaded plug or stopper *f'*, which screws into the opening *e* in the handle *a*, and is provided with a bracket, *f''*.

G designates the oil-spout, which projects through an opening in the plug *f'* to the inside of the oil-receptacle E, where it is secured within the bracket *f''* to a coiled spring, *g*, the distal end of the latter being secured to the adjacent end of said bracket. I provide the spout G with an interiorly-screw-threaded cap

or cover, g' , which is adapted to screw on the threaded portion f^2 of the plug f^4 . A chain, h , connects the cap or cover to the plug f^4 .

Heretofore great difficulty has been experienced in providing a suitable pocket-oiler, the trouble being that the oil invariably finds means for escape, which is accompanied by disagreeable results. This difficulty I claim to have overcome in this invention, as will presently be seen.

The operation of my improved oiler I will now describe. In adjusting the cap it is necessary to force the spout G inward slightly, and hence upon removing the cap the spout G assumes its normal position, and while in this condition the coil-spring g (which causes the spout to maintain the position) is projected, leaving a considerable space between each coil of wire, and through these spaces the oil travels and escapes out of the spout. When the cap is screwed down after using, the spout is pressed in, which also compresses the spring g , thereby causing the spaces between the wires of said coil-spring to be closed. A compressible packing, m , of rubber or other elastic material, is fitted over the threaded inner end of the plug f^4 and compressed tightly between the same and the end of the handle or body of the implement, and a similar elastic ring, m' , is fitted over the outer threaded end of the plug, said ring m' being compressed between the edges of the cap and the plug to effectually prevent the escape of any lubricant or oil from the plug that may flow down the sides of the spout, as is obvious.

In practice I prefer to provide the plug or stopper f^4 and cap g' with a connecting-chain, as h , having at the point where it is connected to the cap g' a swivel, g^3 , which turns when the cap is turned on the plug f^4 .

In devices of this class the objective point is to so combine the elements as to render them convenient, compact, and of small size to adapt them for use in the pocket or satchel. In view of this fact I attach special importance to the invention.

Modifications in the details of construction may be made in the form and proportions of the several elements herein shown and described as an embodiment of my invention without departing from the spirit or sacrificing the advantages thereof.

What I claim is—

1. As a new article of manufacture, the compound tool consisting of a wrench having an adjustable jaw and a fixed jaw, the former being removable and carrying the fixed and movable jaws of a spoke grip or tightener, as described. 55

2. The wrench having the removable jaw, shaped as at b^4 , to form one of the jaws of the spoke-grip, the movable clamping-block mounted on the said jaw of the wrench, and the operating-lever bearing upon the clamping-block, as set forth. 60

3. The wrench having its movable jaw provided with a lip forming one of the jaws of the spoke-tightener, a movable clamping-block connected to the said jaw of the wrench, and a cam-lever pivoted at one end to the jaw of the wrench to bear upon the block and bent downwardly at an intermediate point of its length toward the handle of the wrench, and adapted to lie parallel and in close proximity thereto when folded, as and for the purpose described. 65

4. In a combination-tool, an oil-reservoir, a hollow plug connected to the open end of the reservoir and having a removable cap, a fixed seat connected to the plug, an endwise-movable spout operating through the plug, and a spring fitted on the seat for normally impelling the spout through the plug, as and for the purpose described. 70

5. In combination with an oil-reservoir, a cap removably fitted over the end of a plug communicating with the reservoir, a movable spout housed within the plug, and a spring for impelling the spout toward the cap, as and for the purpose described. 75

6. In combination with the oil-reservoir, a wrench, a spring-controlled spout fitted in one end of the plug communicating with the reservoir, and a cap detachably fitted on the outer end of the said plug and impinging upon the free end of the spout to force the latter inwardly, and thereby compress the spring which operates against a fixed seat, as and for the purpose described. 80

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses. 85

GEORGE WILLIAM RIBBLE.

Witnesses:

D. H. LEE MARTZ,
JOHN L. LOGAN.