No. 716,274. Patented Dec. 16, 1902.

C. L. PEIRCE, JR.

COMBINATION TOOL.

(Application filed May 26, 1902.)

(No Model.)

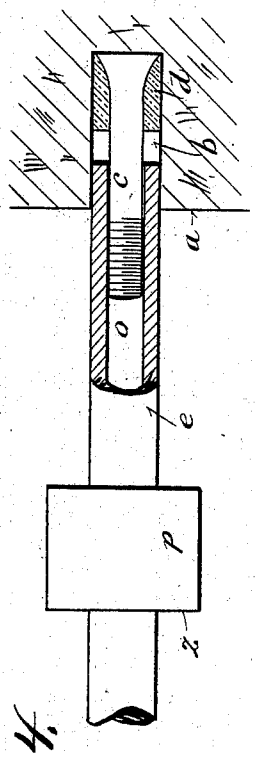


Fig. 4.

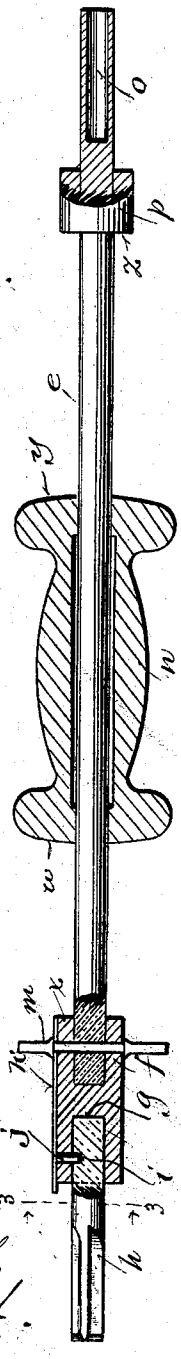


Fig. 1.

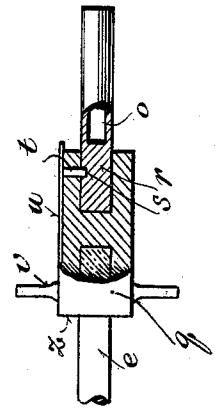


Fig. 2.

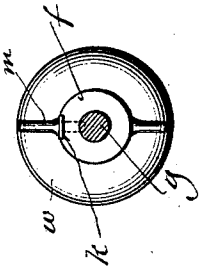


Fig. 3.

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UNITED STATES PATENT OFFICE.

CHARLES L. PEIRCE, JR., OF CHICAGO, ILLINOIS.

COMBINATION-TOOL.

SPECIFICATION forming part of Letters Patent No. 716,274, dated December 16, 1902.

Application filed May 26, 1902. Serial No. 108,893. (No model.)

To all whom it may concern:

Be it known that I, CHARLES L. PEIRCE, Jr., a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Combination-Tools; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to a tool designed to be used in drilling holes into masonry for the reception of bolts and for tamping soft metal around said bolts as the same are inserted in the holes made therefor; and it consists in certain peculiarities of construction and combination of parts, as will be fully set forth hereinafter in connection with the accompanying drawings and subsequently claimed.

In the said drawings, Figure 1 is a view in side elevation and partly in section of one form of my said tool. Fig. 2 is a partly-sectional view illustrating another form of the tamping end of the same. Fig. 3 is an end view of the opposite end of the tool, partly in section, on the line 3 3 of Fig. 1. Fig. 4 is a partly-sectional view drawn to an enlarged scale and illustrating the tamping operation.

My said tool is particularly designed for use in connection with the expansible bolt-fastening devices which form the subject of my prior application for Letters Patent, Serial No. 93,378, filed February 10, 1902, and illustrated in Fig. 4 of the present drawings, and with this single tool all the operations of drilling and tamping can be accomplished, as hereinafter explained.

Referring to the drawings, *a* represents a section of brickwork, stone, or other masonry having a hole *b* drilled therein, in which is inserted a bolt *c*, whose head is surrounded by a soft-metal collar or sleeve *d*, all as shown in my said prior application for Letters Patent hereinbefore referred to and herein illustrated in Fig. 4 of the present drawings.

Referring now especially to Fig. 1, *e* represents a rod, preferably cylindrical in form, to one end of which is secured a sleeve or collar *f*, with solid central portion and tubular end, forming a chuck for the reception of the shank *g* of a drill *h* or analogous tool. This shank *g* is formed with a socket *i* therein for the reception of a pin *j*, projecting inwardly from a point adjacent to one end of a flat spring *k*, whose other end is secured to the said sleeve *f* by a pin *m* passing transversely through the spring *k* and sleeve *f*, which latter is transversely bored for the passage therethrough of the said pin, the said pin *m* being kept in place by swaging the metal thereof, as shown, thereby securing the sleeve or collar *f* to the rod *e* and the spring *k* to the said sleeve or collar, the pin *m* further serving as a hand-guard in the use of the tool, as hereinafter described, the pin *j* passing through a hole in the part *f* and into the socket *i*. Loose on the rod *e* is a sliding double-ended hammer *n*, and the end of the rod opposite to that carrying the drill is tubular or formed with a longitudinal bore, as shown at *o*, so as to receive the shank of a bolt *c* in the tamping operation, as hereinafter described. In the form of my device illustrated in Figs. 1 and 4 this tamping end of the tool is provided with a collar *p*, shrunk, brazed, or otherwise secured to the rod *e*; but in Fig. 2 in place of the collar *p* I have shown a sleeve or collar *q* similar in construction to the hereinbefore-described drill-sleeve *f* at the other end of the rod, and in this form of construction (shown in Fig. 2) the adjacent end of the rod *e* terminates within the sleeve *q*, and the socket *o* of the tamping end is formed in a rod-section *r*, constituting a chuck for the tamping-tool, this part *r* being formed with a socket *s* therein and held in place by a pin *t* on a flat spring *u*, the said spring being secured to the sleeve *q* and rod *e* by a pin *v* passing through the said spring, sleeve, and rod and being swaged, like the pin *m*, already described, the pin *t* passing through a transverse hole in said sleeve and entering the socket *s* in the said rod-section *r*, the pin *v* likewise forming a hand-guard. The object of the construction set forth in Fig. 2 is to enable the tool to be used with a series of rod ends *r*, having bores *o* therein of different diameters so as to fit different sizes of bolts when desired, and similarly the other end is adapted for the reception of a series of drills *h* or other tools of different sizes, both parts *r* and *h* having the same-sized shanks.

The operation of my device will be readily understood from the foregoing description of

the same, taken in connection with the accompanying drawings. When a bolt *c* is to be secured to masonry, the drill end of the tool is held against the brick, stone, or other material of which the masonry is formed and the sliding hammer *n* reciprocated, with its operative end *w* striking against the adjacent end *x* of the sleeve *f*, the rod *e* being turned, if desired, from time to time to vary the cutting edge of the drill *h*. When the hole *b* has been formed the proper depth in the masonry *a*, the bolt *c*, with its head surrounded by the described soft-metal collar or sleeve *d*, is pushed into the said hole *b* and the tool reversed, with the tubular end *o* of the rod surrounding the shank of said bolt, and then the sliding hammer *n* is again reciprocated, with its other operative end *y* striking against the adjacent end *z* of the sleeve *p* (or collar *q*, as the case may be,) thereby tamping the soft metal and spreading the same within the hole *b*, and thus securing the said bolt *c* firmly in place. Thus, as stated, with this single tool all the necessary operations can be properly and quickly accomplished, resulting in a considerable saving in time and trouble, together with a great addition to the convenience of the operator.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A combination-tool, comprising a rod having sleeves or collars secured to its opposite ends, and tools projecting beyond said sleeves or collars, in combination with a sliding double-ended hammer mounted on said rod intermediate of its ends.

2. A combination-tool, comprising a rod having a longitudinal bore in one end, projecting beyond a sleeve or collar fast on said rod, and a drill-holder formed with a sleeve or collar secured to its opposite end, in combination with said sleeve or collar and an intermediate sliding double-ended hammer.

In testimony that I claim the foregoing I have hereunto set my hand, at Chicago, in the county of Cook and State of Illinois, in the presence of two witnesses.

CHARLES L. PEIRCE, JR.

Witnesses:

HARRY C. BUELL,

ALPHONSO L. HAASE.