

(Model.)

W. B. KENNEDY.
COMBINATION TOOL.

No. 326,297.

Patented Sept. 15, 1885.

Fig. 1.

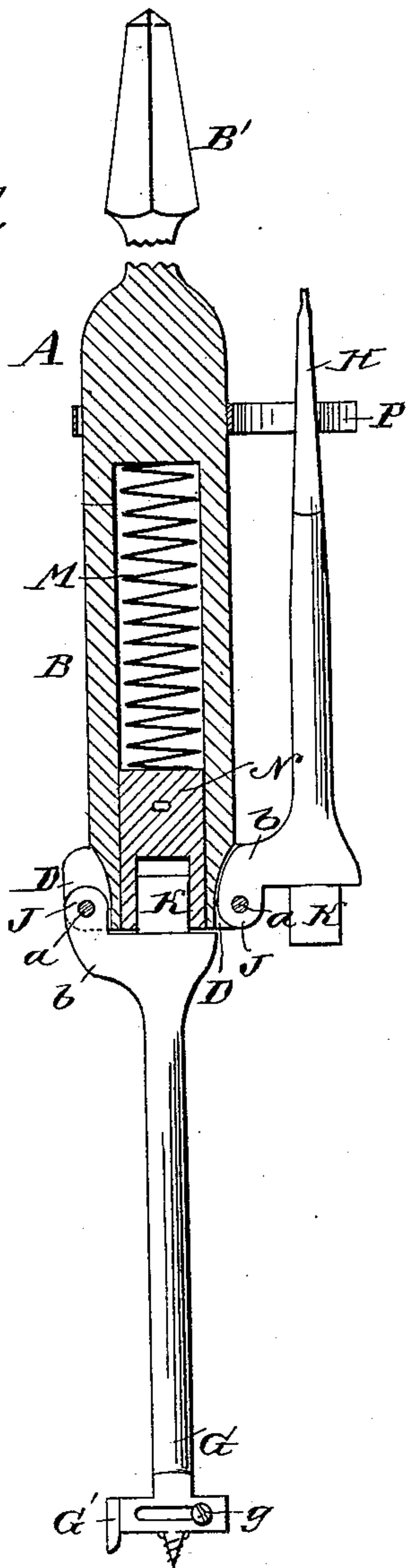


Fig. 2.

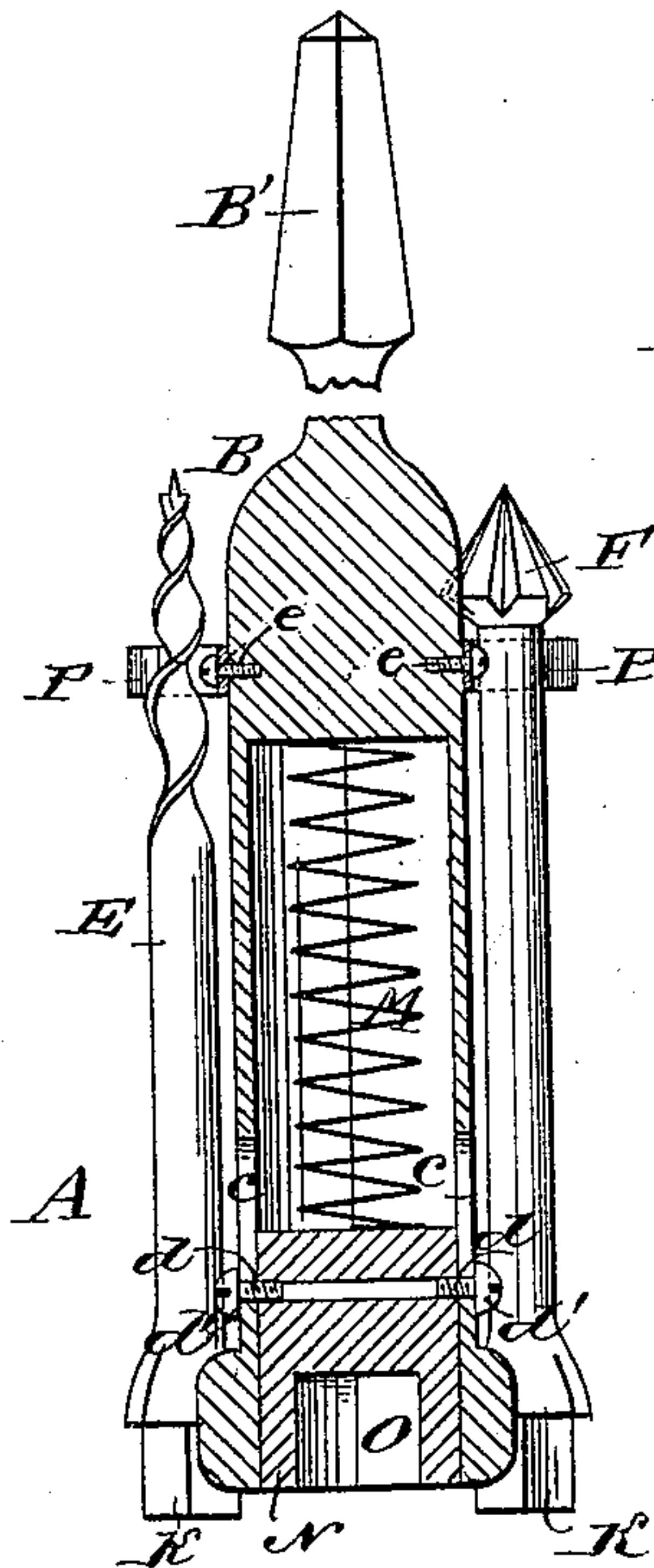
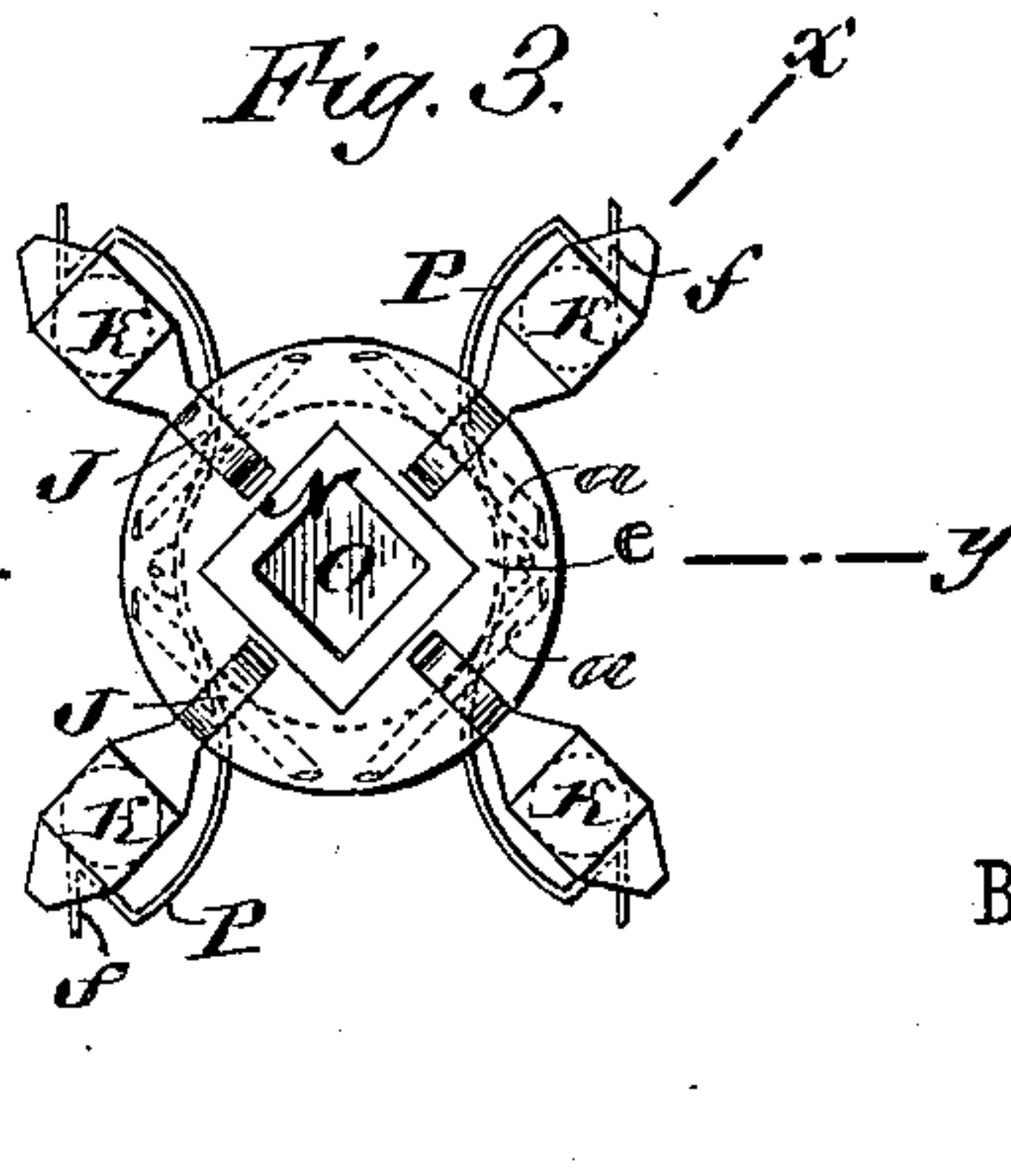


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM B. KENNEDY, OF SILVER REEF, UTAH TERRITORY.

COMBINATION-TOOL.

SPECIFICATION forming part of Letters Patent No. 326,297, dated September 15, 1885.

Application filed March 25, 1885. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM B. KENNEDY, of Silver Reef, in the county of Washington and Territory of Utah, have invented a new and Improved Combination-Tool, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a transverse sectional elevation of a combination-tool embodying my invention on the line *x x* of Fig. 3, showing one of the tools lowered into position in the spring-socket. Fig. 2 is a longitudinal sectional elevation of the same on the line *y y* of Fig. 3, showing the tools closed against the stem and held in place by springs; and Fig. 3 is an inverted plan view of the same, showing the springs holding back four tools.

The object of this invention is to provide a new and improved combination-tool for boring purposes, adapted for use when placed in an auger-handle or brace.

The invention consists of a boring-tool stem, to which are attached by hinges a series of different tools, the interior of the stem being also provided with a spring-socket to receive the tools, and the exterior of the stem with spring-holders to hold the tools, as will be hereinafter more fully described and claimed.

The tool A is constructed with a stem, B, having a shank, B', adapted for operation by a brace or auger-handle. Upon the lower end or lip of stem B are formed recesses D, in which are severally hinged by pins *a* the bit E, countersink F, extension-bit G, and screw-driver H, which tools are formed with projecting hinge-lugs J and square shanks K, which lugs J are bent at *b* and have apertures for pins *a*.

The stem B is hollow, and in it is placed a spring, M, and a socket, N, of square form, to prevent it from turning in the stem B. The socket N is formed with a recess or cavity, O, adapted to receive the tool-shanks K.

In the stem B, near the lower end, are formed oppositely-arranged vertical slots *c*, in which are passed screw-pins *d*, having buttons

or heads *d'*. The pins *d* screw into tapped holes formed in spring-socket N, whereby the socket is retained in stem B, and is adapted to be adjusted by buttons or heads *d'* of the screw-pins, as shown.

To the upper part of stem B are secured by screws or rivets *e* springs P, formed with catches *f*, by which the tools not in use are adapted to be held back out of the way while the desired tool is being used.

The extension-bit G is constructed with an adjustable blade, G', held by a screw, *g*, by means of which adjustment various sizes of holes can be bored with the bit.

In the drawings four tools are shown; but the tool A can be arranged to carry a larger number of tools, if desired.

The operation is as follows: The several tools, when not in use, are turned up on their respective hinges into vertical position along-side of the stem B, as shown in Fig. 2, and their ends are held fast by the spring-holders P, as shown. When any one of the tools is to be used, its spring-holder P is released, and the tool is turned down into vertical position, as shown in Fig. 1, whereby the shank K of the tool is made to enter the recess in the spring-socket, by which the tool is firmly held in sectional line with stem B, and the tool is then ready for use. The spring M, which presses on the back of socket N, allows for the slight vertical movement of the socket necessary for the entrance and withdrawal of the tool from the socket.

My invention forms a very simple, convenient, and economical combination-tool adapted to a great variety of useful purposes.

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

1. As an improved article of manufacture, a combination-tool made as herein shown and described, consisting of a stem having an interior spring-socket and a series of tools provided with shanks to fit the socket, said tools being hinged to the lower extremity of the stem and operated in connection with the spring-socket, as set forth.

2. The combination, with the stem, of a spring-socket, a series of tools hinged to the stem, and a spring for holding back the

tools, substantially as shown and described, whereby the tools not in use are held out of the way while a tool is being used, as set forth.

3. The combination, with the stem having
5 slot *c*, spring-socket N O, and screws *d*, passed through the slots into the sockets, of the hinged tools provided with shanks fitting the aperture O in the socket, substantially as set forth.

4. The combination, with the stem B, having recesses D, of a series of hinged tools having shanks K, and of the spring-socket N, substantially as shown and described. 10

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Witnesses:

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