(No Model.)

A. SUNDEEN & S. B. MOLANDER.

SOLDERING IRON.

No. 400,509. Patented Apr. 2, 1889.

Fig. 1.

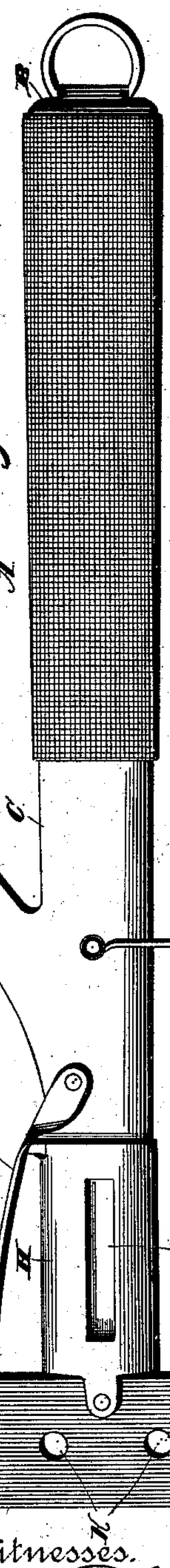


Fig. 2.

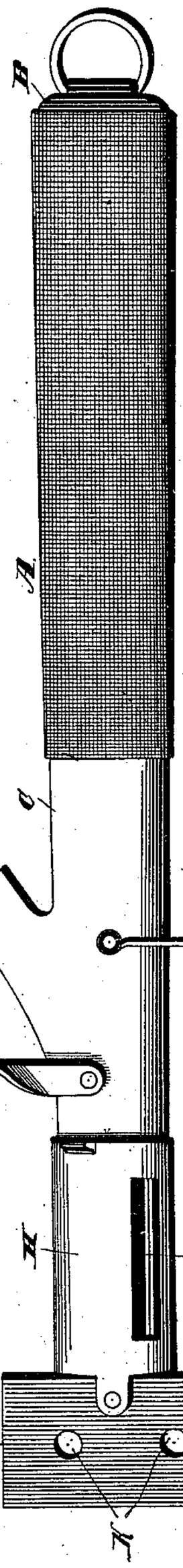
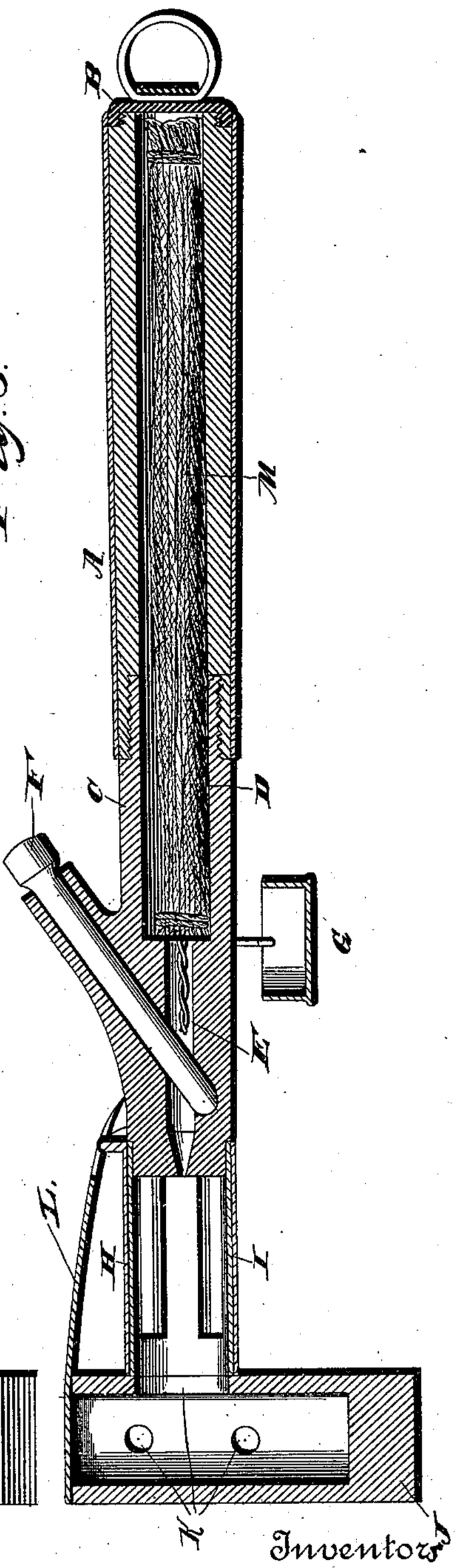


Fig. 3.



Witnesses.
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R. H. Bishop.

Inventors
Alfred Sundeen.
Swan B. Molander.
By their Attorneys
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UNITED STATES PATENT OFFICE.

ALFRED SUNDEEN AND SWAN B. MOLANDER, OF MORA, MINNESOTA.

SOLDERING-IRON.

SPECIFICATION forming part of Letters Patent No. 400,509, dated April 2, 1889.

Application filed December 8, 1888. Serial No. 292,959. (No model.)

To all whom it may concern:

Be it known that we, ALFRED SUNDEEN and SWAN B. MOLANDER, citizens of the United States, residing at Mora, in the county of Kanabec and State of Minnesota, have invented new and useful Improvements in Soldering-Irons, of which the following is a specification.

Our invention relates to improvements in soldering-irons; and it consists in certain novel features hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side view of our improved soldering-iron. Fig. 2 is a similar view showing the cap which is used to regulate the heat raised, and Fig. 3 is a longitudinal section.

Referring to the drawings by letter, A designates a hollow handle, which is covered with some material—such as asbestus—which will not conduct heat, and which is adapted to contain gasoline or some similar inflammable material, as will be readily understood. The larger end of the handle A is closed by a cap, B, which is made removable to permit the filling of the handle when necessary. The smaller end of the handle is secured to the end of a body, C, which has an internal recess, D, communicating with the interior of the handle, and a small passage, E, leading from said recess to its front end. In the upper side of this body we mount the valve F, the inner end of which passes into the passage E and is adapted to regulate the flow of gasoline therethrough.

G designates a small cup hung on the body A and adapted to contain a small quantity of gasoline, as will be hereinafter more particularly referred to.

To the free end of the body C we secure a damper, H, which is mounted upon a stationary cylinder, I, to the end of which is secured the soldering-point J. The said point is hollow, as shown, and is provided with a series of openings, K, in its sides and ends, one of said openings communicating with the interior of the cylinder I. The opening in the end of the soldering-point is adapted to be closed by a cover, L, which is pivoted upon the body and adapted to rest upon the soldering-point, as clearly shown. A wick, M, is arranged within the handle to prevent the too rapid flow of the heating-fluid to the blaze.

The construction and arrangement of the parts of our device being thus made known the operation will be readily understood.

When it is desired to use the device, the cup G is filled with gasoline and the same ignited. The heat rising from this ignited gasoline will convert a portion of the fluid within the body into gas, which will escape through the passage E in said body. The gas escaping from the end of the passage is ignited, and the flame thus created will pass into the soldering-point and escape through the openings therein, so that the sides of the soldering-point will be almost completely enveloped in a sheet of flame and the point consequently rapidly heated and kept heated to the desired degree and for the desired length of time. When the cap or cover L is raised, the larger portion of the flame will escape through the opening in the end of the soldering-point, so that the point will not be heated to such a high degree, and when the cap or cover is lowered the flame will be forced to escape through the openings in the sides of the point and consequently heat the same more rapidly. The heat can be further regulated by the damper H, which can be readily adjusted to provide for more or less rapid combustion, as may be desired.

From the foregoing description it will be seen that we have provided a very simple and compactly-arranged soldering-iron which will not be liable to lose its heat and require reheating after being used, and its advantages are thought to be obvious.

It will be understood that the cup G is used only in starting the fire. After the fire is started the heat given out by it will be sufficient to convert the gasoline into vapor as it approaches the flame.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

The improved soldering-iron herein described and shown, comprising a body having a longitudinal internal recess, D, and a small longitudinal passage, E, leading from said recess, a hollow handle secured to the body, the wick arranged in the handle and enter-

ing the recess D, the valve mounted in the upper side of the body and entering the longitudinal passage E, the hollow soldering-point connected to and communicating with the body and having an open upper end, the cover pivoted to the body and adapted to close the open upper end of the point, and the cup hung on the body, as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

ALFRED SUNDEEN.
SWAN B. MOLANDER.

Witnesses:
S. D. SEAVEY,
HERBERT TODD.