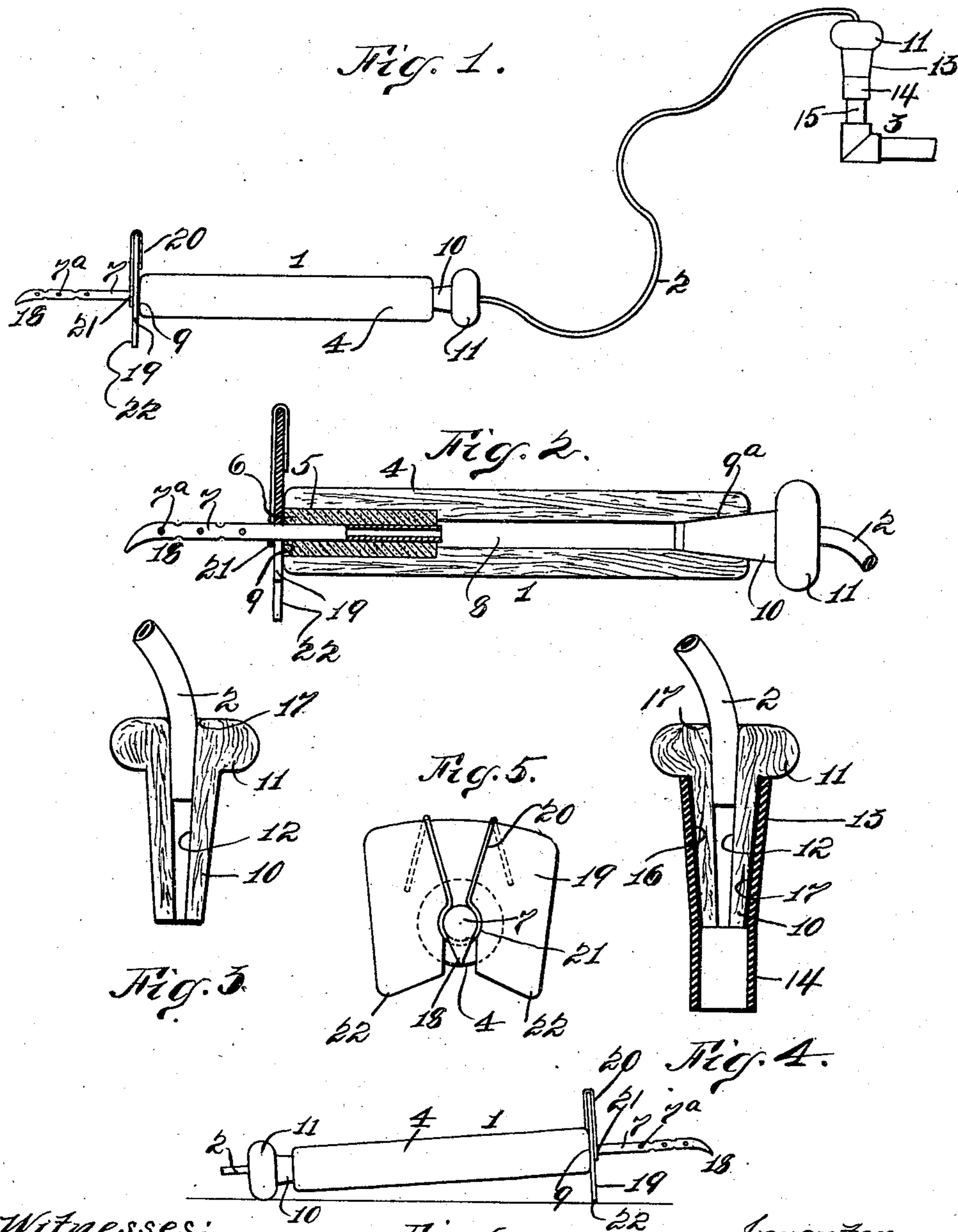


No. 891,478.

PATENTED JUNE 23, 1908.

H. HOLTON.
PYROGRAPHICAL DEVICE.
APPLICATION FILED DEC. 23, 1907.



Witnesses:
C. A. Jarvis
Mildred Vialls.

Fig. 6. Inventor:
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UNITED STATES PATENT OFFICE.

HERBERT HOLTON, OF NEW YORK, N. Y.

PYROGRAPHICAL DEVICE.

No. 891,478.

Specification of Letters Patent.

Patented June 23, 1908.

Application filed December 23, 1907. Serial No. 407,668.

To all whom it may concern:

Be it known that I, HERBERT HOLTON, a citizen of the United States, residing at New York city, Bronx borough, county and State of New York, have invented certain new and useful Improvements in Pyrographical Devices, of which the following is a clear, full, and exact description.

This invention relates to pyrographic devices, but more particularly to that class which use ordinary illuminating gas for the purpose of heating the burning point of the instrument, one of the objects of the invention being to provide an instrument of this variety which can be cheaply manufactured, and to gain this end I have designed my improved device in such a manner as to require a minimum amount of material for the essential parts.

To render my improved device capable of requiring but little space when packed, also to allow the parts thereof to be easily replaced, I prefer to make the device capable of disassemblage.

To these and other ends which will hereinafter appear my invention comprises the novel features of improvement and combination and arrangement of parts which I will now proceed to describe and finally claim, reference being had to the accompanying drawing, forming part hereof, wherein—

Figure 1 illustrates an assembled view, in elevation, of my improved pyrographic device; Fig. 2 is an enlarged longitudinal sectional view of the stock of the burning instrument, the burning point and tube-coupling being shown in elevation; Fig. 3 is an enlarged detail sectional view of the tube-coupling; Fig. 4 is an enlarged sectional detail view of the tube-coupling, showing the said coupling fitted with a rubber sleeve which adapts the coupling for connection with a gas-tip or the like; Fig. 5 is an enlarged face view of the device as shown in Fig. 2, looking from the left; and Fig. 6 is a side elevation of my improved burning instrument, showing one of the functions of the shield.

Like numerals of reference indicate corresponding parts in the several views.

Referring to the drawing, 1 indicates the burning instrument, while 2 indicates a tube which connects the instrument with a gas supply 3. The stock 4 of the burning instrument 1 is made preferably of wood and is counter-bored, as at 5, to receive a body or

bushing 6 of some non-conducting material, such as asbestos. The bushing 6 retains the burning point or needle 7, which comprises a tube, perforated as at 7^a, and sealed at its outer end 18. In order to lessen the cost of the burning instrument, the burning point or needle 7 is made comparatively short, as shown, and a comparatively small amount of asbestos, for instance, need be used. To convey gas to the needle 7 the counter-bore 5 in the stock 4 is placed in communication with the gas tube 2 by means of the chamber 8, said chamber 8 terminating in a tapered bore 9^a, into which the tapered neck 10 of the coupling 11 is adapted to enter and remain in place by frictional contact.

The coupling 11 is provided with a tapering duct 12, into the larger end of which one end of the tube 2 will enter. The object of tapering the duct 12 is to cause the end of the tube 2 to firmly contact the sides of the duct when the said tube is pressed in, whereby a gas tight connection is made. The coupling 11 is designed to enter, as has been above stated, the tapered bore 9^a and also to act as a coupling for the end of the tube 2 which is to receive gas from the supply 3. When the coupling 11 is to be used for the purpose of connection with the gas supply I stretch a rubber sleeve 13 over the tapered neck 10 of the coupling 11, as shown in Fig. 3, and then pass the lower end 14 of the said sleeve 13 over the gas-tip 15 as shown in Fig. 1.

In order to render the couplings 11 gas tight I cover the outer surface of the tapered neck 10 with shellac, as indicated by the heavy lines 16 in Fig. 4.

To secure the burning point or needle 7 in the asbestos bushing 6, I first dip the said point in shellac and pass it into the bushing 6. After having inserted the bushing into the stock 4, I seal the adjacent end of the said stock 4 with shellac or other similar sealing element.

By reason of the fact that the couplings 11 are alike and capable of performing the same function, at the point of usage and of supply, the cost of manufacture of the device is lessened to the extent of saving tools, as the said couplings are interchangeable. When the device is to be packed the couplings can be packed up separately and independently of the burning tool. As the asbestos bushing 6 is comparatively short, as compared to the length of the stock 4, and as the burning

point 7 is also comparatively short a considerable saving is effected especially when the device is manufactured in large quantities.

As can be seen in Fig. 2 the chamber 8 is comparatively large, as compared to the bore of the burning point 7. By making the said chamber larger in capacity than the bore of the point a reservoir or storage chamber is produced which has the effect of supplying a steady flow of gas to the burning point in the event of the supply being intermittent.

As shown in Figs. 3 and 4 the upper end of the duct 12 is rounded as at 17 to prevent the flexible tube 2 from buckling.

In order to concentrate the heat, as much as possible, around the end 18 of the needle 7, also to protect the hand from the heat, I provide a flame shield 19 of any suitable non-conducting material, preferably asbestos said shield being placed against the end 9 of the stock 4. To secure the flame shield 19 in place, and yet adapt it for removal, I employ in this instance (for illustration) a looped wire clamp 20, the loop 21 of which is adapted to firmly grasp the needle 7. The flame shield 19 also serves as a rest for the stock to keep the flame from injuring any article the instrument may be laid on

when not in use. To accomplish this result the flame shield is provided with downwardly projecting members 22 which will keep the needle away from the object upon which the instrument rests. In order to get the best results from the shield I prefer to make it of greater area than the end of the stock 4.

Having now described my invention what I claim and desire to secure by Letters Patent is:—

1. A pyrographic device, comprising a stock, a burning needle carried thereby, a flame shield carried by said needle and a clamp carried by said shield adapted to grasp said needle.

2. A pyrographic device, comprising a stock, a burning needle carried thereby, a flame shield carried by said needle, and a clamp carried by said shield comprising a looped wire, the loop of which is adapted to grasp said needle.

Signed at New York, N. Y., this 21 day of December, 1907.

HERBERT HOLTON.

Witnesses:

ABRAM SHLIVEK,
MILDRED VIALLS.