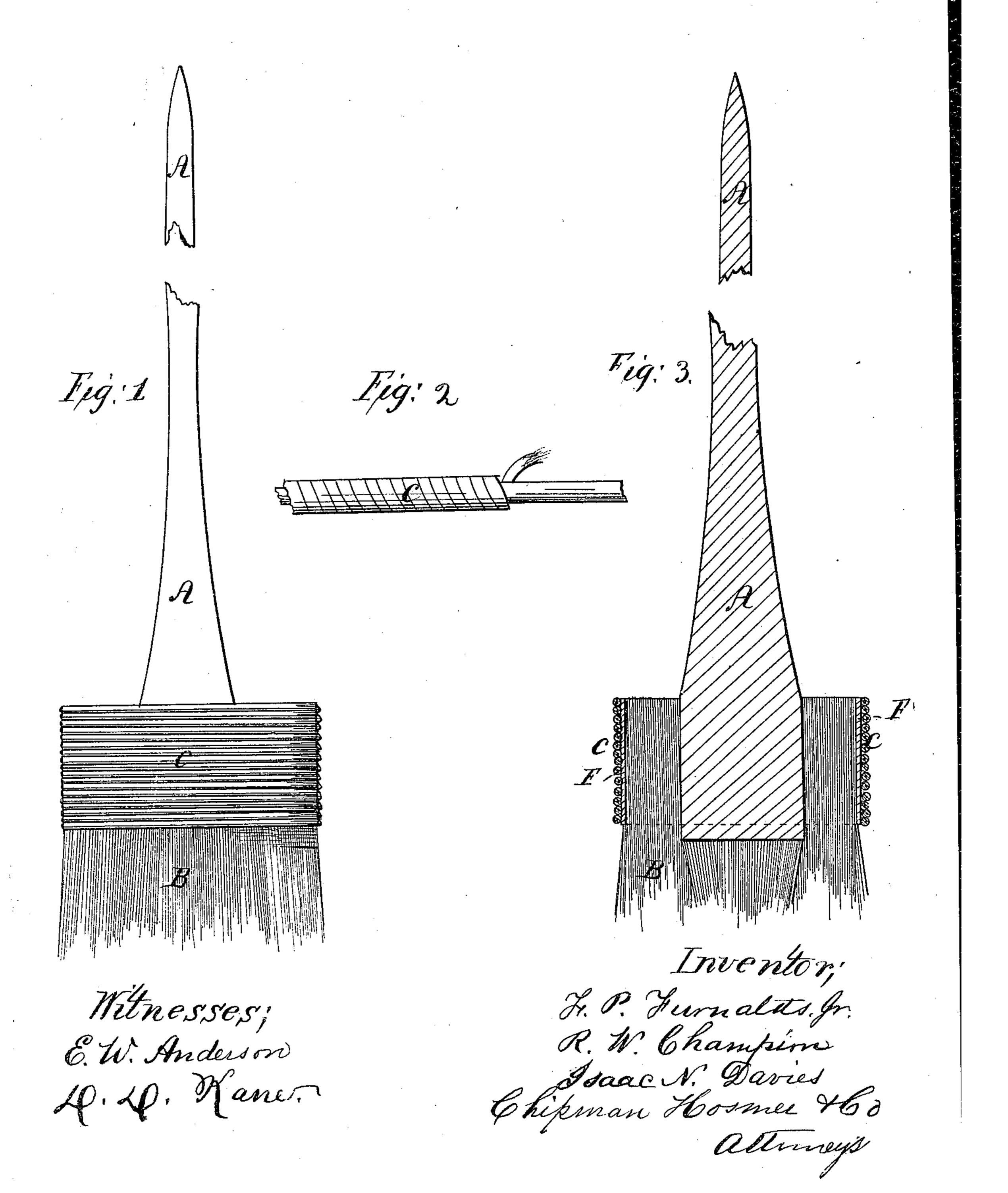
Firmald, Ir Champion & Davies.

Print Brust.

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Patented Dec. 21, 1869.



Anited States Patent Office.

F. P. FURNALD, JR., R. W. CHAMPION, AND ISAAC N. DAVIES, OF NEW YORK, N. Y.

Letters Patent No. 98,158, dated December 21, 1869.

IMPROVED PAINT-BRUSH.

The Schedule referred to in these Letters Patent and making part of the same

. To all whom it may concern:

Be it known that we, F. P. FURNALD, Jr., R. W. CHAMPION, and ISAAC N. DAVIES, of New York, in the county of New York, and State of New York, have invented a new and valuable Improvement in the Ferrules of Paint-Brushes; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1, of the drawings, is a side view of our in-

vention.

Figure 2 is an enlarged view of a strand of wire, with its enveloping-thread.

Figure 3 is a central vertical section of our invention.

Our invention relates to the manufacture of paintbrushes, and consists, mainly, in the construction and novel arrangement of the ferrules thereof, whereby lightness and durability are secured.

The letter A, of the drawings, designates the handle of a paint-brush;

B, the bristles thereof; and

C, the ferrule, composed of wire covered with twine, or other suitable material.

A cylinder of paper, covered with glue, is bound around with the covered wire, and filled with bristles. The handle being inserted, as hereinafter described, a compact, light, and durable paint-brush is produced.

Much time and thought have been devoted to the production of a ferrule for paint-brushes, which would be at once strong and light.

Heretofore, twine has been employed alone, also wire; but it has been found that the former will burst, as it is affected both by the weather and by the turpentine used in paint.

Wire possesses sufficient strength, but as it has to

be dipped in lead, to keep the coil together, a ferrule thus formed is very weighty, and causes great fatigue to the wrist of the workman. Further, if the wire commences to unwind, or starts in any place, the ferrule will all come apart.

In the manufacture of paint-brushes, everything depends on the strength of the ferrule, as will be perceived.

The covered wire is wound around and glued to the

paper cylinder forming the ferrule, which is then filled so full of bristles that no more can be inserted.

The handle, which is pointed and wedge-shaped, is then driven through the bristles, and down until the but-end thereof is even with the lower edge of the ferrule.

It is, therefore, apparent, that a great strain is put on the ferrule. Nothing else holds the bristles but the wedge of the handle. Hence, the imperfection of those brushes, which are wound with twine, even before use. The ferrule is not strong enough to bear the strain necessary to fasten the bristles securely.

The paper cylinder above referred to is marked F on the drawings.

What we claim as our invention, and desire to secure by Letters Patent, is—

The paper cylinder F, in combination with a ferrule, composed of wire covered or wound with thread or twine, as specified.

In testimony that we claim the above, we have hereunto subscribed our names, in the presence of two witnesses.

F. P. FURNALD, JR. R. W. CHAMPION.
I. N. DAVIES.

Witnesses:

G. N. P. GALE, J. W. FROST.