

No. 814,713.

PATENTED MAR. 13, 1906.

W. H. LONG.
COMB CLEANER.
APPLICATION FILED APR. 10, 1905.

Fig. 1.

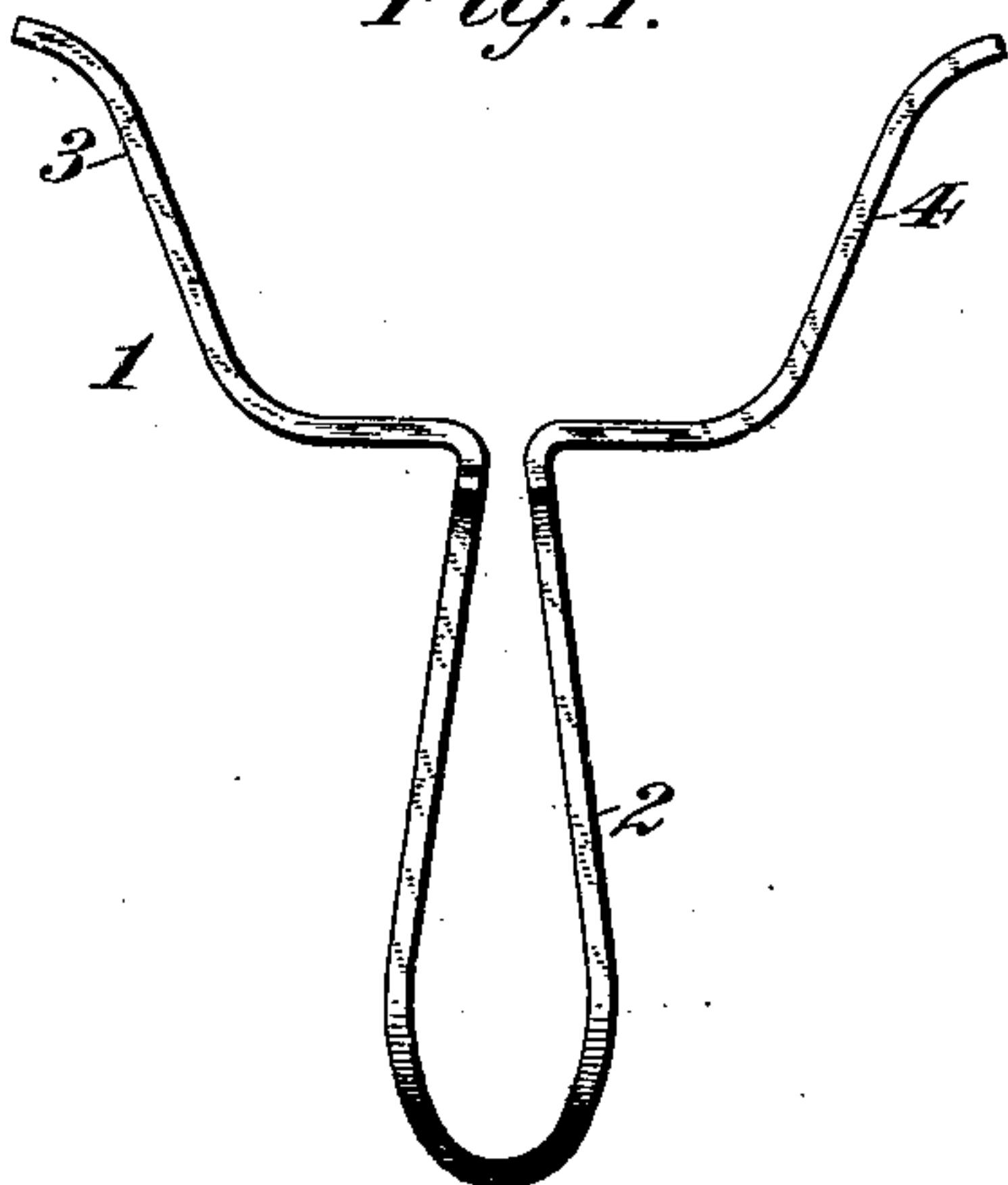


Fig. 2.

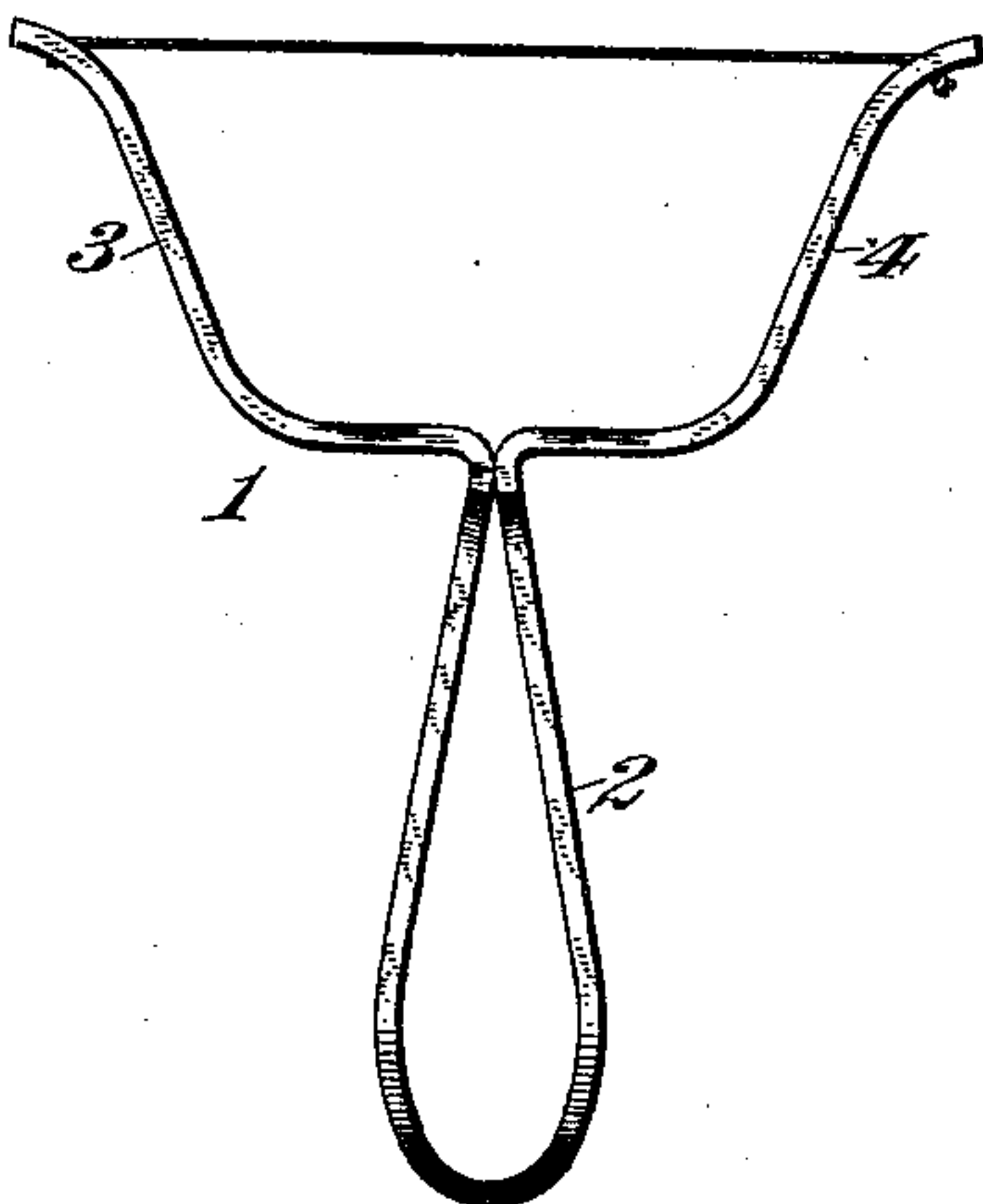


Fig. 3.

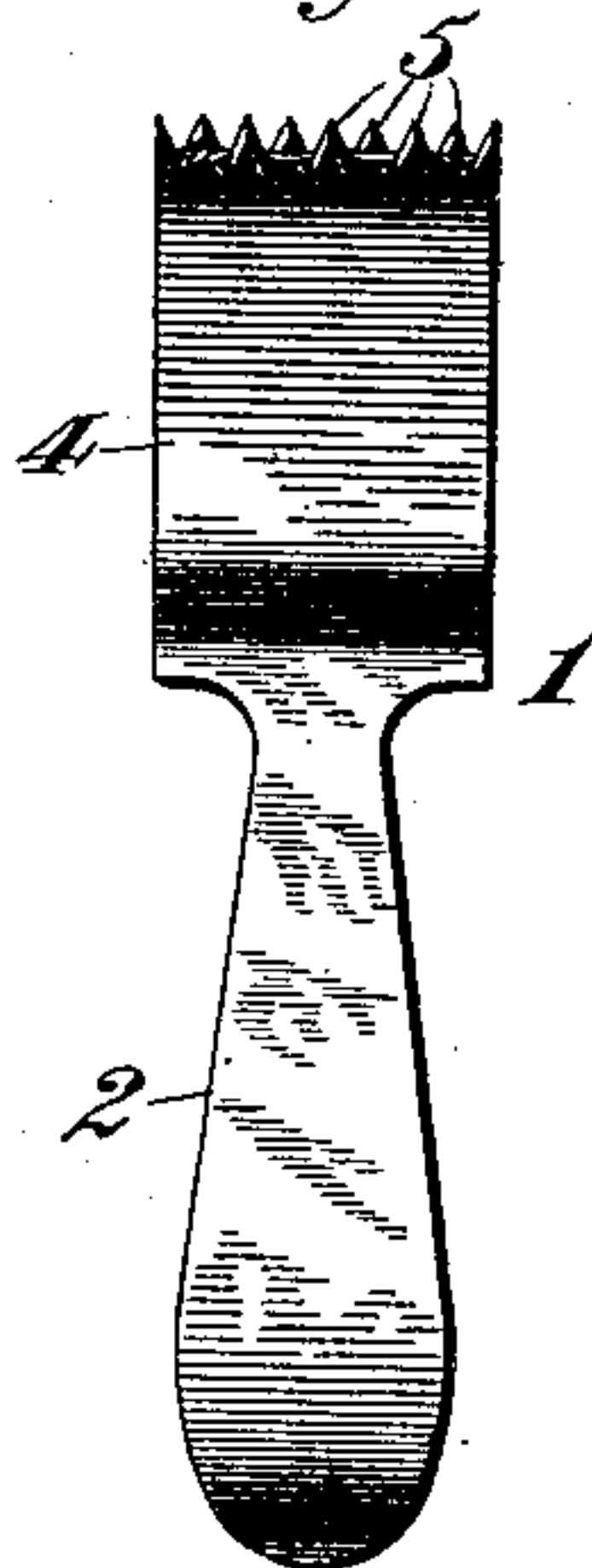


Fig. 4.

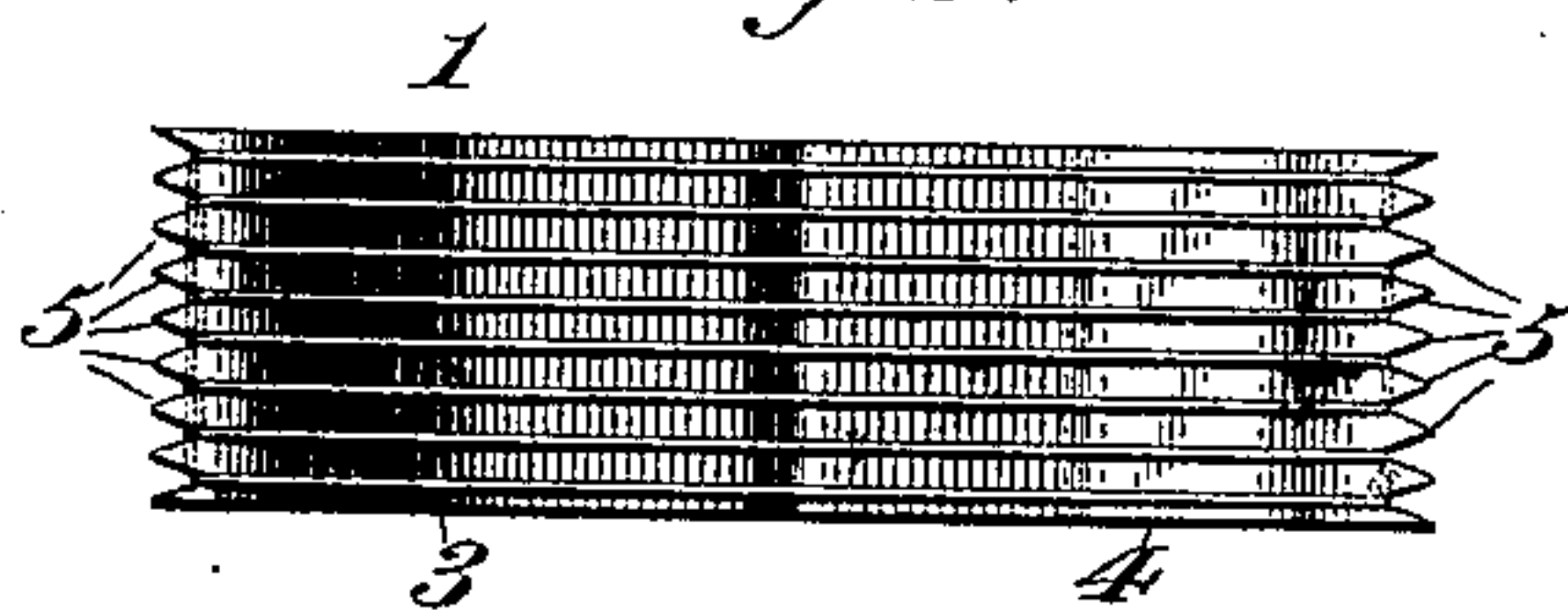
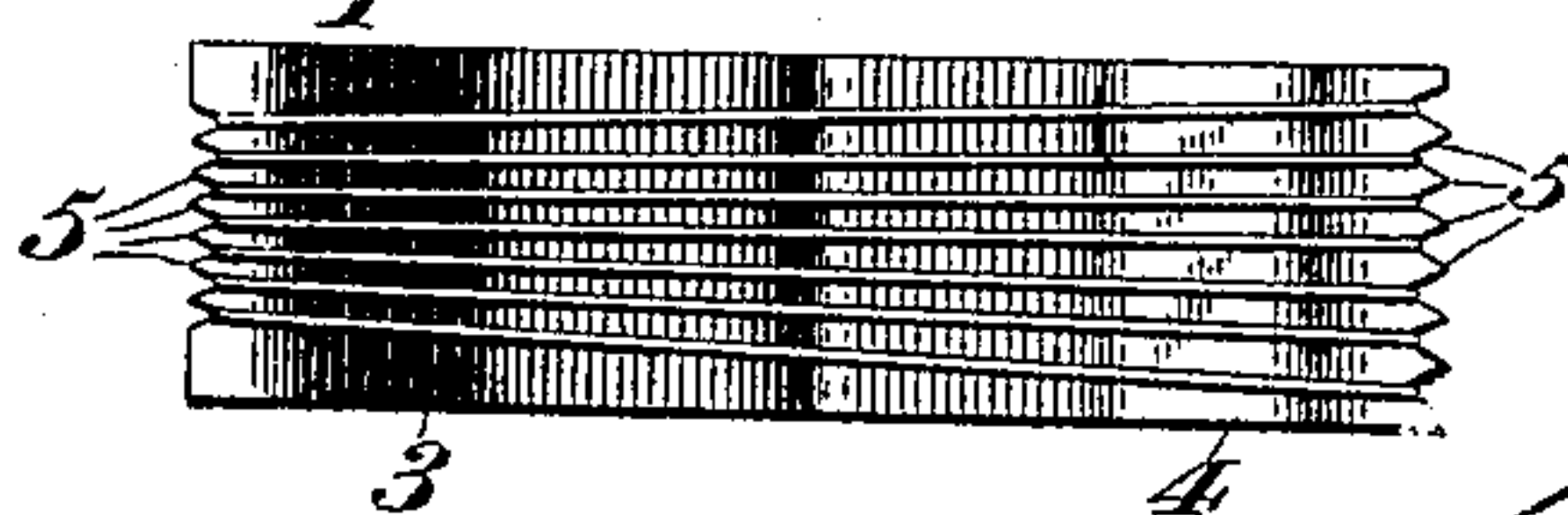


Fig. 5.



Witnesses:

R. L. Edwards

Clara Phillips

Inventor,

W. H. Long

By

John D. Morgan
Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM H. LONG, OF BROOKLYN, NEW YORK.

COMB-CLEANER.

No. 814,713.

Specification of Letters Patent.

Patented March 13, 1906.

Application filed April 10, 1905. Serial No. 254,793.

To all whom it may concern:

Be it known that I, WILLIAM H. LONG, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Comb-Cleaners, of which the following is a specification.

This invention relates to comb-cleaners, and more particularly to that class of comb-cleaners in which a series of plies of filament is used for the purpose of effecting the cleaning operation.

An object of the invention is to provide a comb-cleaner of a high degree of efficiency, low cost of manufacture, which is of simple construction and of neat appearance. These and other objects of the invention will more fully appear from the following description.

The invention consists in the novel parts, improvements, and combinations herein shown and described.

The accompanying drawings referred to herein and forming a part hereof illustrate one embodiment of the invention, the same serving, in connection with the description herein, to explain the principles of the invention.

Of the drawings, Figure 1 is an elevation of the frame portion of a comb-cleaner. Fig. 2 is a similar view showing the filament attached thereto. Fig. 3 is a side elevation thereof. Fig. 4 is a top plan, and Fig. 5 shows a modification in the arrangement of the series of plies of filament.

In the drawings the frame portion of a comb-cleaner, which is one embodiment of the invention, is indicated generally by the reference-numeral 1. As herein shown, the said frame portion may consist of a single piece and may, if desired, be of spring material and preferably of metal, which may be of a flat sheet-like form. The said frame portion may be bent to form a handle portion 2 and two wing portions 3 and 4. This particular form of embodiment of the invention permits the entire frame portion to be struck up from a metal strip or ribbon and also bent into shape at one operation, thus reducing cost of manufacture to a minimum, while permitting the general outline of the frame to be of a neat and artistic design. Furthermore, this provides a strong spring action which is resident in the handle portion primarily and after the filament has been attached in plies or series of plies, as may be found convenient, and has overcome the spring tendency of the

handle portion the springing tendency resident in the wings 3 and 4 is then also brought into use to keep the filament taut.

In the embodiment illustrated the wing portions have their ends respectively bent outward at an angle to the main part of said wing portions, and these ends are provided with means for holding the series of plies of filament which constitute the active cleaning portion of the device. These means are shown as a series of serrations 5 in the end of the metal constituting the wings, and by reason of their position in the outwardly-pointing ends of the said wings the spring action tends to keep the filament accurately in its adjusted position. The simple holding means for the filament used in the particular embodiment of the invention and just described is made available by reason of the flat sheet-like disposition of the material constituting the frame portion and allows the series of plies of filament to rest in a single plane, while the handle and wings constituting the frame portion are all arranged in one general plane or direction, obviating all unsightly and cumbersome bends and turns of the material.

By having a filament of a proper length the two ends thereof may be united beforehand, and by compressing the wings of the frame portion together the filament may be quickly laced over the serrations in a manner clearly shown in Fig. 4, and upon releasing the wing portions it will assume a taut and stable position.

In Fig. 5 of the drawings a modification is shown wherein by reason of a particular arrangement of the serrations at the ends of the two wings, respectively, the distance between contiguous plies of filament varies from end to end.

From the foregoing it will be understood that a comb-cleaner has been provided which is of neat appearance, which may be made from a single piece of metal or other material, which has its parts arranged in one general plane or direction, which has a spring action inherent in the structure thereof, which may be manufactured rapidly and inexpensively, besides possessing many other advantages.

The invention in its broader aspects is not limited to the particular constructions shown nor to any particular constructions by which it has been or may be carried into effect, as many changes may be made in the construction without departing from the main princi-

ples of the invention and without sacrificing its chief advantages.

What I do claim as my invention, and desire to secure by Letters Patent, is—

5 1. As an article of manufacture, a comb-cleaner consisting of a single piece of material, said material being bent to form a handle portion and two wing portions all in one general plane or direction, said wing portions being
10 shaped and disposed for removably holding a series of plies of filament.

2. As an article of manufacture, a comb-cleaner consisting of a single piece of spring material, said material being bent to form a
15 handle portion and two wing portions, all in one general plane or direction, said wing portions being shaped and disposed for removably holding a series of plies of filament.

3. As an article of manufacture, a comb-
20 cleaner consisting of a single piece of flat spring material, said material being bent to form a handle portion and two wing portions, said wing portions being shaped and disposed for removably holding a series of plies of fila-
25 ment substantially in a single plane.

4. As an article of manufacture, a comb-cleaner provided with two flat wing portions,

each wing portion having its end bent outwardly at an angle to the main part of said wing portion and away from the other wing portion, said end being provided with means
30 for holding a series of plies of filament.

5. As an article of manufacture, a comb-cleaner provided with two flat wing portions, each wing portion having its end bent out-
35 wardly at an angle to the main part of said wing portion, said end being provided with serrations for holding a series of plies of filament.

6. As an article of manufacture, a comb-
40 cleaner consisting of a single piece of flat spring material, said material being bent to form a handle portion and two wing portions, the ends of said wing portions being bent outwardly from each other and each having a
45 row of serrations for holding a series of plies of filament.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM H. LONG.

Witnesses:

JOHN D. MORGAN,

AUGUSTE L. SALTZMAN.