## C.F.S.Mardwell. Comb Cleaner.

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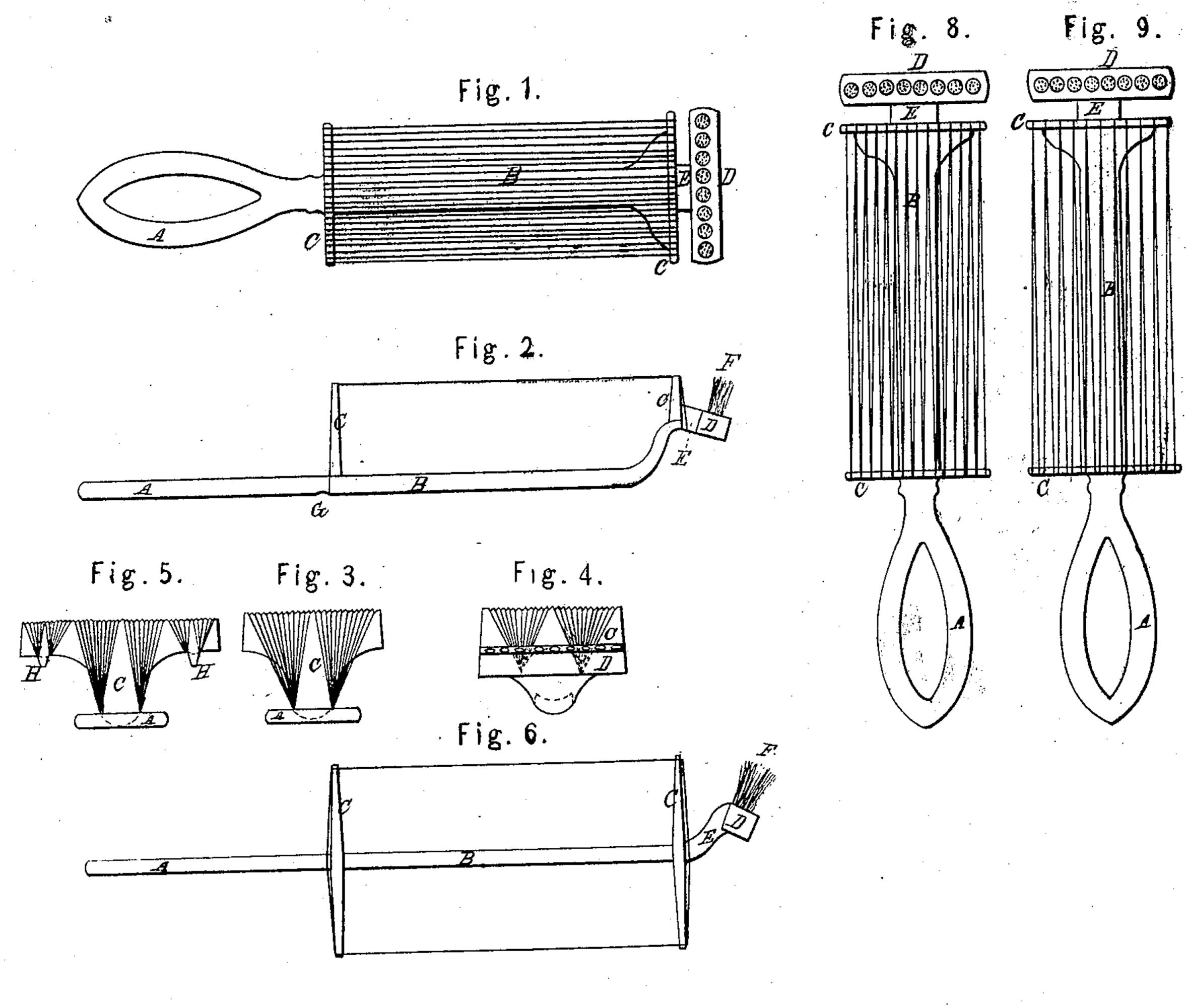
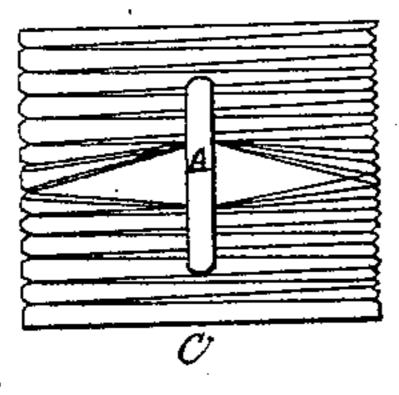


Fig. 7.



Witnesses

Mm. H. Mardwell.

E. E. Webster

Inventor

6. P.S. Wardwell

## UNITED STATES PATENT OFFICE.

C. P. S. WARDWELL, OF LAKE VILLAGE, NEW HAMPSHIRE, ASSIGNOR TO SAMUEL H. DOTEN, OF PLYMOUTH, MASSACHUSETTS.

## COMB-CLEANER.

Specification of Letters Patent No. 30,949, dated December 18, 1860.

To all whom it may concern:

Be it known that I, C. P. S. WARDWELL, of Lake Village, in the county of Belknap and State of New Hampshire, have invented 5 a new and useful Article of Manufacture, called a "Comb-Cleaner;" and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to 10 the letters of reference marked thereon.

The nature of my invention consists in constructing and arranging the several parts of a comb cleaner, so as to be easily twined with thread and to bring several strands 15 parallel or nearly so, so as to operate on several teeth at once and to quickly and effectively clean a comb—and very cheaply

constructed.

To enable others skilled in the art to make 20 and use my invention I will proceed to de-

scribe its construction and operation.

Figure 1 is a top view. Fig. 2 is a side or edge view. Fig. 3 is a back end view without the bristles. Fig. 4 is a front end 25 view. Fig. 5 is a plan of constructing the bridges when they are desired wider or longer than represented in the previous figures. Fig. 6 is a side view of a modified plan of constructing and twining a double 30 cleaner a top view of which is like Fig. 1. Fig. 7 is a front end view of Fig. 6. Figs. 8 and 9 are modified plans of twining.

A, is the handle by which the cleaner is

held when in use.

B, is the body connecting the two bridges C, C, and to which they are transversely attached. These bridges C, C, have notches on their top edge to receive the strands of thread which are represented by the red lines. These notches may be any required distance apart and deep enough to retain or prevent the thread from slipping out. These notches extend a short distance down the outside of the bridges, which insures a 45 firmer hold of the thread. If desired these bridges may be made longer as shown by Fig. 5 and pins H, H, made on the under edge around which to pass the thread in twining, the thread could not be retained 50 in the notches on long bridges by passing it round handle A. Hence I use the studs or pins H, H.

E is a stud or continuation of body B which connects the brush stock D, with the 55 back bridge, F are the bristles, the hole for

the bristles to be set in are drilled nearly through of one size, the remaining through the brush stock to be drilled a little smaller to prevent the bristles from being drawn through in setting or forced through in 60 using the brush. They are twined with thread as follows and as shown by the red lines, first fasten the end of the thread to handle A, in the notch or groove G, Fig. 2, then carry the thread over the bridge in the 65 notch next to one end, thence to the corresponding notch in the back bridge thence round stud E, and over the bridge at its opposite end thence to the corresponding notch in the first named bridge and again 70 round handle A, at G, the two outside strands are now on and parallel to each other now continue as before each time, using the notches next to those already filled till the notches are all filled, and secure the 75 last end of the thread to the handle A, at G, or to stud E as it may chance to terminate

and the twining is complete.

Fig. 6 is a modified plan for a double cleaner, the bridges being deeper or double 80 depth with the handle A and body B, in the center and notches in both edges, those on one edge of the bridges being like those in Fig. 1, those in the other edge being double the distance apart and half in number, so 85 that in twining one strand is in each notch on the fine edge and two strands in each notch on the other or coarse edge. Fig. 7, is an end view of the plan shown by Fig. 6. This is twined by fastening one end of the 90 thread to handle A, then carry the thread over the bridge in the outer notch on the fine side, thence to the corresponding notch in the other bridge, thence transversely across the bridge to the outside notch in the 95 coarse edge, thence to the corresponding notch in first bridge, thence transversely across this bridge to the notch next the one first used, thence to corresponding notch in back bridge, thence to the coarse notch 100 with the thread in it thence to corresponding notch in the first bridge. There are now two strands on the fine side and one strand of two threads on the coarse side now continue in the same manner till the 105 notches are all filled or occupied and secure the last end as shown by Fig. 7—red lines, which makes a double cleaner with fine spaces on one side and coarse on the other for coarse and fine combs.

Figs. 8 and 9 are different plans of twining differing from Fig. 1 only in the plan of arranging the threads in the notches to make them both coarse and fine on one side. 5 They may be made of any suitable materials. The brush F is to dust the dirt from the comb after it has been operated on by the threads, and is made in the usual manner of making brushes and of any suitable material.

10 The operation is as follows: Hold the cleaner in one hand by the handle A with the threads up, then with the other hand draw the comb from one bridge to the other

while the threads are between the teeth, operate on all the teeth till the dirt is suffi- 15 ciently removed from between them then dust the dirt off by the brush F.

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

As a new article of manufacture a comb 20 cleaner constructed substantially as herein described and set forth.

C. P. S. WARDWELL.

Witnesses:

WM. H. WARDWELL, E. E. Webster.