

N. H. C. PIHL.  
COMB CLEANER.  
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1,037,182.

Patented Aug. 27, 1912.

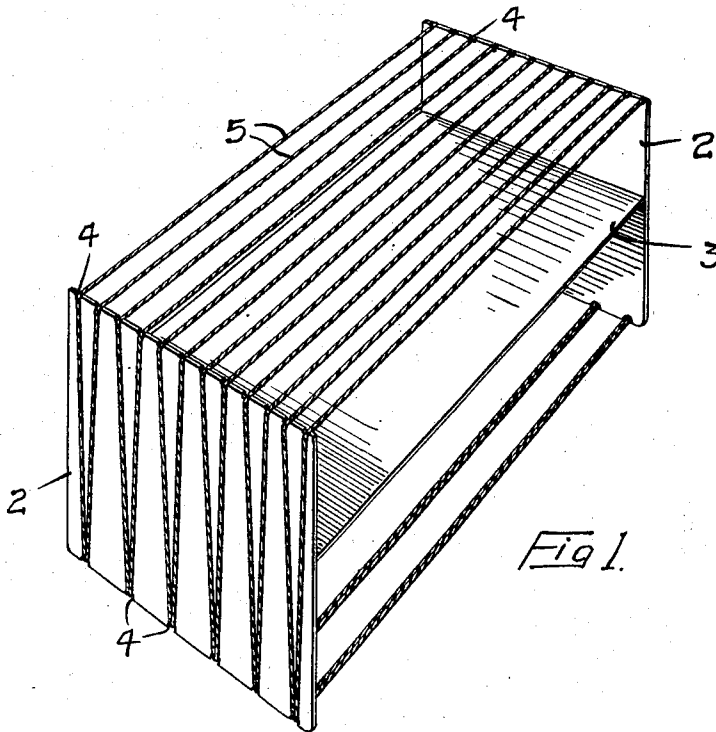


Fig 1.

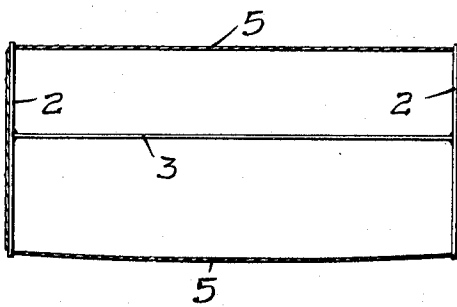


Fig 2.

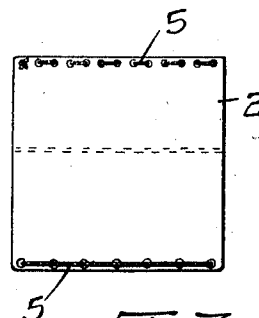


Fig 3.

WITNESSES  
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# UNITED STATES PATENT OFFICE.

NILS H. C. PIHL, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR OF ONE-HALF TO JOHN G. MACCUNE AND ONE-HALF TO FRANK H. PETERSON, BOTH OF MINNEAPOLIS, MINNESOTA.

## COMB-CLEANER.

1,037,182.

Specification of Letters Patent.

Patented Aug. 27, 1912.

Application filed August 22, 1911. Serial No. 646,501.

*To all whom it may concern:*

Be it known that I, NILS H. C. PIHL, a citizen of the United States, and resident of Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Comb-Cleaners, of which the following is a specification.

This invention relates to improvements in devices designed for use in cleaning hair combs, and the object of the invention is to provide a device that is simple and inexpensive in construction and which can be readily used for cleaning combs of different sizes.

The invention consists generally in a comb cleaner having rigid end plates, and an elastic connecting plate with wires extending between the edges of the end plates above and below the connecting plates.

The invention consists further in the constructions and combinations hereinafter described and particularly pointed out in the claims.

In the accompanying drawings forming part of this specification, Figure 1 is a perspective view of a comb cleaner embodying my invention, Fig. 2 is a side elevation of the same, Fig. 3 is an end view.

In the drawings 2—2 represent the end plates which are preferably of rigid material such as tin or zinc and are connected by a flexible plate 3. The upper and lower edges of the end plates 2 are preferably provided with the recesses or notches 4—4, the said recesses or notches in one edge of said plate being preferably twice as far apart as those in the other edge, or in other words, there are only one-half as many of the notches or recesses in one edge of the plate as there are in the other.

Cleaning wires 5 extend between the edges of the end plates parallel with the connecting plate 3. I may fasten the ends of the wires 5 to the edges of the plates 2 in any suitable manner, as shown in Fig. 3 of the drawings. If preferred, however, these wires may be carried continuously around the end plates 2—2, through the recesses or notches in said plates, two wires being preferably arranged in a single notch at one end of the plate, and a single wire being arranged in each notch in the other edge of the plate. With this arrangement the wires are twice as far apart on one side of the

cleaner as they are on the other side, and two wires are arranged close together on the side that is to be used for cleaning large combs. The wires may be fastened to the end plates by soldering or other suitable means.

The end plates below the connecting plate 3, on the side that is not to be used, are grasped between the thumb and fingers of the operator. The ends of the plates thus held are pressed toward each other, and the opposite ends, by reason of the yielding or spring character of the connecting plate 3, spread outwardly, thus bringing taut the threads or wires connecting the ends of the plates carrying the wires that are to be used. When it is desired to use the other wires the device is turned over and the opposite ends of the end plates 2 are pressed toward each other, thus making taut the wires connecting the opposite ends of said plates.

The plate 3 is preferably arranged nearer to the wires 5 that are closest together so as to provide a deeper space on the other side of plate 3 to permit the cleaning on that side, of combs having larger and longer teeth.

The details of the construction may be varied in many particulars without departing from my invention.

I claim as my invention;

1. The comb cleaner herein described, comprising rigid end plates, a spring connecting plate and cleaning wires, extending between the edges of said end plates, substantially parallel with the connecting plate, pressure on the lower portions of said end plates operating to put said spring plate under tension and separate the upper portions of said end plates, thereby increasing the tension of said wires between said upper portions, substantially as described.

2. The comb cleaner herein described, comprising the end plates having recesses in their upper and lower edges, there being a greater number of recesses in one edge than in the other of each plate, a spring plate connecting said end plates and a cleaning wire extending around said end plates and through said recesses, a plurality of strands of the wire being arranged in each recess at those edges of the plates having the fewer recesses, substantially as described.

3. The comb cleaner herein described, 110

comprising end plates having recesses in their upper and lower edges, there being a greater number of recesses in one edge than in the other of each plate, means connecting said end plates, and a cleaning wire  
5 extending around said end plates and through said recesses, a plurality of strands of the wire being arranged in each recess at

those edges of the plates having the fewer recesses, substantially as described.

In witness whereof, I have hereunto set my hand this 23rd day of August, 1911.

NILS H. C. PIHL.

Witnesses:

C. H. REHFUSS,

E. A. PAUL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."