

No. 863,257.

PATENTED AUG. 13, 1907.

A. H. BLANCHARD.
HORSE GROOMING IMPLEMENT.
APPLICATION FILED JUNE 25, 1906.

2 SHEETS—SHEET 1.

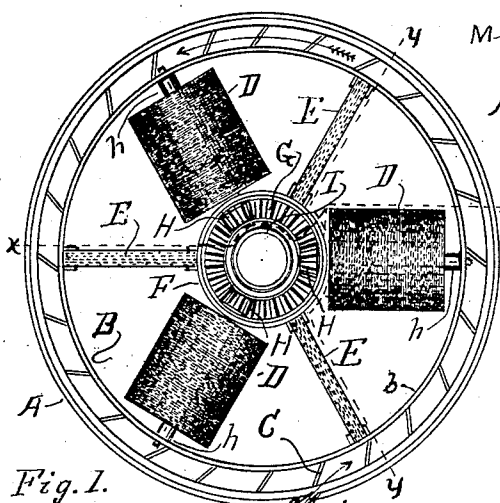


Fig. 1.

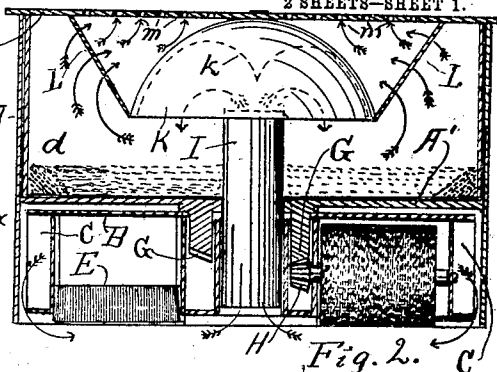


Fig. 2.

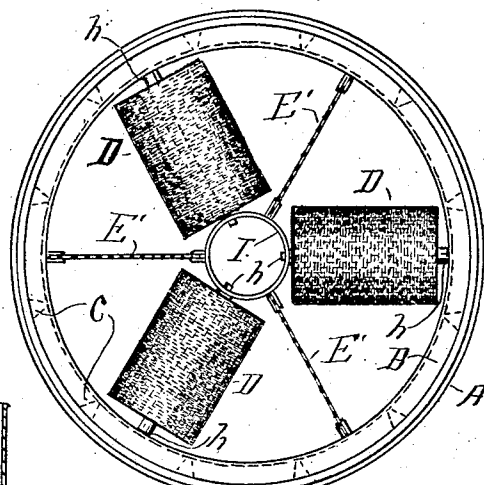


Fig. 3.

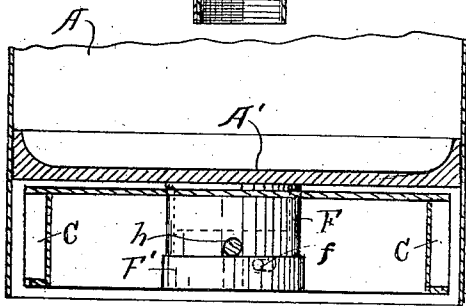


Fig. 4.

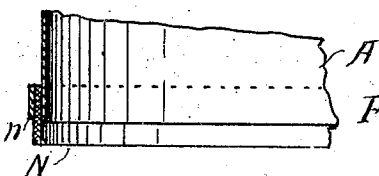


Fig. 5.

Witnesses

A. S. Palmer
T. F. Parker

By

Addison H. Blanchard
Ethel J. Willey
Attorney

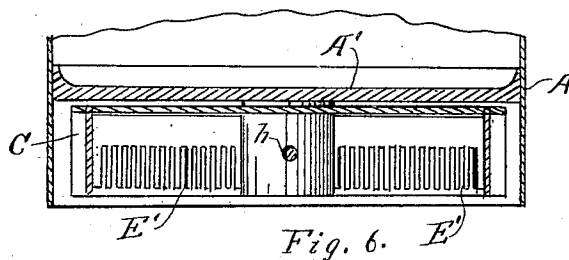
No. 863,257.

PATENTED AUG. 13, 1907.

A. H. BLANCHARD.
HORSE GROOMING IMPLEMENT.

APPLICATION FILED JUNE 25, 1906.

2 SHEETS—SHEET 2.



Witnesses

Lou Gilley
Cecil C. Gilley

Inventor

Addison H. Blanchard

By

Ethel J. Gilley
Attorney

UNITED STATES PATENT OFFICE.

ADDISON H. BLANCHARD, OF GRAND RAPIDS, MICHIGAN.

HORSE-GROOMING IMPLEMENT.

No. 863,257.

Specification of Letters Patent.

Patented Aug. 13, 1907.

Application filed June 25, 1906. Serial No. 323,405.

To all whom it may concern:

Be it known that I, ADDISON H. BLANCHARD, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Horse-Grooming Implements, of which the following is a specification.

My invention relates to improvements in combs and brushes for grooming horses, &c. and its objects are:

- 10 First, to provide a revolving comb and brush that will extract practically all of the dust from a horse's body and will so store it that it will not impregnate the atmosphere in the room where the horse is being groomed;
- 15 second, to provide a revolving brush and comb having secondary brushes that revolve at right angles with the main brushes, and in the opposite direction, or, in other words, will revolve so that the brushes will meet the hair and stir it up freely, and, third, to provide a revolving brush that may conveniently be made to revolve in
- 20 either direction.

I attain these objects by the mechanism illustrated in the accompanying drawing in which

- Figure 1 is a bottom plan of the brush with the handle shown in section to illustrate the position of the inflowing air jet, and the lower plate of the rim removed to show the position of the buckets; Fig. 2 is a sectional elevation of the same practically on the line X X of Fig. 1; Fig. 3 is a bottom plan of a like machine except that the secondary brushes are left free to be made to revolve
- 30 by contact with the horse's body, and with the handle cut away to show the mechanism for reversing the direction of the air current to drive the brushes in either direction; Fig. 4 is a sectional elevation of the case and brush rim practically on the line y y of Fig. 1, but with the brushes removed to show the manner of easily inserting or removing the brushes, Fig. 5 is a section of the case showing a flexible fabric at the bottom and Fig. 6 is a sectional elevation of the case and brush rim, practically on the line y y of Fig. 1.

- 40 Similar letters refer to similar parts throughout the several views.

- In the construction of this line of brushes the case A is so mounted on the base A' that it will hold its position when placed, and still may be slid up or down to adjust
- 45 the depth of the case below the base to the length of the bristles on the brushes, as they wear away by constant use, and to insure a practically air tight contact between the lower edge of the case and the surface of the horse's body I sometimes place a flexible fabric rim, as N, to
 - 50 project below the edge of the rim A and adjust itself to the surface of the body where it is being used. This case has a handle J attached to it, which is hollow and is designed to be attached to a hose O or other suitable appliance for conducting air to the case. The air is ad-

mitted to the case under pressure so that it will cause the brush rim or holder B to revolve rapidly and strong, and is admitted inside of the case through a small opening or jet j directly against the surface of the buckets C, on the rim of the brush holder.

The brush holder B is circular in form and somewhat smaller in diameter than the inside of the case A so that air that is forced against the buckets may flow freely down between the edges of the buckets and the inner surface of the case and out through the inner tube I, into the chamber formed by the upper portion of the case A and the cap M where the upper end of the tube I terminates in or close to the lower edge of the deflector K so that air and dust that passes out of the tube I, coming in contact with the deflector k, will be forced out of the deflector K as indicated by the arrows just emerging from said deflector, and the dust will, to a great extent, settle into the corner of the chamber, as at d, while the air, taking the course of the several arrows in Fig. 2, will pass through the screen L and out of the apertures m, in the top M, to the open air.

In Fig. 1 I have shown the brush holder B provided with buckets C around the periphery and all inclining in one direction, and the jet j so arbitrarily placed that the brush holder can revolve only in the direction of the arrows, shown in this figure. This brush holder is secured to revolve around the tube I with the brushes D, mounted on the shafts h, pivoted to revolve in bearings in the plates b and F, and with bevel gears H secured to one end of the shafts h in position to mesh with the annular bevel gear G and cause the brushes D to revolve rapidly against the surface it is approaching so that the hair will be thoroughly stirred and all dust contained in or covered by the hair will be thoroughly stirred and removed from the hair when it will be taken up by the current of air that is passing from the buckets, past the brushes and out through the tube I into the storage chamber, as hereinbefore described. In this figure I have shown the parts E as brushes, but in some of these implements I use metallic combs, as indicated at E' in Figs. 3 and 6. In Fig. 3 I have shown the revolvable brushes D simply hung in the rims and so arranged that they will be made to revolve by contact with the surface it is being carried over and made to revolve with the brush holder B. I find that this action of these brushes stirs up the dust in very satisfactory manner, but not nearly as effectually as by the arrangement shown in Fig. 1.

In Fig. 3 I have shown the handle J cut away to show the gate J', pivoted at j', in position to be thrown over to either side of the handle to change the flow of the current of air from side to side of the handle so that the brush holder B may be made to revolve either to the right or to the left, as desired, and for this purpose I

place V shaped buckets in the holder, as indicated by the dotted lines C', and provide the case A with two jet openings *jj* to be utilized alternately by manipulating the gate J', as hereinbefore suggested. If desired the brushes D may be removed and only the brushes E or the combs E' used, or, vice versa, the brushes E may be removed and only the brushes D used.

When using the propelling gear G H it is necessary to provide some means for easily and quickly removing or replacing the brushes D, and for this purpose I sometimes form a slot in the wall F, from the normal position of the shaft *h* down to the edge of the wall, as indicated by the dotted lines in Fig. 4, so that the shaft *h* may be easily inserted, and hold the shaft to place by any available means, one of the best and most convenient appliances being a ring or band F' placed to the proper position on the wall F and locked to place by any available lock, as, for instance, the well known pin and open slot, as indicated at *f*.

When using the flexible base N upon the case A I find that the most convenient means of securing it to the case is by the use of a hoop or band, as *n*, though many other well known devices may be used for the purpose and, consequently, I do not desire to restrict myself to this particular means for securing it to place.

It will be readily seen that when using the construction shown in Fig. 1 the pipe I must be firmly secured in the base A' so that it will not revolve with the brush holder B, but in the construction shown in Fig. 3 this tube must revolve with the brush holder, unless a separate tube is placed outside it to receive the end of the shaft *h*, and I prefer to so adjust the tube I that it will revolve freely as by this means the cost of construction is greatly lessened and the operation of the machine is exactly as satisfactory. Compressed air for driving these brushes may be supplied from any ordinary compressed air chamber and conducted through the pipe or flexible tube O, or its equivalent.

I prefer that the base A' be made of cast iron and practically of the form shown in Fig. 4, and when used with the construction shown in Fig. 1 the gear G should be made an integral part of the base, as shown in Fig. 2. In all cases the lower end of the tube I, and the tubes

and walls immediately surrounding it, must be sufficiently raised above the lower edge of the case A to insure a free flow of air and dust from the brushes to and through the tube I into the upper chamber of the machine, to insure the removal of all dust &c.

In Fig. 2 I have shown the cover M with a rim that extends well down into the chamber and can be readily removed for the purpose of emptying the dust from the chamber, as one of the most simple means for accomplishing this object, but any other practical means may be adopted for the purpose.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent of the United States, is:

1. In a horse grooming implement, a case having a storage chamber and a brush receiving chamber, a revoluble brush within the case, buckets attached to said brush, a tube conducting air to said buckets, a tube leading from said brush to the storage chamber, and a deflector and screen within said storage chamber.

2. In a horse grooming implement, a case having a storage chamber, a revoluble brush holder within the case, buckets connected with the brush holder, revoluble brushes within said brush holder, an air pipe leading to the buckets, a discharge tube from the brush holder to the storage chamber, and a deflector and screen with in the chamber.

3. In a horse grooming implement, a cylindrical case having a storage chamber and a brush holding chamber, a brush holder within said case, revoluble brushes in said brush holder, buckets connected with the brush holder, an air tube leading to said buckets to revolve the brush holder, gear wheels connected with the revoluble brushes in the brush holder, a geared plate connected with the case in position to mesh with the gear wheels to revolve the brushes, a tube leading from the brush holder to the storage chamber, and a deflector and screen within the storage chamber.

4. In a horse grooming implement, a cylindrical case having a storage chamber and a brush chamber, a round flat brush holder in the case, buckets on the periphery of the brush holder, stationary brushes and revoluble brushes in said holder, means for revolving the brush holder, means for revolving the revoluble brushes, and means for carrying dust away from the brushes.

Signed at Grand Rapids, Michigan, June 22, 1906.
ADDISON H. BLANCHARD.

In presence of—
I. J. CILLEY,
A. ALLGIER.