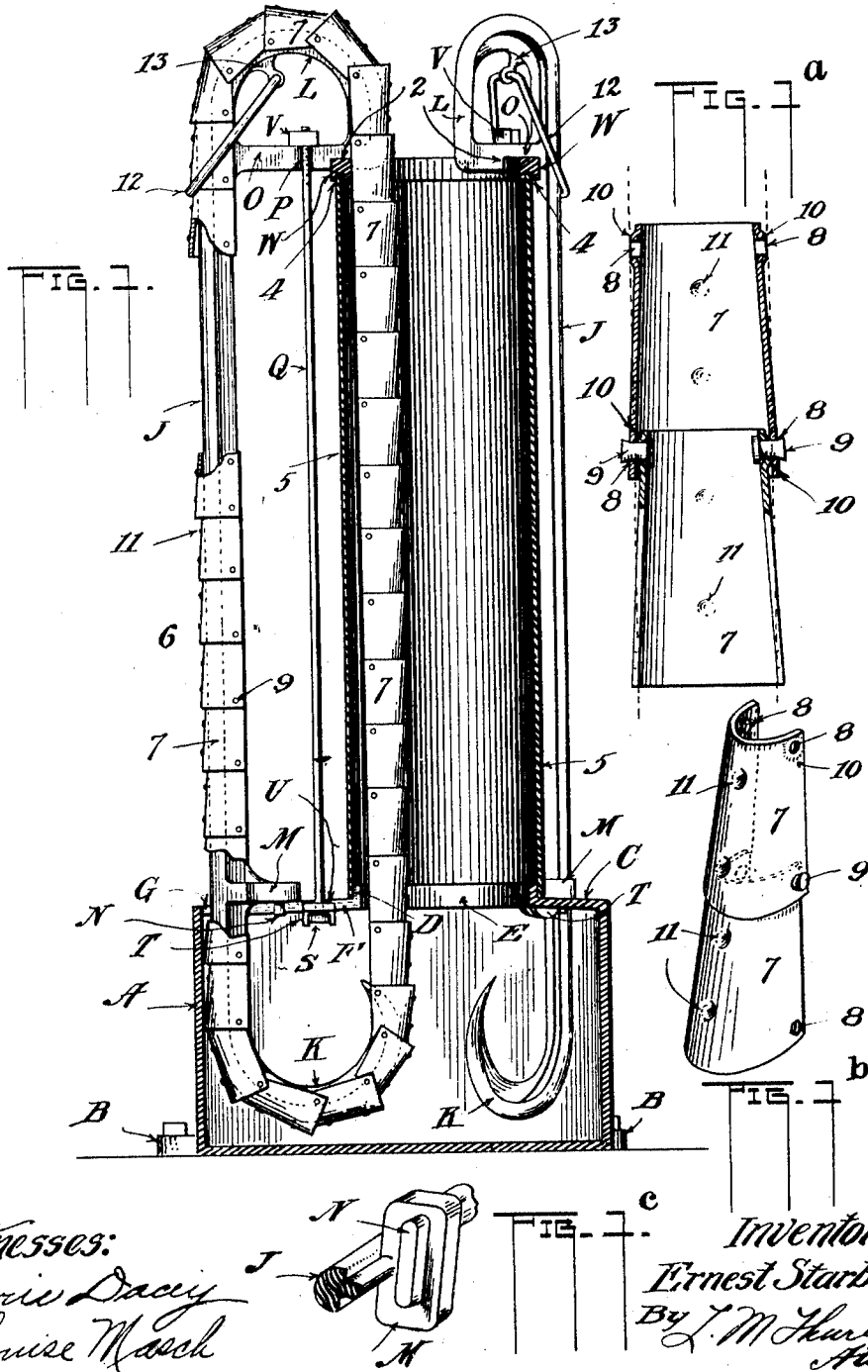


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HOG GREASER.
APPLICATION FILED JULY 25, 1914.

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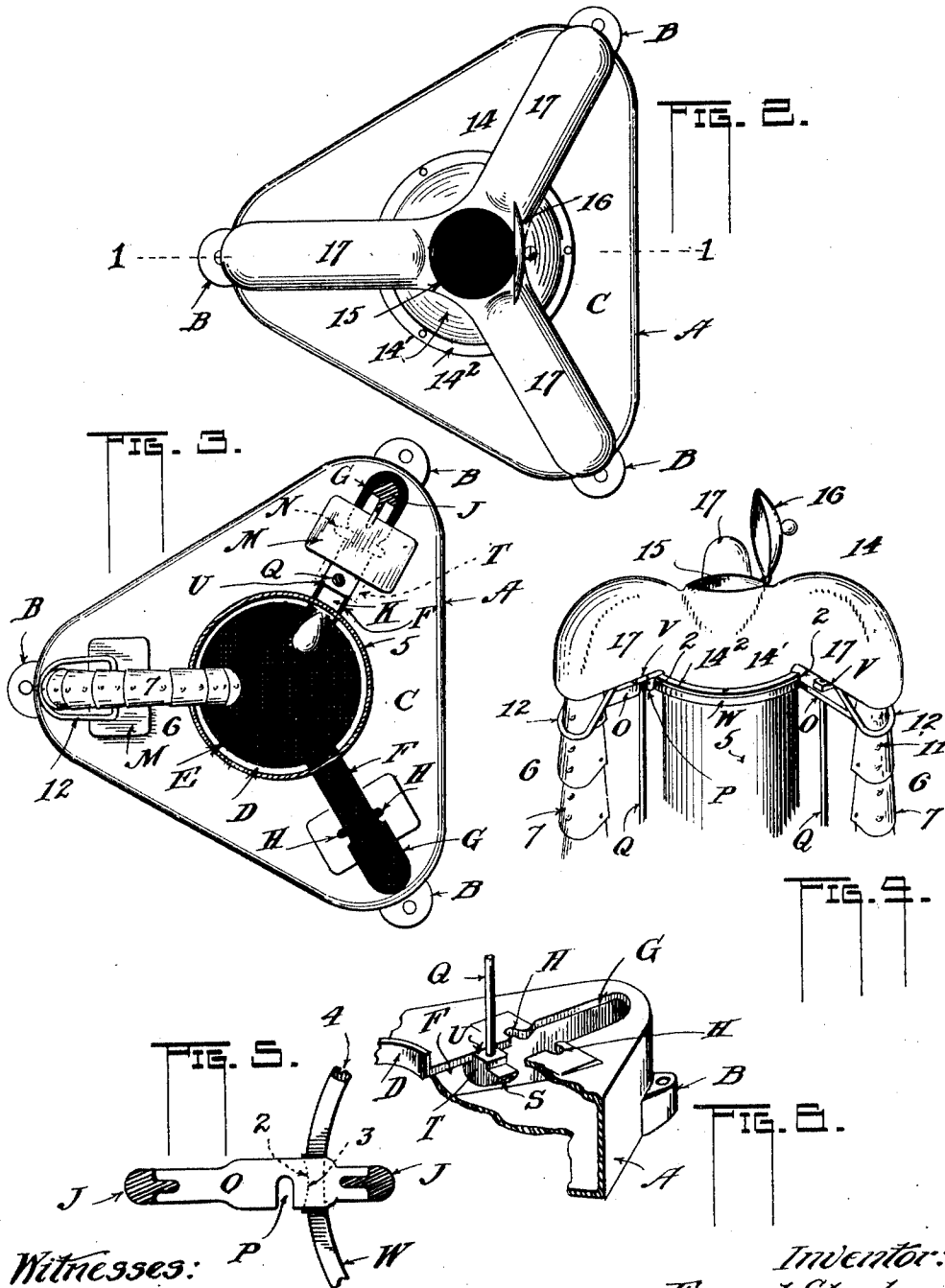
Patented Sept. 9, 1919.
2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

ERNEST STARBUCK, OF PEORIA, ILLINOIS, ASSIGNOR TO WILBERT I. SLEMMONS, OF PEORIA, ILLINOIS; DIME SAVINGS & TRUST CO. ADMINISTRATOR OF SAID WILBERT I. SLEMMONS, DECEASED.

HOG-GREASER.

1,315,583.

Specification of Letters Patent.

Patented Sept. 9, 1919.

Application filed July 25, 1914. Serial No. 853,066.

To all whom it may concern:

Be it known that I, ERNEST STARBUCK, citizen of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Hog-Greasers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to that class of devices known as hog greasers and particularly pertains to a hog greaser of simple construction which includes in its construction one or more endless elevating members each adapted to be operated by the rubbing action of the hog against it, said members being made to pass through a font containing an oil, disinfectant, or dip.

One of the objects is to provide a simple form of hog greaser that can be assembled in a few minutes time and without any machine work whatever and, in consequence, a device that can be built at a comparatively low cost.

Another object of the invention is to provide a simple form of hog greaser provided with one or more endless flexible elevating members of peculiar construction to be operated by the rubbing action of the hog.

Another object of the invention is to provide a peculiar type of endless rubbing member made up of a series of pivotally related parts of peculiar form.

In addition to the objects stated, the invention relates to certain details of construction as will be clearly pointed out herein and form the subject of certain of the claims.

In the appended drawings forming a part of this application—

Figure 1 is a sectional elevation of the hog greaser taken on line 1—1 Fig. 2.

Fig. 1^a is a rear elevation of two sections of an oil elevating member.

Fig. 1^b shows the same in perspective but on a somewhat smaller scale.

Fig. 1^c shows the under side of a portion of one of the parts of the machine in perspective.

Fig. 2 is a plan of the hog greaser.

Fig. 3 is also a plan with certain parts removed and other parts being shown in section.

Fig. 4 shows, in perspective, a part of the upper portion of the hog greaser.

Fig. 5 shows one of the parts of the device in horizontal section together with a portion of a ring associated therewith; and,

Fig. 6 shows a portion of an oil font or base in perspective.

A indicates a hollow cast base constituting a font for a dip, oil, a disinfectant, or other solution, said base being preferably in the form of a triangle as shown in Figs. 2 and 3. It is provided at the bottom with suitable lugs or ears B for securing it to a platform, concrete foundation, or the like. Its top C is provided with a raised flange D surrounding a central opening E, and said top is further provided with an open slot F in three places, each of which communicates or opens into the central opening E, and radiates from the center of the base and terminates outwardly in each corner of the triangle as clearly shown in said Fig. 3.

The outer portions of the slots F are slightly enlarged as shown in G, by making them wider than the main portion F, and at H are two notches the purpose of which will appear later.

J is a member which I shall term a support, track or guide. It includes a substantially straight vertical portion terminating at each end in curved portions K L. The lower portion K depends within the base A while the upper portion L is a considerable distance above said base as clearly shown.

M is a foot extending from the upright portion J. It is adapted to rest upon the top of the base and lies across the said slot F. The under side of this foot, as clearly shown in Fig. 1^c is provided with a depending lug N to rest in and engage the described notches H, also shown in broken lines in Fig. 3. The upper portion L includes a portion O connecting the terminus of said curved portion with the vertical portion. Said portion O is provided with a notch P, Fig. 5, to receive an upright bolt Q whose head, at its lower end, is held in a notch S of a casting T lying within the base A and against the under side of the top C thereof as indicated in Fig. 6, said casting T being provided with a squared portion U to engage in the slot F which prevents the casting from turning.

V is a nut upon the upper threaded end

of the said bolt Q to bear upon the portion O described. By tightening the nut the support J is firmly held in its seat upon the said base A. W is a ring or annulus engaging in a notch 2 in each of the portions O of the upright supports or guides J, see Figs. 1 and 5.

The two walls of the notch as shown in Fig. 5, are curved in opposite directions, one corresponding to the inner curve of the ring or annulus, the other being oppositely curved, and the ring is provided with a corresponding curved surface 3. This forms a lock which prevents the ring moving relative to any one of the upright members J and spaces the latter apart in a permanent and rigid manner.

The under side of the ring is provided with a groove 4 which receives the upper end of a tube 5 of sheet metal, the lower end of the latter resting upon the top C of the base and surrounding or inclosing the described flange D. The bolts Q in addition to firmly bracing the members J also clamp the tube 5 in place in a very rigid and secure manner.

6 represents as a whole a flexible endless member made up of a series of devices such as sections 7 of sheet metal, there being one of said endless members for each of the uprights, said members being of such a length as to extend around the entire member J, extending over its top and beneath its lower end, so as to pass through the oil or other fluid in the base. This is clearly shown in Fig. 1.

The sections 7 are constructed of sheet metal as stated, and are formed by means of dies which are cut to size, formed and punched in one operation and each is U-shaped and smaller at one end than at the other, and at each corner has a hole 8 for receiving rivets 9. The metal of the small end surrounding the holes is forced outward to create projecting annular ribs 10, which, besides reducing the friction between that end and the end of the next section to which it is attached, also increases the measurement of the small end at the said holes 8 so as to be equal in width to that between the inner surface of the corners of the large end of the adjacent section.

By constructing the devices of sections 7 with a large and small end the several sections will readily nest in one another and will easily pivot relatively in passing around the curved ends of the supports or guides J. The broken lines in Fig. 1^a indicate that the measurement between the inner corners of the large end of the section is equal to the measurement of the greatest measurement of the small end including the said ribs 10.

There are advantages in placing the adjacent ends of the sections within one another,

one of which is that by overlapping the dirt on an animal rubbing upon them will not be forced inside them so as to fall into the receptacle A and contaminate the dip. It is quite clear that since the upper one overlies the lower one the mud and dirt will fall outside the receptacle rather than inside.

Another advantage is that the member made up of these sections will be much stronger by having the rivets extend through the metal of both of them rather than through extending parts or ears that would otherwise be necessary in order to connect said sections.

As shown in Fig. 1^b each section is provided with teats 11 created by forcing the metal outward so as to in effect roughen the surfaces whereby the animal in rubbing will compel the member 6 to move.

It is observed in Fig. 1 that the large ends of the sections 7 are lowermost and that their extended ends are also presented for the animal to rub against and these alone or together with the teats 11 by being engaged by the animal in its peculiar rubbing movements will cause the members 6 to slide upward on the supports J in progressive movements. The fluid in the base is therefore elevated by the member 6, the animal receiving it therefrom. 12 is a link freely suspended from a lug 13, for example, depending within the portion L of the member J, said link acting as a pawl by engaging beneath the large extended ends of the sections 7. Gravity holds the link upon the member 6 and it is always in position to drop beneath an extension and by this means the said member can only move upward.

14 as a whole indicates a housing or hood which may be of pressed metal or a casting. It includes a central portion 14' provided with an opening 15 which may be covered by a lid 16 and three extensions 17 to overlie the upper portions of the members 6 protecting them so that in freezing weather rain and snow cannot enter the parts and freeze and thus prevent free operation of the device.

14² is a flange or other part to rest upon the ring or annulus W to which it may be secured in any suitable manner.

The opening 15 is provided for supplying the base with the fluid without requiring a special opening in the top of the base for that purpose, and by providing a lid for the opening, rain and snow is prevented in reaching the base.

The mode of constructing and forming the various parts is such that no machine work or even the drilling of holes is required to assemble the machine. That is, the parts are cast with the necessary holes, notches, or grooves so that in assembling it is only necessary to set the several supports J upon the

base after providing them with the members 6, place the tube 5 in position, together with the annulus W, whereupon by applying the bolts Q and tightening their nuts V the whole structure is complete and substantially as one part merely requiring the attachment of the links 12 and the housing or hood 14.

The supports J and the member 6, *i. e.*, the sections 7, or their equivalents, of which said member is composed, are always thoroughly lubricated so that the said sections move with absolute freedom under the action of the animal and a constant supply of the fluid is available at all times at the rubbing surface.

As distinguished from the art in "hog greasers" or "rubbing devices" in which a series of devices travel upon a track or guide, all said devices in my structure are connected, forming an endless member. When the animal rubs upon any one or several of said devices the entire endless member moves quite easily and freely because friction is reduced to a minimum, the member merely hanging from the top portion L of the guides or supports J.

My device is distinguished by its simplicity, its novel structures throughout, and by the ease and quickness with which it may be assembled.

In the claims when I refer to the member 6, using the term "flexible member," I mean any form that is the equivalent of the member that will accomplish the same result as said member.

I may make changes in my device without departing from the spirit and intent of the invention and without departing from the scope of the appended claims. As an instance of such changes, other means for preventing the retrograde movement of the member 6, and other means of constructing and mounting the support or guide portions J may be adopted.

Having thus described my invention, I claim:—

1. The combination with a receptacle, of an upright fixed with respect thereto, an endless member carried by and movable upon the said upright and comprising a series of pivotally related U-shaped portions having extending portions in position to be engaged by an animal rubbing upon said endless member, the latter being supplied with a dip from said receptacle.

2. In a device of the class described, a receptacle, a support seated upon and uprising therefrom, there being an opening in the top of the receptacle below said support, means to secure the support to the receptacle, and an endless member arranged to move upon said support and depending into said receptacle and having a portion thereof exposed to receive rubbing contact of an animal thereon.

3. In a device of the class described, the combination of a base consisting of a receptacle for a dip provided with a central opening in its top and including a slot communicating with said opening, a support supported above said slot, and an endless member carried by and adapted to move upon the support and depending through the said central opening and said slot and having a portion thereof exposed to receive rubbing contact of an animal thereon.

4. In a portable device of the class described, the combination of a receptacle having a top provided with an opening, a support uprising from said top including a part to be suspended within said opening, said part being spaced from the marginal edges of the receptacle at said opening, and a member comprising a series of portions movable relatively to one another to travel upon said support.

5. In a device of the class described, the combination of a receptacle including a top having an opening therein, a support carried by said top including an upright part to hang in said opening, the same being spaced from the marginal edges of the top at said opening, said support also including a supporting portion therefor to engage and seat in said opening and rest upon the top, and a member to travel upon the support.

6. In a device of the class described, the combination of a receptacle including a top having an opening therein, a support uprising from said top and including a part resting upon the latter and bridging the opening, said part having a depending lug adapted to engage and seat in the opening, said support including an arched portion at its upper end, and a flexible member to travel upon said support.

7. In a device of the class described, the combination with a receptacle, including a top provided with an opening, of a support uprising from said top and having an arched portion at its upper end, said support terminating at its lower portion in a recurved portion extending through said opening and depending within the receptacle, and having a part to rest upon said top, and means to secure the support relative to the top and a member arranged to travel on the support.

8. In a device of the class described, the combination of a support consisting of a substantially vertical portion terminating in a curved portion at one end, and an endless member comprising a series of U-shaped pivotally related sections slidable upon said support and substantially fitting the same, and a receptacle for a dip to receive said endless member.

9. In a device of the class described, the combination of a support consisting of a skeleton structure comprising an upright

portion having a rounded surface, in cross section, and including a rounded portion at its upper end, means to maintain the support in the upright position, an endless member made up of a series of U-shaped pivotally related sections substantially fitting the rounded surface of said upright and adapted to slide upon it and the upper rounded portion, and a receptacle into which said endless member is adapted to pass.

10 10. In a device of the class described, the combination of a receptacle for a dip including a top, having a central opening therein, a series of supports spaced around said opening, there being an opening in said top beneath each support, and means engaging the supports and a part of the receptacle adapted to secure said supports and receptacle relatively, and a member mounted on and adapted to move along each support and each in position to be engaged by an animal and arranged to pass into the receptacle into the dip.

11. In a device for the purposes described, the combination of a receptacle for containing a dip, a series of supports each forming a guide uprising from the receptacle and each including an arched radial portion at its upper end, and a member adapted to travel upon the support or guide and to enter and leave the receptacle in its travel, and exposed in position to be engaged by an animal.

12. In a device of the class described, the combination of a receptacle including a top having a substantially central opening, a series of spaced supports at said opening, each of the supports depending into the receptacle, a tubular member interposed between the upper portions of the supports and the top of the receptacle and inclosing the said central opening, means engaging each support and the top of the receptacle and adapted for clamping the tubular member between the supports and the said top, and adapted also to clamp the said supports upon the said receptacle, and a member arranged to travel upon each of the supports and to enter said receptacle.

13. In a device of the class described, the combination of a receptacle including a top having a substantially central opening there-through, a series of supports spaced around said opening, there being an opening beneath each support, and each support depending into the last named opening, a tubular member interposed between the upper portion of the supports and the top of the receptacle and inclosing the said central opening, means engaging each support and the top of the receptacle and adapted for clamping the tubular member between the supports and the said top, and adapted also to clamp the said supports to the said receptacle, and a member overlying the supports

including an opening above the tubular member and provided with a closure, and a member arranged to travel upon each of the supports and to enter said receptacle.

14. In a device of the class described, the combination of a receptacle including a top having a substantially central opening there-through, a series of supports spaced around said opening, there being an opening beneath each support and each support depending into the receptacle, a tubular member interposed between the upper portion of the supports and the top of the receptacle and inclosing the said central opening, and means engaging each support and the top of the receptacle and adapted for clamping the tubular member between the supports and the said top, and adapted also to clamp the said supports to the said receptacle, and a member arranged to travel upon each support, the inner stretch of each member being within the said tubular member.

15. The combination in a hog greaser of an endless member consisting of U-shaped portions each larger at one end than at the other, the large and small ends of adjacent sections being pivotally connected, the said large end of each extending laterally beyond the other to form a projection in position to be engaged by an animal, a guide to carry the member, and a receptacle for a dip supplied to said member.

16. A member consisting of a series of pivotally connected U-shaped sections, each larger at one end than at the other, the large end of each extending laterally from the adjacent end of the next section to constitute a projection, the related ends lying one within the other.

17. A member consisting of a series of U-shaped sections each smaller at one end than the other and each having at the small end an outwardly extended integral portion, the measurement of said small end of the section including said integral portion being substantially equal to the measurement of the large end between the inner surface of its walls, and means to pivotally connect the large end of one section with the small end of an adjacent section.

18. A member comprising a series of U-shaped sections, each having a small end and large end, its small end having a lateral outwardly extended portion at each side and including an opening through said portion, the full lateral measurement of the small end including the extended portions being substantially equal to the measurement across the large end of said section between the inner surface of its walls, and means to pivotally connect the large end of one section with the small end of an adjacent section.

19. As a new article of manufacture, a U-shaped member of metal smaller in diameter at one end than at the other and pro-

vided at its small end with laterally outwardly extended portions including a hole in each, the diameter of the member at its small end including said outwardly extending portions being substantially equal to the inside lateral measurement of its large end. 5 ing said outwardly extended portions being substantially equal to the inside diameter of its large end, and an integral extension projecting from the outer surface of the curved portion of said section. 15

In testimony whereof I affix my signature, in presence of two witnesses.

ERNEST STARBUCK

Witnesses:

L. E. SUTHERLAND,
L. M. THURLOW.

20. As a new article of manufacture, a U-shaped member of metal smaller in diameter at one end than at the other and provided at its small end with outwardly extended portions including a hole in each, the diameter of the member at its small end includ-

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