

June 23, 1936.

I. BJORNSON

2,044,896

ABRADANT HOLDER

Filed Feb. 28, 1934

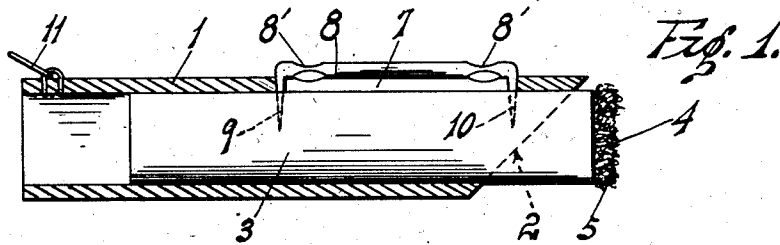


Fig. 1.

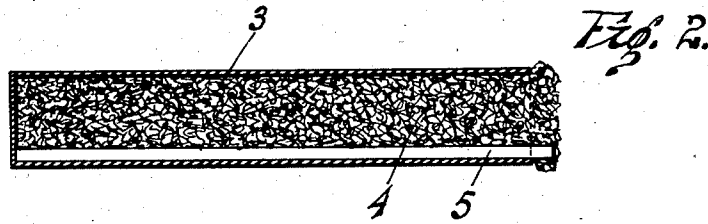


Fig. 2.

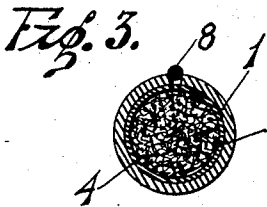


Fig. 3.

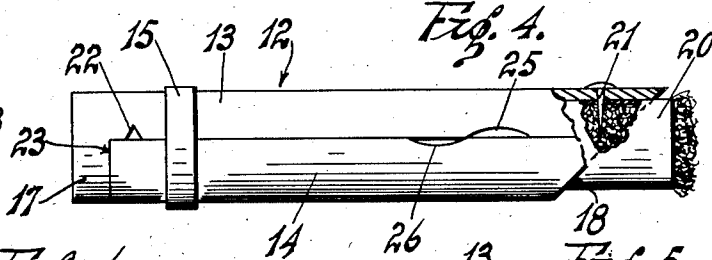


Fig. 4.

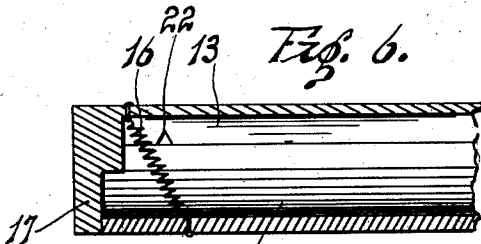


Fig. 5.

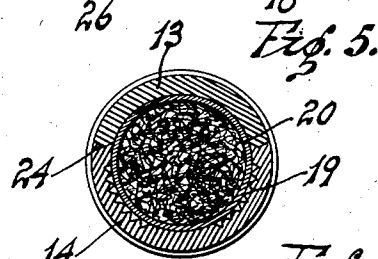


Fig. 6.

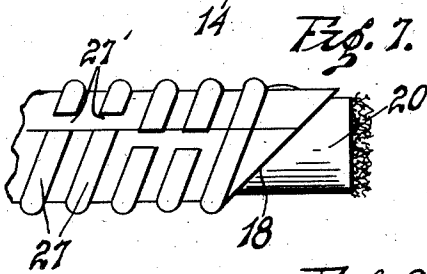


Fig. 7.

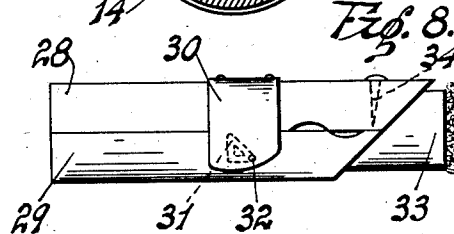


Fig. 8.

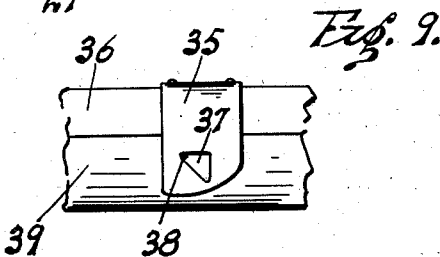


Fig. 9.

INVENTOR.
INGVARD BJORNSON.
BY.
H. R. Duckman
ATTORNEY.

UNITED STATES PATENT OFFICE

2,044,896

ABRADANT HOLDER

Ingvard Bjornson, Los Alamitos, Calif.

Application February 28, 1934, Serial No. 713,329

16 Claims. (Cl. 15—209)

This invention relates to an abradant holder, the material used, being preferably of metallic wool, or the like, which is adapted to be formed into a roll or cartridge and used with the holder. A detergent may also be incorporated with the metallic wool, if desired.

This holder is especially necessary in the use of steel wool, by housewives and others, in the cleaning of pots, pans and kettles.

An object of my invention is to provide a holder so that the particles of steel or metal, or other abradant material, when broken off, cannot get into the hands of the user.

Another object is to provide the abradant cartridge with a substantially continuous strip of soap so that as long as there is any of the abradant left, there will be sufficient soap with it to aid in removing any dirt or rough places from the pans, pots, or other surfaces to which the abradant is being applied for scouring purposes. Another purpose of the soap is to lubricate the abradant, thus making it easier to move the abradant over the surface to be cleaned, and to prevent scratching and to promote polishing of the surface, and also to prevent rusting of the abradant when the device is not in use.

A further object is to increase the wearing qualities and useful life of the metallic wool, and to make its use more economic.

Another object is to provide a holder for the abradant which will permit advancing the abradant from the end thereof, as said abradant is worn away.

Another object of the invention is to provide a waterproof container for the abradant which will prevent scattering or breaking the abradant, except at the point of contact with the surface being cleaned.

Another object is to make a compact package which will be more or less waterproof, and which will retain some of the detergent until the abradant is completely used.

Still another object is to prevent injury to the abradant by working it up like a sponge when in use, only the portion being used, sustaining any wear.

A feature of my invention is to cover the cartridge of abradant with a waterproof covering to prevent oxidation by contact with the air.

A further feature is to enable the abradant to be forcefully applied, and to enable the operator to reach corners of vessels, and the sides thereof.

Other objects, advantages and features of invention may appear from the accompanying

drawing, the subjoined detailed description, and the appended claims.

In the drawing

Figure 1 is a longitudinal, sectional view of the holder, with an abradant cartridge positioned therein.

Figure 2 is a sectional view of an abradant-containing cartridge showing steel wool and a detergent incorporated therewith.

Figure 3 is a transverse, sectional view of the abradant cartridge and holder.

Figure 4 is a side elevation of a modified form of the holder, with the cartridge positioned therein, parts being broken away to show interior construction.

Figure 5 is a transverse, sectional view of the holder shown in Figure 4.

Figure 6 is a fragmentary, longitudinal, sectional view of an abradant holder of the split type, showing a modified form of yieldable means to hold the parts together.

Figure 7 is a fragmentary, side elevation of a split type of holder with exterior corrugations.

Figure 8 is a side elevation of a modified type of holder of the split type.

Figure 9 is a fragmentary, side elevation of a modified form of spring clip to hold the split type of holder together.

Referring more particularly to the drawing, the abradant container consists of a tube 1 of a considerable length to be convenient for the use of the housewife. Ordinarily, this tube has its end cut off on a slope, as indicated at 2, and the tube is made of fiber, wood, or other material which will not scratch the surfaces to which the abradant is applied.

The abradant can be of any type desired which can be placed within the cartridge 3, said cartridge ordinarily being made waterproof with the use of paraffine covering or paper, or cellulose, foil, cloth, or the like, there being within this cartridge a body of metallic wool 4, with a strip or strips of soap 5 included within the cartridge to lie along the extended length of the cartridge, as shown in Figure 2.

On one side, the container 1 has an elongated slot 7 which is wide enough to receive the elongated staple 8, the points of which are indicated at 9 and 10, said points passing thru the shell 1 and into the abradant-containing cartridge, the object being to permit the abradant-containing cartridge to be shoved forward as the abradant may be worn off of it.

If it is desired to extend the abradant after it has been worn down close to the sloping end of

the tube 1, the staple 8 is pulled out, the cartridge shoved forward a slight amount by means of the staple, and the staple is then returned to its position as shown in Figure 1, the flattened places 8' preventing the staple from falling thru the slot when the cartridge is nearly used up.

A ring 11 may be secured to the tube so as to provide a convenient means of hanging the device upon a nail when not in use. When hung up, the holder will be so positioned that water will drain out of the cartridge 3 and the steel wool will not rust so rapidly.

In Figure 4, I have shown a modified type of holder 12, which comprises two complementary sections 13, 14. The two parts of the holder are yieldably pressed together by means of a resilient band 15 which may be either rubber, or a spring. If desired, a coil spring 16 can be mounted on the inside of the holder, the ends of the spring being attached to the two sections 13, 14. The resilient means to press the parts of the holder together is preferably positioned at the rear end, the purpose of which will be subsequently described.

The upper part 13 of the holder is formed with the depending shoulder 17, against which the lower half 14 of the holder, butts. The outer end of the holder is beveled or sloped, as shown at 18. The lower half 14 of the holder is preferably more than a half cylinder, or deeper than the upper half, and the inner surface thereof may be notched or serrated, as shown at 19. The purpose of this construction is to more firmly grasp the abradant cartridge 20, and to hold it against upward movement.

A fixed pin or staple 21 extends downwardly from the upper half of the holder and penetrates the cartridge 20, thus holding said cartridge against retraction.

A plurality of notches 22 is formed in the upper half of the holder, the purpose of which notches is to receive the rear edges 23 of the part 14 when the two halves of the holder are spread apart at front, as on a hinge. The prong or pin 21 will be pulled out of the abradant cartridge, and when the two halves of the holder are again placed together at the forward end, the lower half will have advanced, due to the fact that it was held by the notches 22. The pin 21 then holds the cartridge 20 in its advance position, and the lower half 14 of the holder is pushed rearwardly against the shoulder 17, as shown in Figure 4. It will be evident that each time the halves of the holder are pulled apart at the forward end, the cartridge 20 will be pushed outwardly a distance corresponding to the space between the notches 22 and the shoulder 17.

The abutting edges of two halves of the holder are formed with inter-fitting groove and tongue, as shown at 24. This holds the halves of the holder in proper alignment.

Thumb notches 25, 26 may be provided in the halves 13, 14, respectively, so that the said halves can be spread apart to advance the abradant cartridge.

In Figure 7, the outer surface of the cartridge is formed with a corrugation, or is roughened, as shown at 27. This enables the holder to be more readily grasped and retained in the hand. Certain of the corrugations are broken away as shown at 27', so as to provide thumb or finger holds when the halves of the holder are spread apart.

In Figure 8, I have illustrated a modified means for holding together the halves 28, 29 of the holder. A metallic spring clip 30 is attached to the

upper half 28 and extends partly around the lower half 29. A triangular grooved recess 31 is formed in the lower half 29, and an indentation or tip 32 extends from the spring 30 into the recess. As the front part of the holder is pulled apart, the tip 32 will move in the recess 31 and push the lower half 29 forwardly. The cartridge 33 is thus advanced and when the front ends of the two halves of the holder are pushed together, the prong or staple 34 will hold the cartridge in this advanced position. The lower half 29 of the holder is then pushed rearwardly and returned to the position, as shown in Figure 8.

In Figure 9, a spring clip 35 is secured to the upper half of the holder 26. A triangular hole 37 is formed in the clip 35, and a pin 38 extends from the lower half 39 of the holder into said hole. The method of advancing the cartridge by this last named arrangement, is the same as described for Figure 8.

Having described my invention, I claim:

1. An abradant holder comprising a tubular container one end being beveled, a replaceable cartridge of abradant therein, a releasable means on the container to hold the cartridge in any desired position with respect to the length of the container, with the cartridge protruding from the beveled end.

2. An abradant holder comprising a tubular container one end being beveled, a demountable abradant cartridge adapted to be mounted within the tubular member, a disintegrable waterproof covering on said cartridge and a releasable lock on the container for holding the abradant cartridge in a fixed position with respect to the tubular container, with the cartridge protruding from the beveled end.

3. An abradant holder comprising a tubular member, an abradant cartridge adapted to be fitted within the member, a waterproof cover around the abradant cartridge, and a releasable lock on the tubular member, said lock engaging the abradant cartridge whereby the cartridge is held in a fixed position with respect to the tubular member.

4. An abradant holder comprising a tubular member, a waterproof covered abradant cartridge frictionally engaged with said tubular member, said cartridge having a mass of metal wool, a portion of soap extending thruout the length of the wool, and a pin on the tubular member, said pin having a sharpened prong to hold the cartridge in a given position with respect to said tubular member.

5. An abradant cartridge comprising a body of compressed abradant, a waterproof covering therefor, to retain the abradant in a desired shape, a tubular member having a beveled end into which the cartridge is placed, and a pin on the tubular member adapted to engage the cartridge to hold it in a given position in the tubular member.

6. An abradant holder comprising a non-metallic tubular member, said member including complementary sections, resilient means engaging said sections whereby they are pressed together, an abradant cartridge adapted to be held in the holder, and means on the holder engaging the cartridge whereby said cartridge is held against retraction.

7. An abradant holder comprising a tubular member, said member including two complementary sections, yieldable means engaging said sections whereby they are pressed together, an abradant cartridge adapted to be held in the

holder, means on the holder engaging the cartridge whereby said cartridge is held against retraction, and a waterproof covering encircling the cartridge, the end of said holder from which the cartridge protrudes, being beveled.

8. An abradant holder comprising complementary upper and lower sections, a shoulder on the upper section at one end thereof, the other section having its corresponding end abutting said shoulder, said upper section having a notch therein into which an edge of the lower section fits when the sections are spread apart at the end opposite said shoulder, resilient means engaging the sections and urging them together, and an abradant cartridge within the holder.

9. An abradant holder comprising a tubular member, said tubular member consisting of complementary upper and lower sections, spring means gripping and partly encircling said sections adjacent one end thereof, means on the upper section engaging the lower section whereby said lower section is moved forwardly relative to the upper section when said sections are swung apart at the end opposite said last named means, and an abradant cartridge in said holder.

10. An abradant holder comprising a tubular member, said tubular member consisting of complementary upper and lower sections, a spring clip partly encircling both said sections at one end thereof and secured to the upper section, means on the clip engaging the lower section whereby said lower section is moved forwardly relative to the upper section when said sections are swung apart at the end opposite said clip, and an abradant cartridge in said holder.

11. An abradant holder comprising a tubular member, said tubular member consisting of complementary upper and lower sections, a spring clip partly encircling said sections at one end thereof and secured to the upper section, means on the clip engaging the lower section whereby said lower section is moved forwardly relative to the upper section when said sections are swung apart at the end opposite said clip, an abradant cartridge in said holder, and means on the holder engaging the cartridge whereby said cartridge is held against retraction.

12. An abradant holder comprising a tubular member beveled at one end thereof, said member including complementary sections, means engaging said sections whereby they are releasably held together, an abradant cartridge adapted to be

held in the holder, and means on the holder releasably engaging the cartridge whereby said cartridge is held against retraction.

13. An abradant holder comprising a tubular member, said member including complementary sections, means engaging said sections whereby they are releasably held together, an abradant cartridge adapted to be held in the holder, means on one of the complementary sections engaging the abradant cartridge whereby the cartridge is held against removal transversely of said one of said sections, and means on the holder releasably engaging the cartridge whereby said cartridge is held against retraction.

14. An abradant holder comprising a tubular container, one end being beveled, a replaceable cartridge of abradant therein, a releasable means on the container to hold the cartridge in any desired position with respect to the length of the container, and with the cartridge protruding from the beveled end, said releasable means being positioned adjacent the beveled end of the container.

15. An abradant holder comprising complementary upper and lower sections, a shoulder on the upper section at one end thereof, the other section having its corresponding end abutting said shoulder, said upper section having a notch therein into which an edge of the lower section fits when the sections are spread apart at the end opposite said shoulder, resilient means engaging the sections and urging them together, an abradant cartridge within the holder, a cartridge engaging means on one of said complementary sections, said cartridge engaging means being positioned adjacent the end of the holder from which the cartridge protrudes.

16. An abradant holder comprising a tubular member, said tubular member consisting of complementary upper and lower sections, spring means gripping and partly encircling said sections, means on the upper section adjacent one end thereof, engaging the lower section whereby said lower section is moved forwardly relative to the upper section when said sections are swung apart at the end opposite said last named means, an abradant cartridge in said holder, a cartridge engaging means on one of said complementary sections, said cartridge engaging means being positioned adjacent the end of the holder from which the cartridge protrudes.

INGVARD BJORNSON.