

Sept. 21, 1965

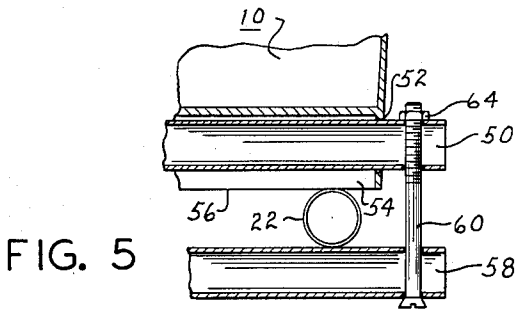
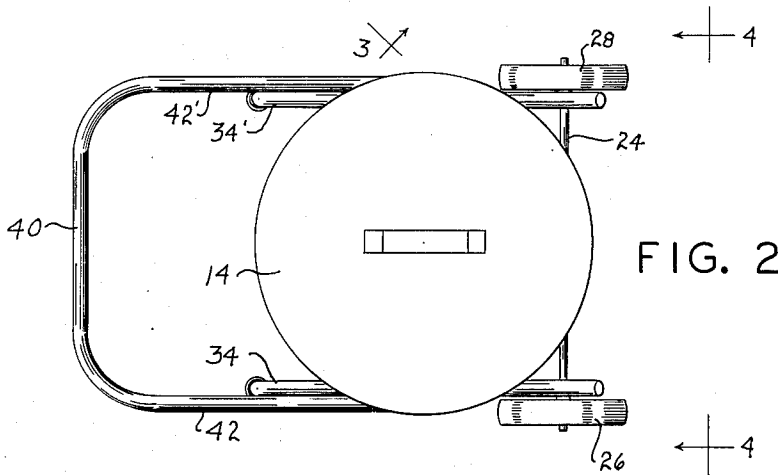
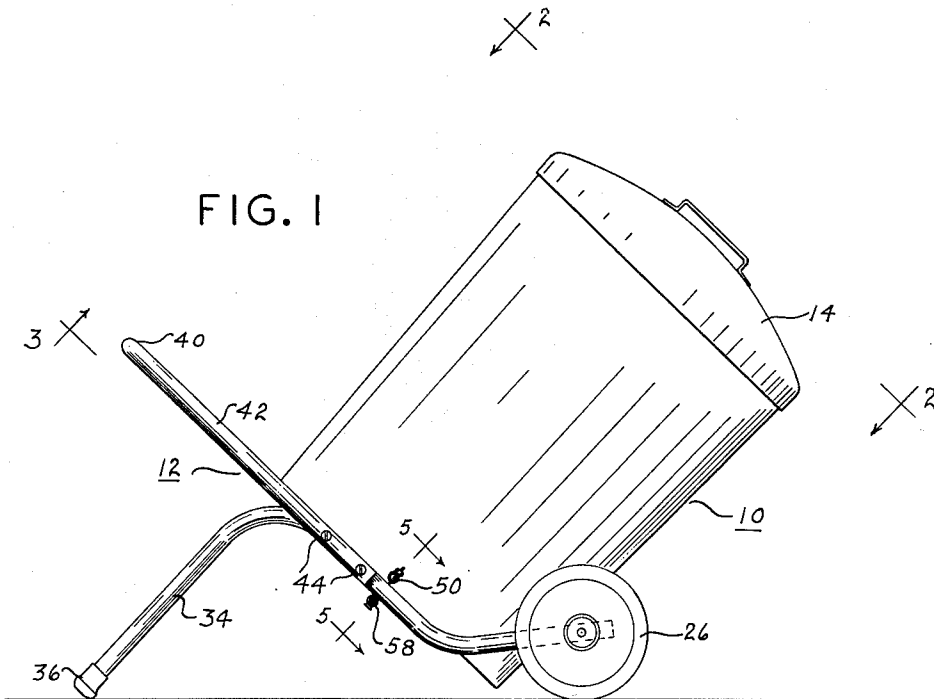
C. H. KRUEGER, JR

3,207,104

TRASH HANDLING AND BURNING APPARATUS

Filed Dec. 2, 1963

4 Sheets-Sheet 1



INVENTOR.  
CHARLES H. KRUEGER, JR.  
BY *Hobbs & Coston*  
ATTORNEYS

Sept. 21, 1965

C. H. KRUEGER, JR

3,207,104

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4 Sheets-Sheet 2

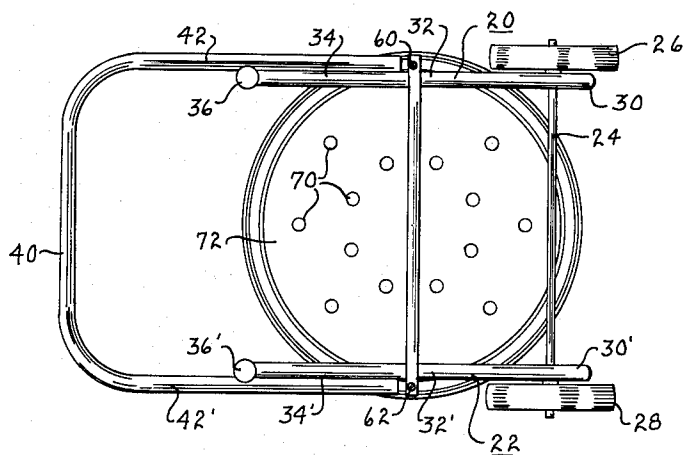


FIG. 3

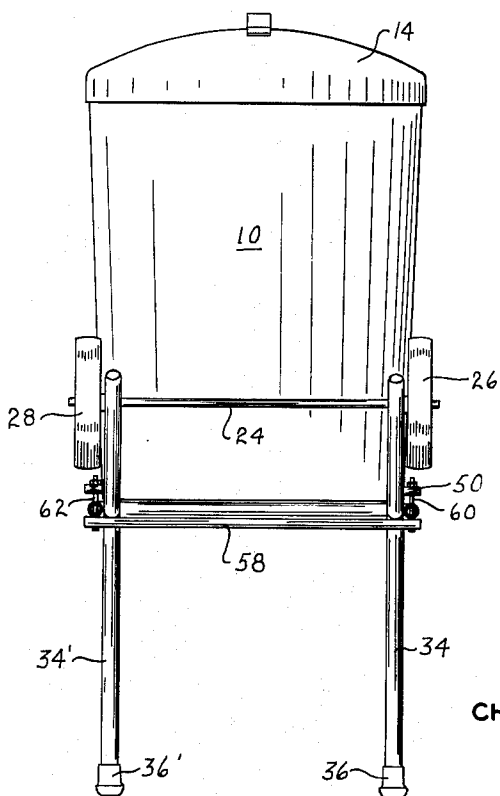


FIG. 4

INVENTOR.  
CHARLES H. KRUEGER, JR.  
BY *Hobbs & Easton*  
ATTORNEYS

Sept. 21, 1965

C. H. KRUEGER, JR

3,207,104

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4 Sheets-Sheet 3

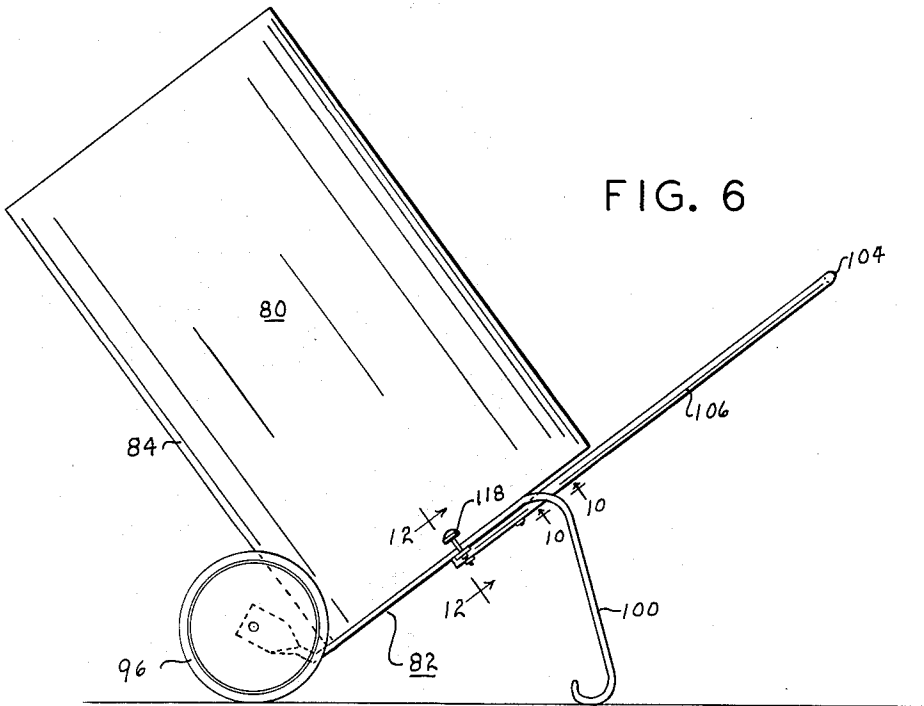


FIG. 6

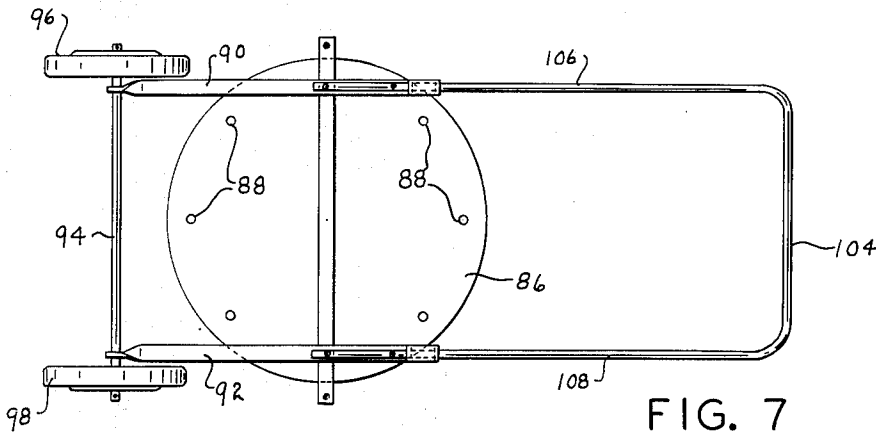


FIG. 7

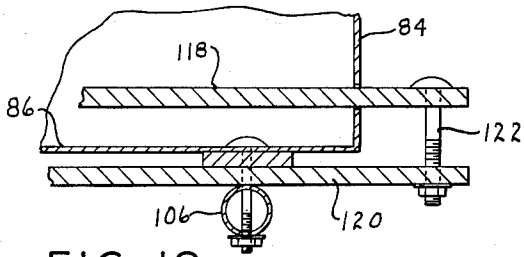


FIG. 12

INVENTOR.  
CHARLES H. KRUEGER, JR.  
BY *Hobbs & Easton*  
ATTORNEYS

Sept. 21, 1965

C. H. KRUEGER, JR

3,207,104

TRASH HANDLING AND BURNING APPARATUS

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4 Sheets-Sheet 4

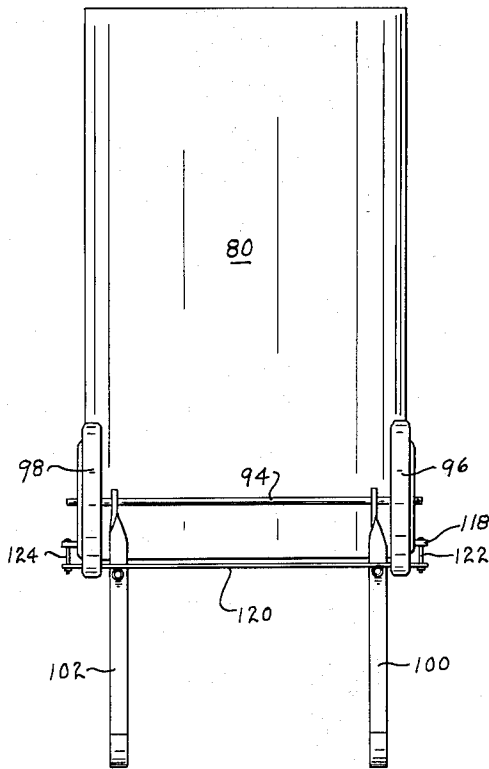


FIG. 8

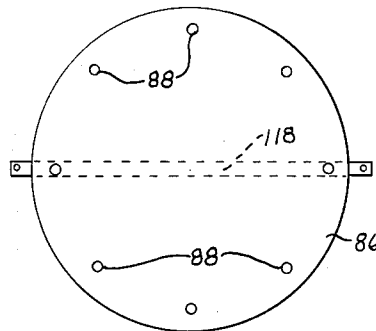


FIG. 11

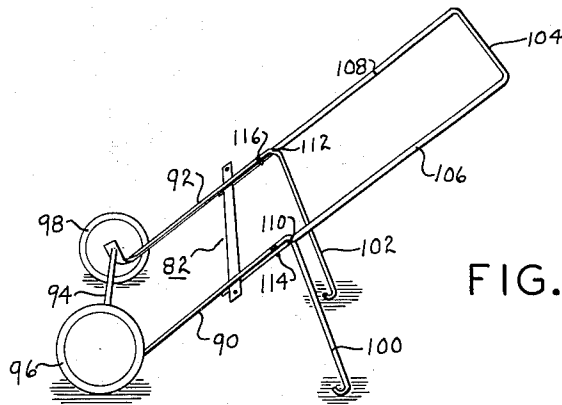


FIG. 9

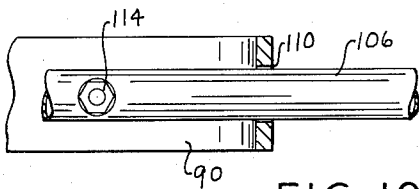


FIG. 10

INVENTOR.  
CHARLES H. KRUEGER, JR.  
BY *Hobbs & Easton*  
ATTORNEYS

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3,207,104

## TRASH HANDLING AND BURNING APPARATUS

Charles H. Krueger, Jr., 1222 Prospect Drive,  
Mishawaka, Ind.

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4 Claims. (Cl. 110—18)

The present invention relates to a trash handling apparatus and more particularly to an apparatus for collecting, hauling and burning trash and the like.

Trash burners used around the home and yard usually consist of a drum or cylinder having an open top and usually holes or slots in or near the bottom to admit air into the container for burning the trash. These have in some instances been mounted on a carriage or rollers to facilitate moving from place to place and storing when the burner is not in use. Further, the prior portable burners have either been provided with holes in the bottom for air which permit the ashes and small pieces of trash to fall from the burner container while it is being moved, thereby littering the lawn or other areas around the home yard, or have employed solid bottoms and sides and, as a result, have provided poor and incomplete combustion of the trash. Further, in addition to littering the lawn and/or providing poor combustion, these prior burners are often difficult to empty and clean and prepare for further use, and cannot be moved with sufficient ease to render them practical or convenient for daily use and storage when not in use. It is therefore one of the principal objects of the present invention to provide a trash handling and burning apparatus which is so constructed and designed that it can be easily loaded with trash and moved to a safe and convenient place for burning the trash, and which is constructed to facilitate effective burning without littering the lawn or yard while it is transporting trash to the place where it is to be burned.

Another object of the invention is to provide a relatively simple trash handling apparatus which can be fabricated from standard materials and metal fabricating machines and tools, and which can easily be shipped in a disassembled condition and readily assembled at the place where it is to be used by an unskilled person using only a conventional screw driver and wrench.

Still another object of the invention is to provide a trash collecting and burning apparatus which can be used to collect trash over a period of several days or weeks for burning, and which maintains the collected trash in a satisfactory combustible condition throughout the period so that it can readily be ignited and burned whenever the container has been filled.

A further object is to provide a trash handling and burning apparatus of the aforesaid type which can be conveniently loaded and emptied without handling the burner or the ashes, and which is covered or closed while it is being used to collect the trash and rubbish to protect and conceal the burner contents until it is to be burned.

Another object of the invention is to provide an apparatus for handling, collecting and burning trash, which provides more effective combustion of the trash than the conventional drum or cylinder, without the use of any special blowers or other mechanical draft creating mechanism, and which is so constructed that it will give an effective draft regardless of the amount of trash material in the burner.

Additional objects and advantages of the present invention will become apparent from the following description and accompanying drawings, wherein:

FIGURE 1 is a side elevational view of the present apparatus for collecting, handling and burning trash;

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FIGURE 2 is an elevational view of the trash handling apparatus shown in FIGURE 1, viewed as indicated on line 2—2 in the latter figure;

FIGURE 3 is a bottom view of the present apparatus as viewed on line 3—3 of FIGURE 1;

FIGURE 4 is a rear elevational view of the present apparatus as viewed on line 4—4 of FIGURE 2;

FIGURE 5 is an enlarged fragmentary cross sectional view of the trash handling apparatus shown in the preceding figures, the section being taken on line 5—5 of FIGURE 1;

FIGURE 6 is a side elevational view of a modified form of the present trash handling apparatus;

FIGURE 7 is a bottom view of the trash handling apparatus shown in FIGURE 6;

FIGURE 8 is a rear elevational view of the trash handling apparatus shown in FIGURES 6 and 7;

FIGURE 9 is a perspective view of the frame of the trash handling apparatus shown in the modified form of FIGURE 6;

FIGURE 10 is an enlarged fragmentary cross sectional view of the apparatus taken on line 10—10 of FIGURE 6;

FIGURE 11 is a bottom view of the container of the modified form; and

FIGURE 12 is an enlarged fragmentary cross sectional view of the modified form of FIGURE 6, the section being taken on line 12—12 of FIGURE 6.

Referring more specifically to the drawings and to FIGURES 1 through 5 in particular, numeral 10 designates generally the trash collecting and burning unit, and 12 a carriage on which unit 10 is rigidly mounted. The size and shape of the trash collector and burner unit may be varied, and the unit is preferably provided with a lid 14 for concealing the contents in the unit and for preventing the collected material from becoming wet while it is standing before being burned.

The carriage 12 consists of two laterally disposed frame members 20 and 22 joined at one end by an axle 24 extending through the two frame members and projecting beyond the two frame members for receiving wheels 26 and 28. The forward portions 30 and 30' of the two frame members are horizontally disposed and are connected to upwardly extending portions 32 and 32' which terminate in downwardly extending portions 34 and 34' forming legs for supporting the carriage and the burner unit, the lower end of the two legs being provided with rubber caps 36 and 36'. Handle 40 consists of a horizontal hand portion and two arms 42 and 42' joined at their lower ends to frame members 20 and 22, respectively, by a plurality of screws 44 extending through arms 42 and 42' into the respective frame members. The handle 40 with the two arms 42 and 42' forms a rigid structure with frame members 20 and 22 and axle 24, the handle and the two frame members preferably being of tubular light metal construction.

The trash collector and burner unit is rigidly secured to frame members 20 and 22 along angular portions 32 and 32' by a tube or rod 50 extending through holes 52 in rim 54 of burner unit 10. The bottom edge 56 of the burner unit is clamped firmly against the upper surface of portions 32 and 32' by a tubular member 58 beneath portions 32 and 32' and bolts 60 and 62 extending through the ends of tubular members 50 and 58 and held in place by a nut 64 threaded onto the end of each bolt.

It is seen that when burner unit 10 is mounted on the carriage in the foregoing manner, it is held at a substantially 45-degree angle with respect to the surface of the ground. This feature is important in the present invention and provides a much more effective combustion than can be obtained in the trash material with conventional drum-shaped burners without blowers or other external

mechanical air supply means. A plurality of holes 70 are provided in bottom 72 of the burner unit to provide draft and to permit aerating of the trash in the burner while it is being collected from time to time before the contents are burned.

When the present trash handling apparatus is being used, it is maintained in the position shown in FIGURE 1 and trash is collected therein from time to time with lid 14 being left on the container except when the trash is being collected and burned. The lid prevents the trash from becoming moist or wet from rain, and the holes in the bottom permit any excess moisture to drain therefrom and sufficient air to enter to dry out the material so that it becomes readily combustible as it is being collected. After the trash has been collected and the burner unit is substantially full, the apparatus is rolled to a suitable area for burning the trash and the lid is removed and the contents ignited. The angle of the burner unit and the holes 70 in the bottom of the unit permit effective circulation of air, both from the top and bottom, so that effective combustion can consistently be obtained in the burner. After the trash has fully burned, the ashes in the burner unit can easily be emptied by tilting handle 40 upwardly and the unit forwardly until the open upper end thereof is adjacent the ground. The ashes will then slide or fall from the container. The apparatus is then returned to its original place for again collecting the trash.

The modified unit shown in FIGURES 6 through 10 involves the same basic concept of the burner unit positioned at a substantially 45-degree angle and consists of a burner unit 80 and carriage unit 82. The burner unit shown in this modified form consists of straight cylindrical side walls 84 and a disc-shaped bottom 86 secured to the lower edges of the side walls and having a plurality of holes 88 along the margin thereof for combustion air. The carriage consists of two diagonally positioned side frame members 90 and 92 connected at their lower ends to an axle 94 on which wheels 96 and 98 are rotatably mounted. The upper ends of frame members 90 and 92 terminate in downwardly extending portions 100 and 102 forming legs for the carriage, and a U-shaped handle 104 similar to handle 40 is provided with arms 106 and 108 extending through holes 110 and 112 in frame members 90 and 92, respectively, and joined to said frame members by bolts 114 and 116.

Burner unit 80 is secured to frame members 90 and 92 of the carriage by a bar 118 extending through diametrically opposed holes in the lower portion of the burner unit and projecting laterally from the sides of the unit. A second bar 120 is positioned beneath frame members 90 and 92 and is secured to bar 118 by bolts 122 and 124 extending through the ends of the two bars. When the nuts on the two bolts are tightened, the bottom of the burner unit is drawn firmly against the upper side of frame members 90 and 92, thus holding the burner unit rigidly in place on carriage 82.

The modified apparatus for collecting, hauling and burning trash has the same basic advantage as the embodiment previously described herein, in that complete and effective combustion of the trash is obtained by the positioning of the burner unit at approximately a 45-degree angle. The bottom in this modification, as well as in the previously described embodiment, may or may not have holes therein. While the holes facilitate combustion, they may interfere with the use of the apparatus for hauling dirt, sand and other small particle material. The trash in the burner will, however, effectively burn without the holes in the bottom, utilizing the air created by the convection resulting from the angular position of the burner.

While only two embodiments of the present trash handling apparatus have been described in detail herein, various changes and modifications may be made to satisfy requirements.

I claim:

1. An apparatus for collecting, hauling and burning trash and the like, comprising a carriage having two spaced parallel frame members extending angularly downwardly and forwardly at approximately a 45-degree angle, an axle extending between said frame members near the forward end thereof and projecting laterally at each end beyond said frame members, a wheel on each end of said axle, said frame members having a horizontal portion projecting forwardly near the forward end thereof and a downwardly extending portion at the rear end thereof forming legs, a U-shaped handle having arms extending along said frame members, means for securing said arms to said frame members, a trash collector and burner unit having cylindrical-shaped side walls and a disc-shaped perforated bottom, a lid for said unit having marginal side walls overlapping the side walls of said burner, means securing said burner unit to said angular frame members including a bar-like member extending through the side walls of said burner unit and projecting therebeyond, a rod-like member disposed beneath the frame members and projecting laterally beyond said members, and bolts in the two ends of said two rod-like members for connecting said members together and clamping the burner unit to the upper side of said frame members for retaining said unit rigidly in place thereon at a 45-degree angle.

2. An apparatus for collecting, hauling and burning trash and the like, comprising a carriage having two spaced parallel frame members extending angularly downwardly and forwardly at approximately a 45-degree angle, an axle extending between said frame members near the forward end thereof and projecting laterally at each end beyond said frame members, a wheel on each end of said axle, said frame members having a horizontal portion projecting forwardly near the forward end thereof and a downwardly extending portion at the rear end thereof forming legs, a U-shaped handle having arms extending along said frame members, means for securing said arms to said frame members, a trash collector and burner unit having cylindrical-shaped side walls and a disc-shaped perforated bottom, a lid for said unit having marginal side walls overlapping the side walls of said burner, means securing said burner unit to said angular frame members including a bar-like member extending through the side walls of said burner unit and projecting therebeyond, a rod-like member disposed beneath the frame members and projecting laterally beyond said members, and means securing said two rod-like members together.

3. An apparatus for collecting, hauling and burning trash and the like, comprising a carriage having two spaced parallel frame members extending angularly downwardly and forwardly at approximately a 45-degree angle, an axle extending between said frame members near the forward end thereof and projecting laterally at each end beyond said frame members, a wheel on each end of said axle, said frame members having a horizontal portion projecting forwardly near the forward end thereof and a downwardly extending portion at the rear end thereof forming legs, a U-shaped handle having arms extending along said frame members, means for securing said arms to said frame members, a trash collector and burner unit having cylindrical-shaped side walls and a disc-shaped perforated bottom, and means securing said burner unit rigidly to said angular frame members at a 45-degree angle, said burner unit being of such proportions that a portion of the upper side wall is positioned directly above a portion of the lower side wall when said unit is in place on said frame members.

4. An apparatus for collecting, hauling and burning trash and the like, comprising a carriage having two spaced parallel frame members extending angularly downwardly and forwardly, an axle extending between said frame members near the forward end thereof and projecting laterally at each end beyond said frame members,

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a wheel on each end of said axle, said frame members having a horizontal portion projecting forwardly near the forward end thereof, a U-shaped handle having arms extending along said frame members, means for securing said arms to said frame members, a trash collector and burner unit having cylindrical-shaped side walls and a disc-shaped perforated bottom, and means securing said burner unit rigidly to said angular frame members, the axis of said burner unit being positioned at an angle between vertical and horizontal, said burner unit being of such proportions that a portion of the upper side wall is positioned directly above a portion of the lower side wall when said unit is in place on said frame members.

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References Cited by the Examiner

UNITED STATES PATENTS

513,132	1/94	McClanathan	298—5
1,116,473	11/14	Oberle	110—19 X
2,695,790	11/54	Ford	280—43.1
2,737,911	3/56	Mims	110—18
2,767,886	10/56	Jenkins	110—19 X
2,889,152	6/59	Hurst et al.	298—3 X

10 FREDERICK L. MATTESON, Jr., *Primary Examiner*.  
 JOHN J. CAMBY, CHARLES SUKALO, *Examiner*.