March 8, 1955 A. B. HANSEN 2,703,527

FIRE EXTINGUISHING OR INCENDIARY BOMB

Filed Oct. 30, 1951 4 Sheets-Sheet 1

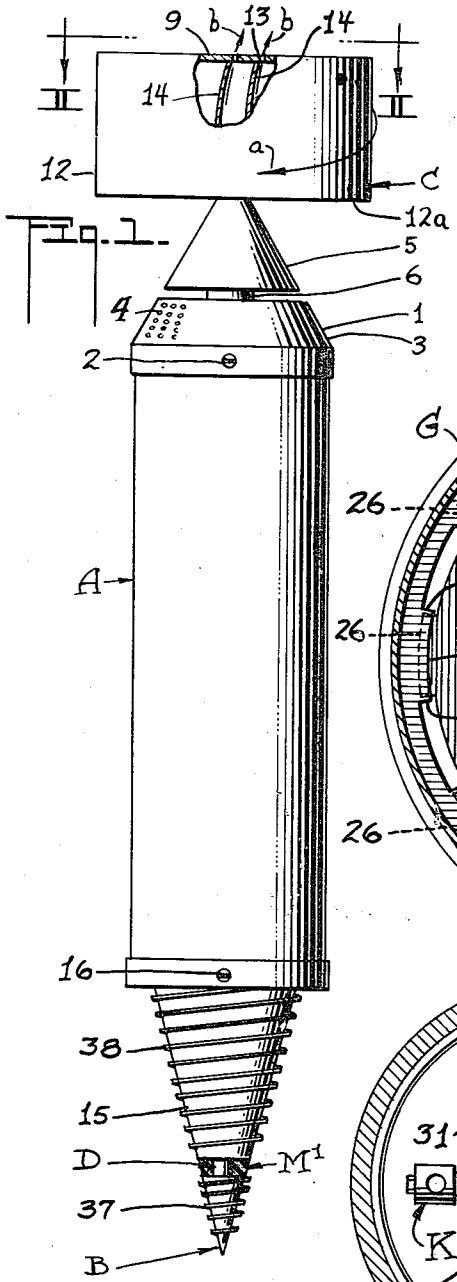

Fig. 1.

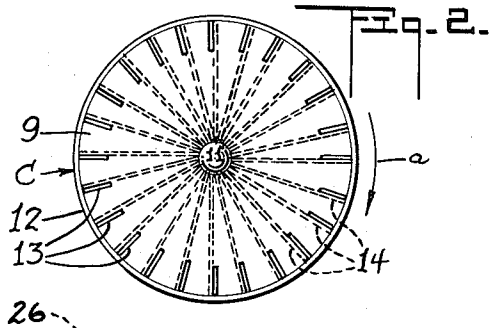

Fig. 2.

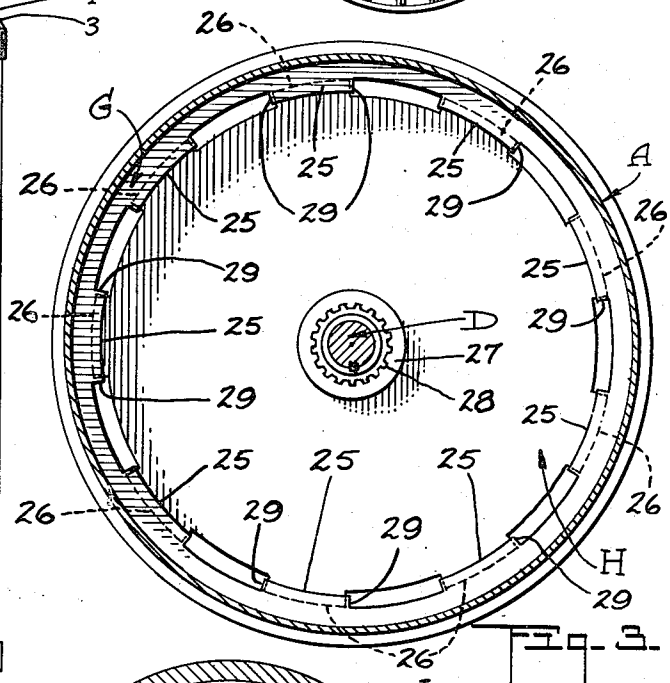

Fig. 3.

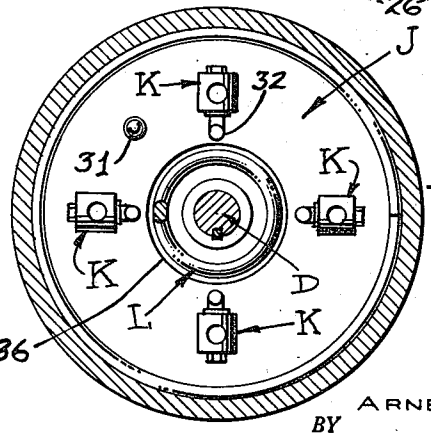

Fig. 4.

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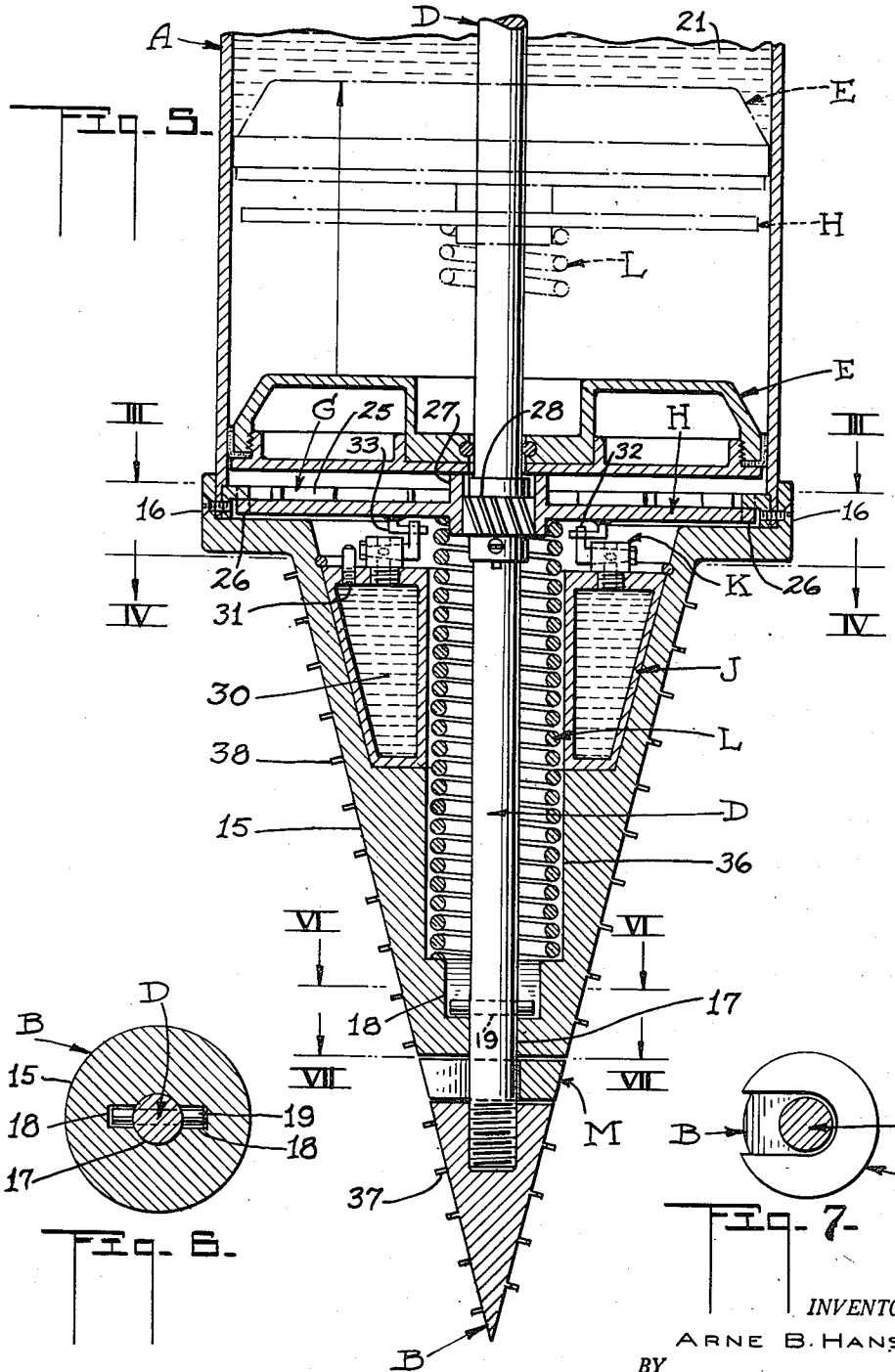

FIG. 5.

FIG. 6.

FIG. 7.

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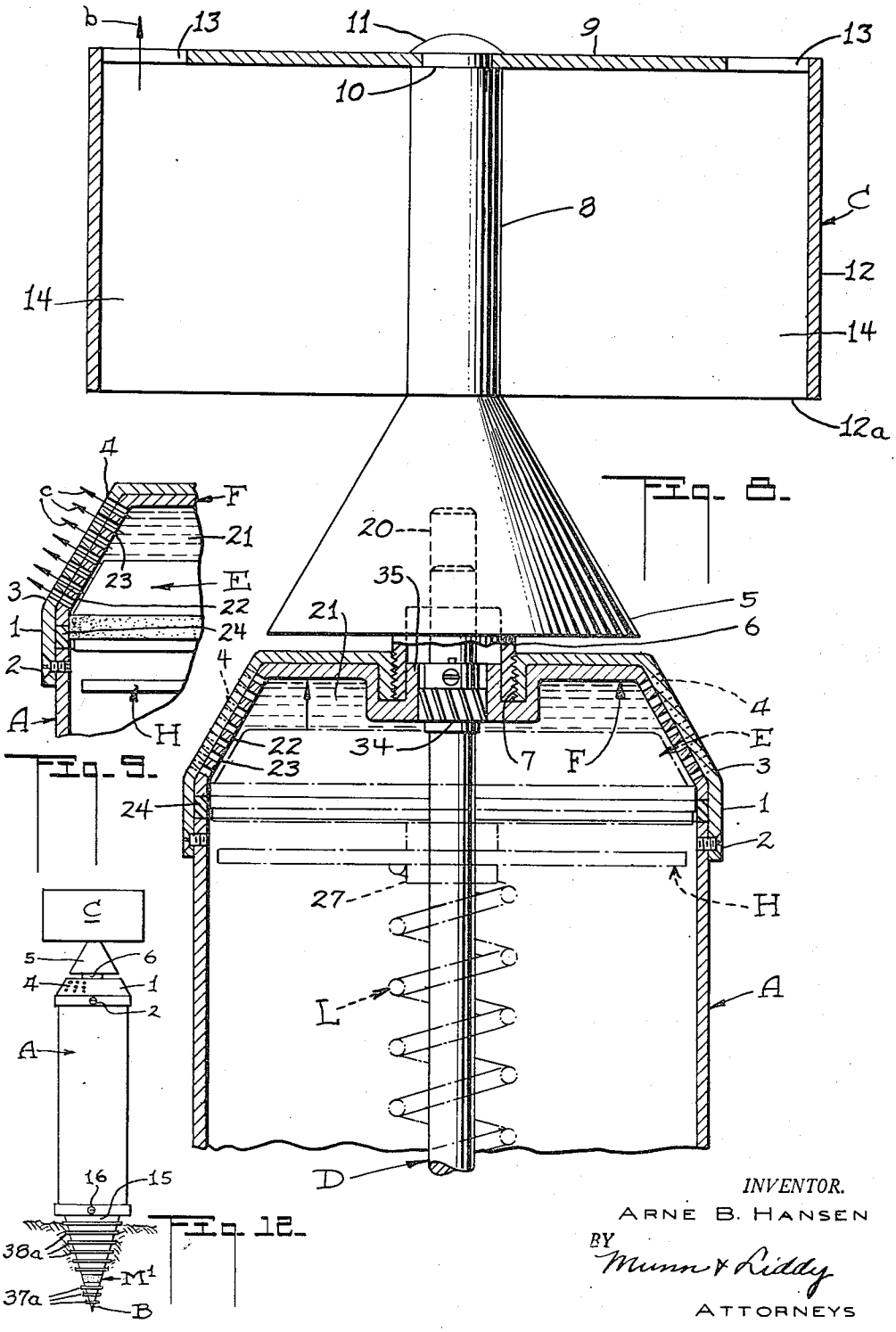
FIRE EXTINGUISHING OR INCENDIARY BOMB

Filed Oct. 30, 1951 4 Sheets-Sheet 3



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FIRE EXTINGUISHING OR INCENDIARY BOMB

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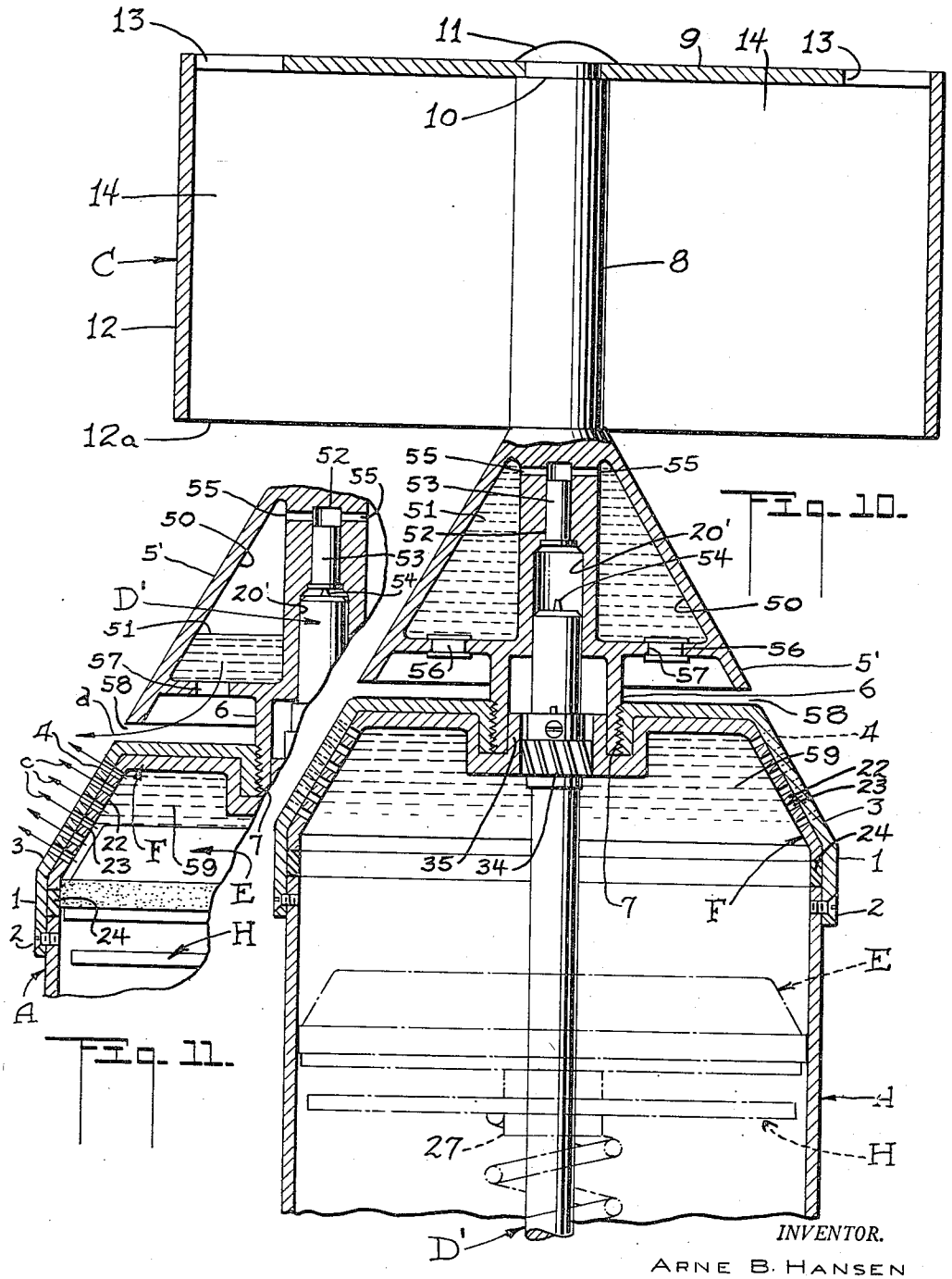

FIG. 10.

FIG. 11.

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FIRE EXTINGUISHING OR INCENDIARY BOMB

Arne B. Hansen, Sacramento, Calif.

Application October 30, 1951, Serial No. 253,864

5 Claims. (Cl. 102—6)

An object of my invention is to provide a bomb which may be dropped from airplanes and when used for putting out forest fires, it will automatically dispense fire extinguishing material over a prescribed area upon striking the ground or other object. Many forest fires originate in almost inaccessible places and frequently the fire gets beyond control before the fire fighters can reach the locality of the fire. One of the purposes of my invention is to provide a bomb that can be quickly flown by airplane to the scene of the fire and released for immediately combating the forest or brush fire, or other raging conflagration, such as a fire engulfed oil field, refinery, or a fire caused by an explosion.

Because of the element of time and the remote inaccessibility of many forest fires, and the intense heat of forest and petroleum fires, I have designed my device as a bomb which may be launched from an airborne craft. The bomb can be launched as a complete unit which will automatically dispense a given quantity of fire-extinguishing fluid over a certain area as it strikes the ground or an object.

A further object of my invention is to provide a device of the type described in which the fire-extinguishing fluid is retained within a casing and novel means is used for expelling all of the fluid from the casing when the bomb strikes the ground or other object.

A further object of my invention is to provide a device of the type described that makes use of a parachute-type tail for retarding the fall of the bomb through the air and for imparting a rotative movement to the bomb so that the conical-shaped forward end of the bomb with its threaded outer surface, will screw its way into the ground due to the rotative force plus the penetrating force exerted by the bomb at the moment of impact. The embedded conical head will hold the bomb in an erect position and the bomb has fluid outlet openings which are automatically opened upon the bomb's impact with the ground and therefore the fluid will be sprayed radially from the bomb in all directions to cover a large area. I make use of both spring and gas pressure in expelling the fire extinguishing fluid from the bomb.

The bomb can also be used as an incendiary bomb if a highly inflammable fluid is substituted for the fire extinguishing fluid. An automatically ignitable element can be used which will ignite upon the bomb striking the ground or other object and which will set the inflammable fluid to burning as the latter issues from the bomb. Very little change is necessary to alter the bomb from a fire extinguishing type to an incendiary type.

There are numerous uses to which the bomb could be put when acting as an incendiary bomb. The bomb could be used as a defensive weapon in warfare. For example, an enemy charging a beach head objective could be forced to retire if the bomb were used and the objective suddenly became a seething mass of flame. An entire attacking force advancing through a narrow pass, could be stopped by the use of the bomb. A near miss on an enemy concrete emplacement or tank would still render either object untenable.

Other objects and advantages will appear in the following specification, and the novel features of the device will be particularly pointed out in the appended claims.

My invention is illustrated in the accompanying drawings forming a part of this application, in which:

Figure 1 is a side elevation of the bomb shown in a position it would occupy as it descended through the air from an airplane;

Figure 2 is a top plan view of the tail assembly, when looking in the direction of the arrows II—II of Figure 1.

Figure 3 is a transverse section taken along the line III—III of Figure 5, and illustrates a part of the release mechanism for forcing fluid from the bomb;

Figure 4 is a transverse section taken along the line IV—IV of Figure 5, and illustrates a part of the gas release mechanism that in turn is utilized for forcing fluid from the bomb;

Figure 5 is an enlarged vertical section of the lower portion of the device and illustrates the release and driving mechanism for moving a piston through a cylinder for expelling fluid therefrom;

Figures 6 and 7 are horizontal sections taken along the lines VI—VI and VII—VII of Figure 5;

Figure 8 is an enlarged vertical section of the upper portion of the device and shows the mechanism for uncovering the outlet openings through which the fluid is forced when the bomb strikes its object;

Figure 9 is a detail of a part of Figure 8 and illustrates the fluid outlet openings uncovered;

Figure 10 is a sectional view similar to Figure 8, but showing the bomb altered so as to act as an incendiary bomb;

Figure 11 is a sectional detail view of a portion of Figure 10 and indicates the fluid outlet openings as being uncovered; and

Figure 12 is a side elevation of the incendiary bomb.

While I have shown only the preferred forms of my invention, it should be understood that various changes or modifications may be made within the scope of the appended claims without departing from the spirit and scope of the invention.

In carrying out my invention, I provide a bomb having a cylindrical housing A, as clearly shown in Figure 1. The forward end of the bomb is provided with a primer head B, while the rear end of the bomb carries a tail assembly indicated generally at C. It might be best to set forth the structure of the tail assembly C first, and then describe the internal structure of the bomb itself and show how the bomb is automatically set in operation when the primer head B strikes the ground or other object.

Tail assembly

The tail assembly is illustrated in Figures 1, 2 and 8. The cylindrical housing A of the bomb has the rear end 1 permanently secured thereto by screws 2 or other suitable fastening means, see Figure 8. The rear end 1 has a conical portion 3 which is perforated at 4 in the manner shown in Figure 9. The perforations extend entirely around the conical portion 3 and constitute a plurality of outlet openings for the escape of fluid that is housed within the cylinder A. The rear end 1 of the bomb is connected to a conical-shaped tail piece 5 whose outer surface is practically a continuation of the conical portion 3, see Figure 1. The tail piece 5 has a threaded cylindrical projection 6, see Figure 8, that is removably secured to a threaded recess 7 provided at the top of the rear end 1.

Figure 8 further shows the conical-shaped tail piece 5 as being integral with a cylindrical-shaped end member 8. Referring to Figure 2 as well as Figure 8, it will be seen that the cylindrical member 8 has a disc 9 secured thereto. The end 8 has a shoulder 10 against which the disc 9 rests. The free end of the cylindrical member 8 extending beyond the shoulder 10, is upset as at 11 for rigidly securing the disc to the member 8. A cylindrical casing 12 encircles the periphery of the disc 9 and faces toward the body A of the bomb. Both Figures 2 and 8 illustrate how the disc 9 is provided with a plurality of slots 13 which are placed adjacent to the casing 12 and are for the purpose of retarding the flow of air through the casing. In fact, the disc 9 and casing 12 act as an open parachute for retarding the fall of the bomb through the air. The air passing into the casing 12 cannot escape except through the slots 13. The area of the slots cuts down the flow of air passing through the casing, because all of the air entering the casing must pass through the

slots. In this way the speed of the bomb as it drops toward the ground is retarded.

I further utilize the tail assembly C for imparting a rotative movement to the cylinder housing **8** and to the entire bomb as it falls through the air. In both Figures 1 and 2, I show a plurality of vanes **14** that extend from the entrance end **12***a* of the housing **12** up to the inner surface of the disc **9**. The vanes are curved slightly in their vertical direction as shown in Figure 1, and therefore the passage of air into the housing and out through the bleeder slots **13** will cause the tail assembly C to rotate in the direction of the arrow *a* shown in Figures 1 and 2. The flow of air through the housing **12** is indicated by the arrows *b* in Figure 1. I do not wish to be confined to any particular size for the tail assembly C because this will depend entirely upon the weight of the bomb and its size as well as its shape. The function of the tail assembly is to retard the falling of the bomb as it moves toward the earth from an airplane that has just released it, and the additional function of the tail assembly is to impart a rotative movement to the entire bomb along its longitudinal axis. This rotational movement will tend to keep the bomb moving along its course and will cause the primer head B to enter the ground upon the impact of the bomb therewith.

Body structure

As already stated, the body of the bomb includes the cylindrical housing A. This housing extends from a conical shaped forward end **15** for the bomb, see Figure 5, to the conical-shaped rear end **1** shown in Figure 8. The forward end of the cylindrical housing A is secured to the conical-shaped forward end **15** of the bomb by screws **16**, see Figure 5, or other suitable fastening means. A plunger rod D extends entirely through the length of the cylinder housing A and has its forward end screwed into the primer head B as clearly shown in Figure 5. The plunger rod is slidably received in a bore **17** and the conical-shaped forward end **15** has diametrically opposed grooves **18** facing the bore **17** and in which the ends of a pin **19** are adapted to slide. The pin extends transversely through the plunger rod D and it will be seen that the structure permits the primer head B to move toward the adjacent end of the conical-shaped member **15**, but the rod will be prevented from rotating within the end **15**. In Figure 8, I show the opposite end of the plunger rod D slidably received in a bore **20** that is formed in the conical-shaped tail piece **5**. The purpose of permitting longitudinal movement of the rod D within the housing A while preventing rotational movement, will be described hereinafter.

A piston indicated generally at E in Figure 5 is slidably mounted within the housing A and the piston is free to slide on the plunger rod D. The piston can move from the forward end of the housing A, shown in Figure 5, into the tail end **1** of the housing as shown by the dot dash lines in Figure 8. Normally a fire extinguisher liquid **21** is placed within the housing A and extends from the piston E to the rear end **1** of the bomb. The movement of the piston E from the forward end of the bomb to the rear end thereof by a means presently to be described, will force the fire extinguishing liquid out through the outlet openings **4** shown in Figure 9, and the liquid will be sprayed radially from the openings **4** in all directions as indicated by the arrows *c* in Figure 9.

The openings **4** are normally closed so as to confine the fire extinguishing liquid **21** within the bomb housing A. I accomplish the closing of the openings **4** by a conical-shaped valve member F that is rotatably mounted within the interior of the rear end **1**, see Figure 8. The conical valve F has a conical portion **22** that is coextensive with the conical portion **3** and is provided with a plurality of outlet openings **23** of the same spacing and size as the openings **4**, but are normally out of registration with the outlet openings **4**. When the conical valve F is rotated with respect to the rear end **1**, the openings **23** will be brought into registration with the openings **4** and the fire extinguishing liquid **21** will be free to pass out through the aligned openings. The conical valve F has a rim that rides on a bearing ring **24** which in turn is secured to the interior of the rear end **1**, see Figure 8.

Valve and piston operating mechanism

In Figures 3 and 5, I show the housing A provided with a lock ring G that is secured to the housing so as to be held against rotation with respect to the housing. The ring G has a plurality of inwardly-extending projections **25**, see Figure 3, that are spaced apart, and these projections are normally disposed above a like number of radially and outwardly-extending projections **26** that are carried by a release disc H. In Figure 5 I disclose the release disc H as having a hub **27** for receiving a spiral toothed portion **28** of the plunger rod D. The interior of the hub **27** is provided with spiral grooves which will receive the spiral toothed portion **28**. The pitch of the teeth **28** and their complementary grooves in the hub **27** is such as to cause the disc H to rotate when the plunger rod D is moved upwardly in Figure 5 due to the primer head B striking the ground or another object. The angular movement imparted to the release disc H is sufficient to swing its outwardly-extending projections **26** out of registration with the inwardly-extending projections **25** of the ring G. Passageways **29** are formed between the adjacent inwardly-extending projections **25** of the ring G and when the disc H is rotated, the projections **26** thereof will be brought into registration with the passageways and therefore the disc H will be free to move along the longitudinal axis of the housing A because the projections **26** can move through the passageways **29**.

I provide novel means for releasing gas under pressure at the moment the release disc H is rotated so as to be freed from the lock ring G. Again referring to Figure 5, it will be seen that I provide a receptacle J within the conical end **15** for holding a liquid carbon dioxide indicated generally at **30**. This liquid carbon dioxide has previously been forced into the receptacle or container J under pressure by means of a self-closing inlet valve **31**, also shown in Figure 5. A plurality of outlet valves K are mounted on the top of the receptacle J, see Figures 4 and 5, and these valves are provided with handles **32** that are normally closed so that no liquid carbon dioxide can escape from the receptacle J. The handles **32** extend in an upright position when the valves K are closed. The under side of the disc H carries triggers **33** and these triggers will be moved when the release disc H is rotated. The triggers are in line to contact the upraised handles **32** when the disc is rotated and to swing the handles **32** for opening the outlet valves K. The result will be that the liquid carbon dioxide which is under pressure within the container J will issue from the outlet valves K as a gas and will exert its force against the release disc H and the piston E to move them. Inasmuch as the disc H is now freed from the ring G, the disc and piston will be moved upwardly in Figure 5 from the forward end of the housing A and will continue to move until they reach the rear end **1**.

It should be noted at this point that the same movement of the plunger rod D which will rotate the release disc H into its freed position, will also rotate the valve F for bringing the openings **23** of the valve into registration with the outlet openings **4**. To accomplish this, I provide a second member on the rod D with helical teeth **34**, see Figure 8. This second member on the rod D is slidably received within a hub portion **35** provided in the rear end **1**. The interior of the hub **35** has complementary helical-shaped grooves that will receive the helical shaped teeth **34** on the second member. Therefore, an upward vertical movement of the rod D in Figure 8 will rotate the valve F to uncover the outlet openings **4**. This rotative movement of the valve F takes place simultaneously with the rotative movement of the release disc H and therefore the opening of the valves K and the release of the carbon dioxide as a gas will permit the piston and disc H to move upwardly in Figure 8 to the dot dash line position and force the fire extinguishing liquid **21** from the housing A, out through the outlet openings **4**. I do not wish to be confined to any particular liquid or gas that might be placed in the container J. I am merely setting forth compressed liquid carbon dioxide as an example because this will change into a gas when released and will increase in volume many times. Also the particular type of fire extinguishing liquid can be varied to meet the situation involved.

I not only use gas for moving the piston E for expelling the fire extinguishing liquid from the bomb, but in addition I use a coil spring shown at L in Figure 5 for the same purpose. The coil spring is housed within a bore **36** and the conical member **15** and the spring is compressed when the release disc H is held against movement

by the lock ring G. However, as soon as the release disc H is rotated for freeing it from the lock ring, the full energy of the compressed spring L will be exerted against the disc H for moving it along the interior of the housing A. In Figure 8, I show the coil spring L in extended position by the dot dash lines after the spring has moved the piston E to the rear of the housing A. Of course the release of the gas aids the coil spring in moving the piston.

Operation

From the foregoing description of the various parts of the device, the operation thereof may be readily understood.

The cylindrical housing A is filled with the fire extinguishing liquid **21** and the container J is likewise filled with carbon dioxide liquid under pressure. Until the bomb is used, a safety U-shaped block M, see Figure 7, is inserted between the primer head B and the forward conical end **15**. The safety block acts as a spacer and prevents accidental movement of the primer head B toward the conical end **15**. It will be noted from Figure 1 that the primer head B and the conical head **15** are provided with a spiral rib or thread **37—38**, respectively.

The bomb is placed in an airplane or other airborne craft and is flown to the fire at which point it is released. The tail assembly C will cause the bomb to assume the vertical position shown in Figure 1 as it moves toward the ground through the air. At the same time the curved vanes **14** will impart a rotative movement to the tail assembly and to the bomb, causing the bomb to rotate during its descent. Before the bomb is dropped the safety U-shaped block M is removed from between the primer head B and the forward conical end **15**. A U-shaped rubber washer M1 may be substituted for the block M1. When the bomb strikes the ground, its rotation and downward thrust will cause the primer head B to screw its way into the earth. The initial impact will cause the conical end **15** to move downwardly toward the primer head B and this will cause the plunger rod D to move upwardly within the interior of the bomb housing A. The rubber washer M1 will act as a buffer as the end **15** and head B are forced toward each other.

As already explained, the upward movement of the rod D will cause the spiral toothed portion **28** of the rod, see Figure 3, to rotate the release disc H and move the disc projections **26** out of alignment with the lock ring projections **25**. The same rotative movement of the disc will cause the triggers **33** to open the gas outlet valves K. At the top end of the bomb, the same upward movement of the plunger rod D within the housing A will cause the helical teeth **34** to rotate the valve F and uncover the outlet openings **4** as clearly shown in Figure 9.

The movement of these various parts is automatic upon the bomb striking the ground and during the rotative movement of the primer head B and the conical end **15**, the helical ribs **37** and **38** will screw their way into the earth so as to support the bomb in an upright position when it comes to rest. The freeing of the release disc H from the lock ring G will permit the compressed coil spring L to move the disc and piston E upwardly in Figure 5. The same rotative movement of the disc H will open the outlet valves K and the carbon dioxide gas issuing from these valves will aid in moving both the disc and piston E upwardly. Inasmuch as the carbon dioxide liquid is under pressure in the container J, its release from the container will change it into a gas which will have many times the volume it formerly occupied as a liquid. Both the gas and the spring cooperate to move the piston E upwardly and to force the fire extinguishing fluid **21** out through the openings **4** as indicated by the arrows *c* in Figure 9. The fire extinguishing liquid will cut off the supply of oxygen to the blaze and will put out the fire. It is possible with this bomb and an airplane to reach a fire almost as soon as it is detected and to put out the fire by the release of the bomb before the fire has had a chance to gain any headway.

Incendiary bomb

It is possible to use the bomb as an incendiary bomb and a modified form of the tail end of the bomb is illustrated in Figures 10 and 11 to show how my present bomb can be used for this purpose. Like parts shown in Figures 1 to 9, inclusive, and in Figures 10 and 11, will be given similar reference letters and numerals and where the part in the modified form has been changed slightly the letter or numeral will be primed from that shown in Figures 1 to 9, inclusive. Figures 10 and 11 correspond with Figures 8 and 9 except that the conical shaped tail piece 5′ is now made hollow at **50** to receive a fluid **51** or other burnable material. The bore **20′** that receives the upper end of the slidable rod D′ communicates with a cartridge-receiving recess **52**. The cartridge **53** is placed in the recess and the top of the rod D′ has a pin **54** that will strike the cartridge **53** and cause it to explode when the rod is moved upwardly due to the impact of the bomb upon striking the ground.

Radially extending passages **55** lead from the recess **52** into the interior **50** of the tail piece 5′ and convey the fire created by the exploding cartridge, to the fuel **51** for igniting it. Blowout plugs **56** normally close openings **57** leading from the interior **50** to the atmosphere. The sudden buildup of pressure caused by the burning fluid **51** will force these blowout plugs out from the openings **57** and the burning fluid **51** will then issue from these openings and will pass out through an annular slot **58** that separates the tail piece 5′ from the rear end **1**.

It will be understood that the upward movement of the plunger D′ to explode the cartridge **53** will also rotate the release disc H shown in Figure 5 to open the gas outlet valves K and free the disc from the lock ring G. At the same time the outlet openings **4** in the tail section **1** will be uncovered by the rotation of the valve F. Therefore, the incendiary material **59** contained within the cylindrical housing A will be forced out through the openings **4** and will be ignited by the flame that issues from the openings **57** and passes through the annular slot **58** as shown by the arrow *d* in Figure 11. The result will be that the highly inflammable fluid **59** will be ignited by the flame issuing from the compartment **50** and all of the fluid **59** will burn and create an intense heat.

It is possible to make most of the bomb structure shown in Figures 10 and 11 from a heavy duty plastic that would be consumed by the burning of the highly inflammable fluid **59**. In this way all of the working parts of the bomb would be destroyed and the enemy could not detect its structure nor how it operated. If necessary the rod D′ could be made of metal but I do not wish to be limited to any particular type of material forming the various parts of the bomb. Figure 10 illustrates the firing pin **54** spaced from the cartridge **53**, while Figure 11 shows the firing pin in actual contact with the cartridge for exploding it. In fact, Figure 11 further illustrates the partial consumption of the burnable fluid or other material **51** disposed in the hollow interior **50**. This is the material that issues from the openings **57** and ignites the liquid **59** after passing from the annular slot **58**.

No mention need be made of the tail assembly C in the modified form of the invention, because it will be of the same construction as that shown in the form of the device illustrated in Figures 1 through 9, inclusive. The bomb shown in Figures 10 and 11 will operate in identically the same manner as the preferred form of the bomb, the only difference being that in the first form the device is used as a fire extinguisher, while in the second form the bomb is used as an incendiary one.

The helical ribs **37** and **38** shown in Figure 1, may be changed to a plurality of spaced rings **37*a*** and **38*a***, shown in Figure 12 when the bomb is used as an incendiary bomb. The rings are spaced a few inches apart and this will enable the incendiary bomb to continue its rotary spinning when it strikes the ground and the centrifugal force derived therefrom will cause the burning fluid issuing from the bomb to cover a much larger area than it would if the spiral ribs were used and the screwing in process halted the rotary spinning of the unit.

I claim:

1. In a bomb of the type described; an elongated housing for containing a dispensible fluid; a valve disposed near one end of the housing and being normally closed for retaining the fluid in the housing; a fluid dispensing piston disposed within the housing at the end opposite from the valve; automatic valve opening means including a rod that is carried by the housing and is slidable in the direction of its length and has an end projecting beyond the same housing end at which the piston is disposed; a tail assembly carried by the housing end at which the

valve is disposed and causing the housing to point the exposed end of the rod in the direction of travel when the bomb is moving through the air; whereby the exposed end of the rod will be the first to contact with and be moved by the ground upon the impact of the bomb therewith; means normally holding the piston from moving; a coil spring for moving the piston; means operatively connected to said rod for releasing said piston holding means when the rod is moved; whereby the spring will move the piston; said rod being operatively connected to the valve opening means so that a movement of the rod upon contact with the ground will actuate the valve opening means to open the valve and permit the fluid in the housing to escape therefrom as the piston is moved by the spring.

2. In a bomb of the type described; an elongated housing for containing a dispensible fluid; a valve disposed near one end of the housing and being normally closed for retaining the fluid in the housing; valve opening means; a fluid dispensing piston disposed within the housing at the end opposite from the valve; piston moving means disposed adjacent to the piston; means normally maintaining the piston moving means inactive; a rod carried by the housing and slidable in the direction of its length and provided with an end projecting beyond the same housing end at which the piston is disposed; a tail assembly carried by the housing end at which the valve is disposed and causing the housing to point the exposed end of the rod in the direction of travel when the bomb is moving through the air; whereby the exposed end of the rod will be the first to contact with and be moved by the ground upon impact of the bomb therewith; said rod being operatively connected to the valve opening means and to the means that maintains the piston moving means inactive so that a movement of the rod upon contact with the ground will actuate the valve opening means to open the valve and will free the piston moving means; whereby the piston will force the fluid from the housing through the opened valve.

3. In a bomb of the type described; an elongated housing for containing a dispensible fluid and having outlet openings therefor disposed at one end; a piston normally disposed at the other housing end and being movable in the housing for expelling the fluid through the openings; a container mounted adjacent to the piston and holding a piston moving fluid; at least one outlet valve for the container; a release disc rotatably and slidably mounted in the housing and having outwardly extending projections spaced from each other; a ring carried by the housing and having inwardly-extending projections that normally overlie the disc projections and prevent movement of the disc toward the piston; and means carried by the disc for opening the container outlet valve when the disc is rotated for disposing its projections between the ring projections; whereby the escaping fluid from the container will move the disc and piston for causing the latter to expel the dispensible fluid from the housing.

4. A bomb of the type described; an elongated housing for containing inflammable fluid and having outlet openings therefor disposed at one end; a piston normally disposed at the other housing end and being movable in the housing for expelling the fluid through the openings; a container mounted adjacent to the piston and holding a piston moving fluid; at least one outlet valve for the container; a release disc rotatably and slidably mounted in the housing and having outwardly extending projections spaced from each other; a ring carried by the housing and having inwardly-extending projections that normally overlie the disc projections and prevent movement of the disc toward the piston; means carried by the disc for opening the container outlet valve when the disc is rotated for disposing its projections between the ring projections; whereby the escaping fluid from the container will move the disc and piston for causing the latter to expel the inflammable fluid from the housing; a reservoir for holding a burnable material; means for igniting the burnable material; means for guiding the burnable material to the outlet openings for igniting the inflammable fluid as it issues from the outlet openings; a valve normally closing the outlet openings; and connections between the means for igniting the burnable material and the valve, for opening the valve when the igniting means ignites the burnable material.

5. In a bomb of the type described: an elongated housing for containing a dispensible fluid and having outlet openings therefor disposed at one end; a piston normally disposed at the other housing end and being movable in the housing for expelling the fluid through the openings; a container carried by the housing and mounted adjacent to the housing end disposed opposite to the outlet openings and holding a piston moving fluid; at least one outlet valve for the container; a release disc rotatably and slidably mounted in the housing and having outwardly extending projections spaced from each other; a ring carried by the housing and having inwardly-extending projections that normally overlie the disc projections and prevent movement of the disc toward the piston; means carried by the disc for opening the container outlet valve when the disc is rotated for disposing its projections between the ring projections; whereby the escaping fluid from the container will move the disc and piston for causing the latter to expel the dispensible fluid from the housing; and a coil spring for moving the piston; said spring cooperating with the escaping fluid from the container for aiding in moving the piston.

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