April 22, 1969 W. J. HUSTON, SR 3,439,608

MEANS AND METHOD OF DESTROYING OLD AUTOMOBILES AND THE LIKE

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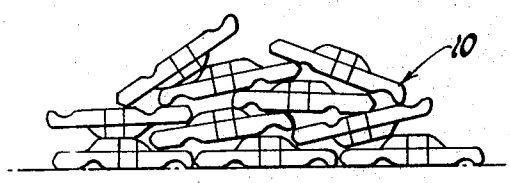


Fig. 1

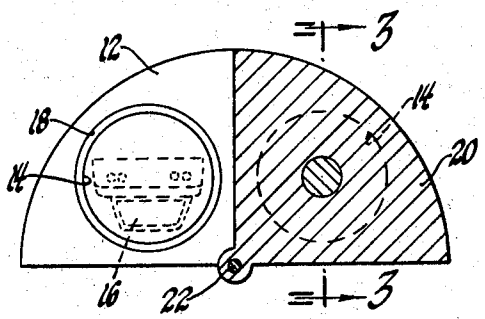


Fig. 2

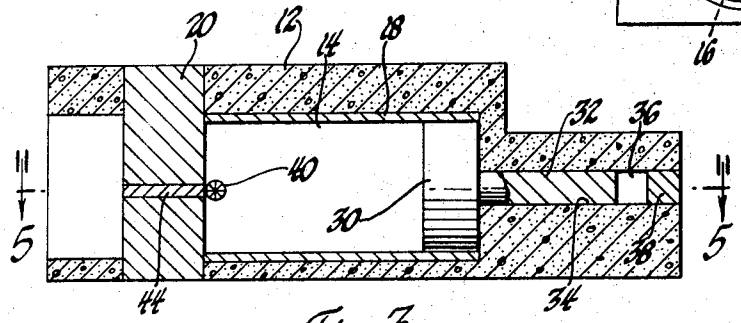


Fig. 3

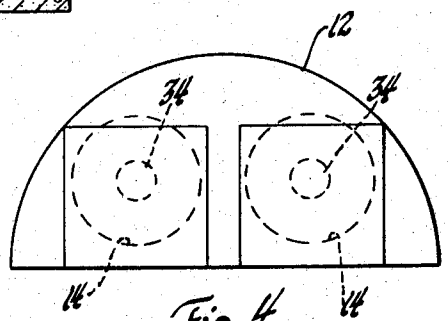


Fig. 4

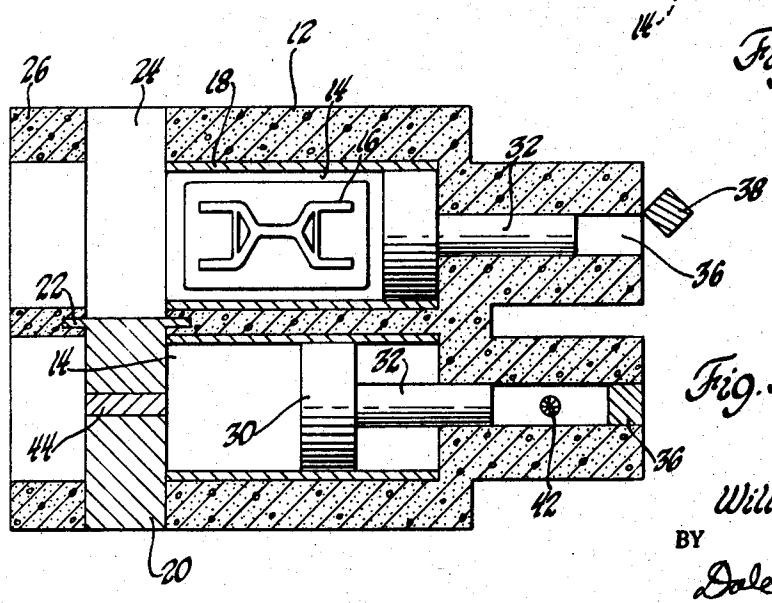


Fig. 5

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MEANS AND METHOD OF DESTROYING OLD AUTOMOBILES AND THE LIKE

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U.S. Cl. 100—38 6 Claims

ABSTRACT OF THE DISCLOSURE

Scrap metal is compacted by placing it within an enclosed space, the temperature of the space is raised by igniting an explosive charge therein and finally a wall of the enclosed space is driven into compacting engagement with the scrap metal by means of an explosive charge.

This invention relates to a means and method of destroying old cars in a convenient and economical manner.

As the standard of living goes up and with it the production, use and discarding of more and more automobiles each year, a problem has been created as to just how to best get rid of the old worn-out family car. The problem has become quite acute even in some areas where suburban outgrowth has caught up and swallowed the junk yard; formerly well out of town.

Suggestions have been made to strip and then ship old cars far out to sea for burial. And, much different equipment to burn, break and bale the old cars up for easier handling has also been proposed.

Most power operated equipment for breaking-up and compacting old cars is hydraulically operated. It is usually large, cumbersome, noisy and troublesome. Furthermore, it is of such expense to manufacture and service that only very large junk or scrap yard facilities can afford the initial investment and operating expense involved.

This invention contemplates the use of explosive power to compact old cars and the like.

It is an object of this invention to teach the use of explosives to both plasticize and to compress and compact old car bodies after they have been stripped and made ready.

It is an object of this invention to disclose a simple apparatus including few moving parts and made rugged and sturdy for its intended purpose. Such apparatus includes a combustion chamber receptive of a whole car body and in which an explosive charge may be ignited to raise the temperature in the compartment and to subject the car body to a latent heat sufficient to make it less resistant to compacting forces to follow.

The apparatus proposed also includes power operated piston means acting in the chamber to compact the car body after it has been subjected to the high heats of the first explosive charge. The source of power may be, and is preferably, a second explosive charge to drive the piston member to accomplish its intended purpose.

In the disclosure which follows, similarities are made to both the combustion chamber of an automobile engine, where combustion raises temperatures and drives a piston member, and also to firearms and heavy artillery where explosives are used to propel a member, breech closures are provided and successive chamber areas are employed.

Having these and other devices in mind, and with an open mind to all possibilities, the following description of one foreseeable embodiment of this invention is given by way of example and without any limitations other than are specifically recited.

Referring to the drawing:

FIGURE 1 pictorially shows an unsightly pile or stack of old automobiles.

FIGURE 2 is a front schematic and partially cross-sectional view of one form of the apparatus envisioned.

FIGURE 3 is a side cross-sectional view taken in the plane of line 3—3 of FIGURE 2 through one of the combustion chambers of the apparatus disclosed hereinafter.

FIGURE 4 is a back view of the apparatus.

FIGURE 5 is a top plan view, in cross-section, of the apparatus for destroying old cars and the like, of this invention, as shown in the plane of line 5—5 of FIGURE 3.

In practically every city of the world, or just outside, there is a grave yard for old cars and other vehicles. Frequently, other scrap metal is also collected in these depositories and it is common to see old cars stacked three and four high as in FIGURE 1, and identified **10**.

Usually, the cars are stripped of everything of value along the way to their final destruction, in whatever form it may be. Good parts and side panels are removed, accessory items are salvaged, tires and wheels are removed, windshields and side glass are destroyed, and seats, headliners, etc. are eventually burned out.

All that remains is a shell which has been made as practically indestructible as possible.

Wherein lies the problem.

One solution is to provide a concrete bunker or housing **12** with one or more cylindrical chambers **14** of a size receptive of an old car body **16**, therein. In the unit shown there are two chambers **14**, side-by-side, and each with a cylindrical steel liner **18**, or such, for further strength and reinforcement.

A large explosion resistant door **20** is pivotally hung, as at **22**, to swing between the two chambers **14** so that when it closes one, it leaves the other open.

In the instance shown, the bunker **12** is formed to include a swing way **24** for the quarter-section door **20** so that it is backed-up or stopped by outer wall parts **26**, at the open ends of the chambers; against lateral movement due to an explosion or such in the chambers for reasons soon to be appreciated.

In the chamber space **14** is a plunger or piston like member **30**. It fits the cylindrical space and is reciprocal practically the full length of the chamber as will be shown. In the embodiment disclosed the member **30** includes a shank **32** fitted in a smaller bore **34** which helps guide the larger part.

Behind the end of the plunger or piston shank **32**, is a breech space **36**. This is closed by a breech block **38** much in the way of a heavy field artillery piece; a cannon or such.

Now then, within each of the chamber space **14** and the breech space **36** of each chamber member is intended to be an explosive charge **40** and **42** and means of setting it off. In both instances the charge could be carried by the closure door; the larger one **20** and the smaller breech block closure **38**.

Over and beyond this, some means of venting the space **14** is needed and may be such as a removable plug **44** or otherwise.

The apparatus disclosed is used as follows:

Being provided at a scrap or junk yard, either permanently or as a portable unit temporarily left there, it is set up to receive and compact car bodies alternately within the two chamber spaces **14**.

A car body, stripped and made ready, is slid, pushed, dropped or otherwise deposited in the one of the chambers **16** which is open and not closed by the heavy and indestructible door **20**. In doing so, or before, the piston or plunger part **30** is moved back in the chamber space against the far end wall.

An explosive charge **42** is placed in the breech space **36** and the block **38** is swung into place to close the bore **34**.

An explosive charge is similarly placed in the chamber space **16**, as in closing the door **20** over the open end thereof, or with the removable plug **44**.

The next step is to detonate the charge **40** to raise the temperature in the chamber space **16** and make the metal of the car body more plastic and susceptible to being squashed or compacted, as is about to be done.

In due course, after this, the charge **42** is detonated to drive the plunger or piston member **30** home and squash the car body against the stopped door **20**. In doing so some venting of the chamber **16** is advisable. However, use of further compression for higher temperature purposes is not to be overlooked.

While this has been occurring in the one chamber, it will be appreciated that the compacted car body has been removed from the other chamber space and another car body has been made ready for destruction.

Although not shown, it will be appreciated that a crankshaft with suitable crank throw connections to the two piston members might be feasible, that the chambers might rotate and the closure door or such be stationary, like the cartridge cylinder of a revolver, and that other innovations might be included and used with the basic idea presented.

I claim:

1. The method of compacting scrap metal comprising;

placing scrap metal in an enclosed space igniting an explosive charge in said spaced for raising the temperature therewithin,

and igniting a second charge outside and next adjacent a wall of said enclosed space for driving said wall into compacting engagement with the scrap metal therewithin.

2. The method of compacting scrap metal of claim **1**, comprising;

venting said enclosed space in the course of compacting said scrap metal.

3. Apparatus for compacting scrap metal, comprising;

means providing a combustion chamber open at one end, and having a piston member operable therein,

said chamber providing means being receptive of scrap metal therewithin and having a combustion resistant closure for the open end thereof,

means for raising the temperature within said chamber

for making the scrap metal therein more plastic and susceptible to being compacted, and explosive means operable of said piston for driving the same in said chamber and compacting the scrap metal, said temperature raising means including an explosive charge.

4. The apparatus of claim **3**, including

side-by-side combustion chamber means having a common closure operable therebetween and across the open ends thereof for alternate loading and compacting the scrap metal in said different chamber means.

5. Explosive means for compacting scrap metal and comprising;

an explosive resistant bunker having a pair of cylindrical chambers provided in parallel spaced relation therein,

said chambers being open at like ends and receptive of scrap metal for compacting therein,

an explosive resistant closure positionable to close one of said chambers and to leave the other thereof open,

power operated means within said chambers for compacting the scrap metal against an end wall thereof,

a source of explosive power within said chambers for actuating said power operated means, and

a first source of explosive power for raising the temperature in a closed chamber prior to the compacting of the scrap metal by said power operated means.

6. The explosive compacting means of claim **5**, including,

means for moving said closure between the open ends of said chambers for alternately closing one for compacting use and opening the other to abort compacted scrap metal and receive more scrap metal for compacting therein.

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U.S. Cl. X.R.

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