

[54] **DUMMY SHELL**

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[57] **ABSTRACT**

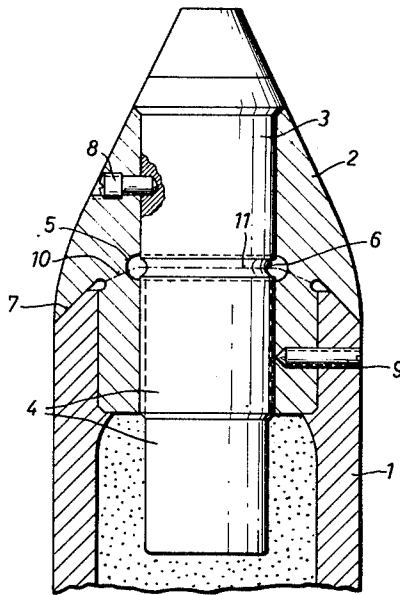
A dummy shell with a screwed-in impact-ignition-and-decomposition device which comprises means for weakening the cross-section of the head of the shell at a set breaking point within the range of the connecting plane between the impact-ignition device and the decomposition device. By this arrangement it is brought about that upon inclined or flat impact of the shell, the impact-ignition-device separates itself from the decomposition device, and the latter remains in the jacket of the shell.

[56] **References Cited**

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3 Claims, 2 Drawing Figures



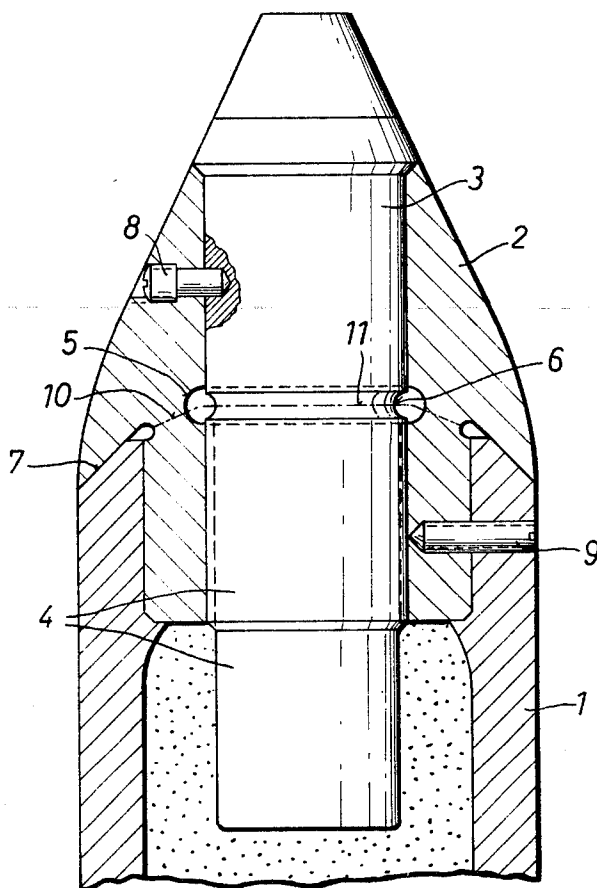


FIG. 1

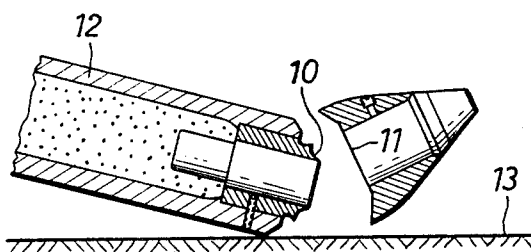


FIG. 2

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DUMMY SHELL

The present invention relates to a dummy shell having a screwed-in impact-ignition device and a decomposition device.

Shells of this type are known in many structures. They consist substantially of an ignition housing and a shell head, respectively, which is screwed into the shell jacket, which ignition housing and shell head, respectively, receives again an impact-ignition device and decomposition device. The decomposition device serves, among others, the purpose of bringing about the shell to detonate nevertheless, in case of an inclined impact of the shell, that means, when the impact-ignition device does not become effective, or if it fails for any other reasons. In such firings, it happens that the complete ignition device, namely the impact-ignition device and the decomposition device are thrown out of the shell jacket and the shell is not brought to detonation by the failing decomposition device. Aside from the fact that the shell does not fulfill its task to bring about detonation upon impact or after a predetermined time period, a serious danger is created by the shell jackets filled with explosives remaining unimpaired, since upon using of short practice places, a shell separated from the ignition device could fly beyond a maximum permitted path and thus could create appreciable damage.

It is one object of the present invention to provide a dummy shell in which upon flat or inclined impact a loosening of the decomposition device is prevented and thus a decomposition of the shell is assured in every case.

It is another object of the present invention to provide a dummy shell, wherein within the range of the connecting plane between the impact-ignition device and the decomposition device, the shell head cross-section is reduced to a set braking point such that upon inclined or flat impact of the shell the impact ignition device separates from the decomposition device remains. This set braking point is prepared such that the cross-section of the ignition housing and of the shell heads, respectively, as well as of the impact-ignition device is reduced by a recess of annular groove-like shape.

It is a further advantageous development of the present invention to raise and to form as a truncated cone the end face limit of the shell jacket up to the range of the set breaking point such, that during sliding of the shell jacket separated from the impact-ignition device, over the ground, the shell jacket is effective to within the truncated cone-like end face limit disposed within the range of the breaking point, against prying open of the shell jacket and throwing out the decomposition device by rejection of the penetrating soil. Several other possibilities are also available for the production of the set breaking point. Without this conical end face limit the drawback would be present, that the straight end face created during breaking up upon sliding over the ground would create a shovel effect, which would make possible the penetration of the soil between the shell jacket and the decomposition device. A prying open of the shell jacket and throw-out of the decomposition device would then occur.

With these and other objects in view which will become apparent in the following detailed description, the present invention, which is shown by example only, will be clearly understood in connection with the accompanying drawing, in which:

FIG. 1 is a section through the shell head of a dummy shell; and

FIG. 2 is an axial section of a shell after an inclined impact. The shell head comprises a shell jacket 1 in which the cylinder housing 2 is pressed in or screwed in and is secured by the threaded pin 9. An ignition comprising an impact ignition

device 3 and a decomposition device 4, formed integrally as one piece with the impact ignition device 3, is screwed into the ignition housing 2 and secured again by a set screw 8. Within the range of the connecting plane between the impact ignition device 3 and the decomposition device 4 a weakening of the cross-section of the impact ignition device 3 is brought about by the annular groove 6, as well as of the ignition housing 2 by the annular groove 5. The end face limitation 7 of the shell jacket 1 is formed as a truncated cone. If now the shell performs an impact in the manner shown in FIG. 2, the ignition housing 2 and the impact ignition device 3, respectively, break off at the set breaking points 10 and 11, whereby it is brought about, that the decomposition device 4 by a set breaking off of the impact-ignition device and of the ignition housing is not torn out of the shell sleeve 12, rather remains for the start of the detonation of the shell in the shell jacket 12. During further sliding of the shell jacket 12 on the ground, the truncated cone-like formed end face limit 7 of the shell jacket 1 rejects slide-like the soil 13 which is prevented from penetration between the shell jacket 1 and the decomposition device 4 and prying open of the shell jacket 1. Thereby the possibility is removed that the decomposition device 4 gets lost by the prying open the shell jacket 1 of the shell sleeve 12.

Within the framework of the present invention for production of the set breaking point, several possibilities are available, as for instance, an annular groove turned in from the inside into the ignition housing, which retains a thin jacket wall as a set breaking point. This annular groove can be again advantageously conically formed.

While we have disclosed one embodiment of the present invention, it is to be understood that this embodiment is given by example only and not in a limiting sense.

We claim:

1. A dummy shell, comprising,
 - a shell jacket,
 - an ignition housing forming a shell tip secured to said shell jacket,
 - a one-piece ignition device contained in said ignition housing and comprising an impact-ignition means and a decomposition ignition means,
 - said decomposition ignition means being screwed into said ignition housing,
 - said ignition housing being provided with a first annular recess formed set breaking point,
 - said ignition device being provided with a second annular recess formed set breaking point between said impact-ignition means and said decomposition ignition means, and
 - said first and second annular recesses forming set breaking points being disposed adjacent one another at the same longitudinal distance of said shell, such that by an inclined striking of said dummy shell on a target, said ignition housing with said impact-ignition means breaks off in said set breaking points and said decomposition ignition means remains in said shell jacket.
2. The dummy shell, as set forth in claim 1, wherein said shell jacket extends substantially to the level of said annular recess in said ignition housing, whereby the reduction of the cross-section obtained thereby, serves as said first set breaking point.
3. The dummy shell, as set forth in claim 3, wherein said shell jacket has an end formation disposed within the range of said first set breaking point and having the shape of a truncated cone, such that upon sliding of a said shell jacket after being separated from said impact ignition means, over the ground, said end formation is effective against prying open of said shell jacket and spattering of said decomposition device by rejection of penetrating soil material.

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