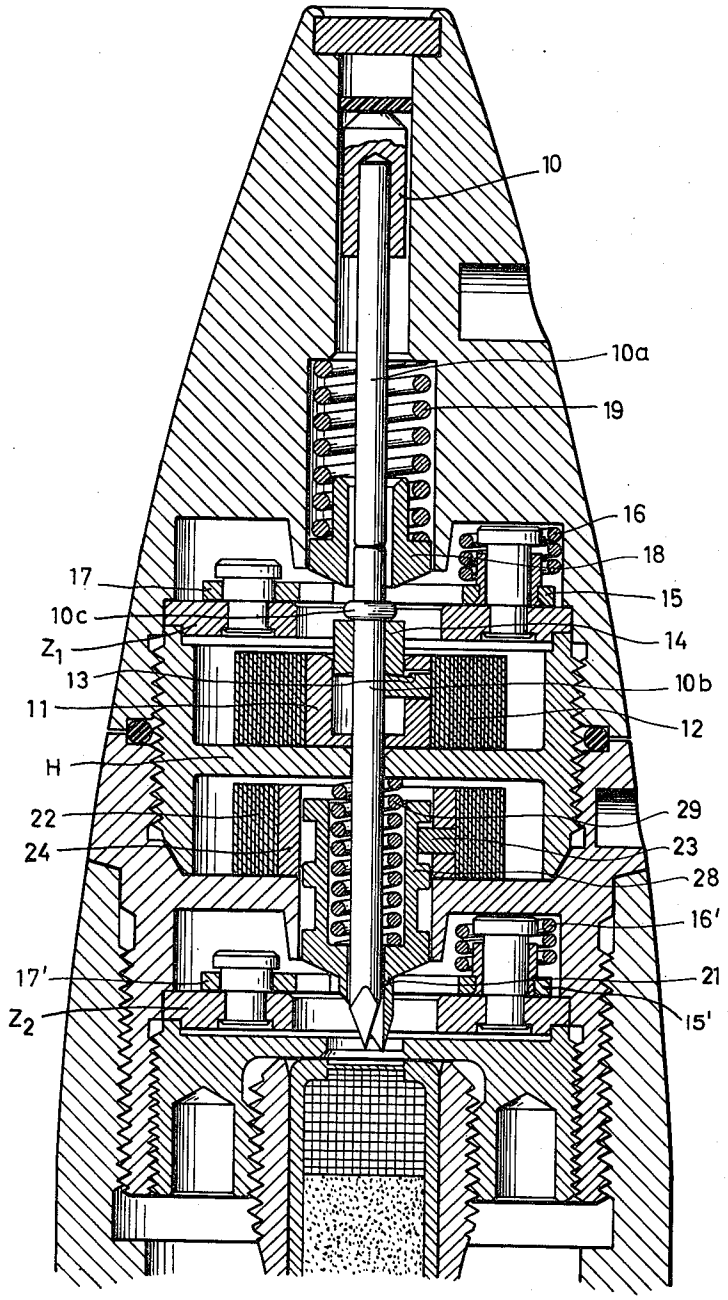
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SELF-DESTROYING FUZE FOR ROTATING PROJECTILES

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SELF-DESTROYING FUZE FOR ROTATING PROJECTILES

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The invention relates to self-destroying fuze for rotating projectiles with head firing pin bolt which is locked by a centrifugal spiral band and released by a self-destroying device. Such fuzes are intended for firing at targets in the air. If the target is missed, they should destroy themselves so that they no damage when striking the ground at the end of their trajectory. This is particularly important when shooting in practice areas where it cannot always be guaranteed that there is no traffic in the hinterland.

Now the object of the invention is to ensure the operation of the self-destroying fuze under all circumstances.

The aim of the invention is therefore to provide two self-destroying devices operating absolutely independently of each other and each acting on its own firing pin in the new self-destroying fuzes for rotating projectiles with head firing pin bolt which is locked by a centrifugal spiral band and released by a self-destroying device. The two self-destroying devices are arranged one behind the other and their centrifugal spiral bands are located one on each side of an intermediate bottom or partition of a sleeve of H-shaped cross-section, which has an external screw thread on its periphery by means of which the fuze cap and fuze body are held together. The rear self-destroying device comprises a striker sleeve surrounding the firing pin shank and accommodates a striker pin, said sleeve having an outer flange which engages behind the centrifugal segment of is centrifugal spiral band locking device and an extension at its rear end tapering to a point and serving as firing pin. Each of the two self-destroying mechanisms with its identical parts is mounted one on each of two identical plates which are each fixed on an inner shoulder in the fuze bore.

An embodiment of the invention is illustrated in longitudinal section by way of example in the only figure of the accompanying drawing.

The fuze has an axial two-part firing bolt. The front part **10***a* carries an impact head **10** and bears against the rear part **10***b* which carries at its rear end the striker pin. The striker pin shank **10***b* has at its front end a rigid collar **10***c*. This is followed by a centrifugal segment **13** mounted in a transverse slot in a sleeve **11** which serves as core for a centrifugal band spiral **12** locking the centrifugal segment **13**. The centrifugal segment has, in known manner, a circular segment-shaped notch in which the concave rear side of the sleeve **14** engages. The firing bolt is surrounded by a hammer sleeve **18** loaded by a percussion spring **19**.

The hammer sleeve **18** together with its percussion spring is held under tension by the release lever **17** which in turn is locked by the centrifugal lever **15** of the self-destroying device. In locking position this lever is loaded by a torsion spring **16** and prevented from swinging inwards by a deforming safety member not shown.

The construction and manner of operation of the self-destroying device are known and are not the subject matter of the invention.

Behind the above-described self-destroying device a second self-destroying device is arranged according to the invention and operates independently of the front self-destroying device.

It consists of a striker sleeve **28** surrounding the rear part **10***b* of the pin shank and terminates at its rear end in a neck which is tapered to a point and forms a striker **21**. The striker spring **29** is located in the interior of the striker sleeve. The striker sleeve **28** and the striker spring are held tensioned by the same means as in the front self-destroying device, namely by a releasing lever **17'**, self-destroying centrifugal lever **15'**, torsion spring **16'** and deforming safety member.

Also in this case the locking is effected by a centrifugal spiral band **22** which is wound around a core sleeve **24** and locks a centrifugal segment **23** which is located in a transverse slot in the core sleeve **24** and engages behind an outer flange on the striker sleeve **28**. The construction of the rear self-destroying device, with the exception of the striker sleeve **28**, is identical with the front self-destroying device.

The releasing mechanisms of the two self-detonating devices are mounted on two identical plates Z^1 and Z^2 which are fixed on inner shoulders in the fuze bore.

Both centrifugal band spirals with their cores are located in a sleeve H of H-shaped cross-section one on each side of an intermediate bottom or partition and provided with an external screw thread serving at the same time for holding together the fuze body and fuze cap.

The manner in which the two self-destroying devices operate is known and therefore need not be described. The two devices operate entirely independently of each other so that it can be assumed with certainty that at least one destroying impulse will be successful.

What is claimed is:

1. Self-destroying fuze for rotating projectiles with head striking bolt which is locked by a centrifugal spiral band and released by a self-destroying mechanism, comprising two-self-destroying devices operating absolutely independently of each other, each of which acts on its own striker pin, the two self-destroying devices being arranged one behind the other and each having a centrifugal band, located one on each side of the intermediate bottom of a sleeve of H-shape in cross-section provided with an external screw thread by means of which it holds together the fuze cap and fuze body.

2. Self-destroying fuze according to claim **1**, in which a centrifugal segment and a striker sleeve are provided with the sleeve surrounding a striker pin shank and enclosing a striker spring, said sleeve having a flange on its outer side which engages behind the centrifugal segment of its centrifugal spiral locking device and has at its rear end a tapered and pointed extension forming a striker.

3. Self-destroying fuze according to claim **1**, in which two identical plates are provided with the self-destroying devices with their identical parts being mounted each on an identical plate, each of the two plates being fixed on an inner shoulder in the bore of the fuze.

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