

Jan. 10, 1967

G. JACOBSON

3,296,929

MISSILES

Filed Sept. 16, 1964

3 Sheets-Sheet 1

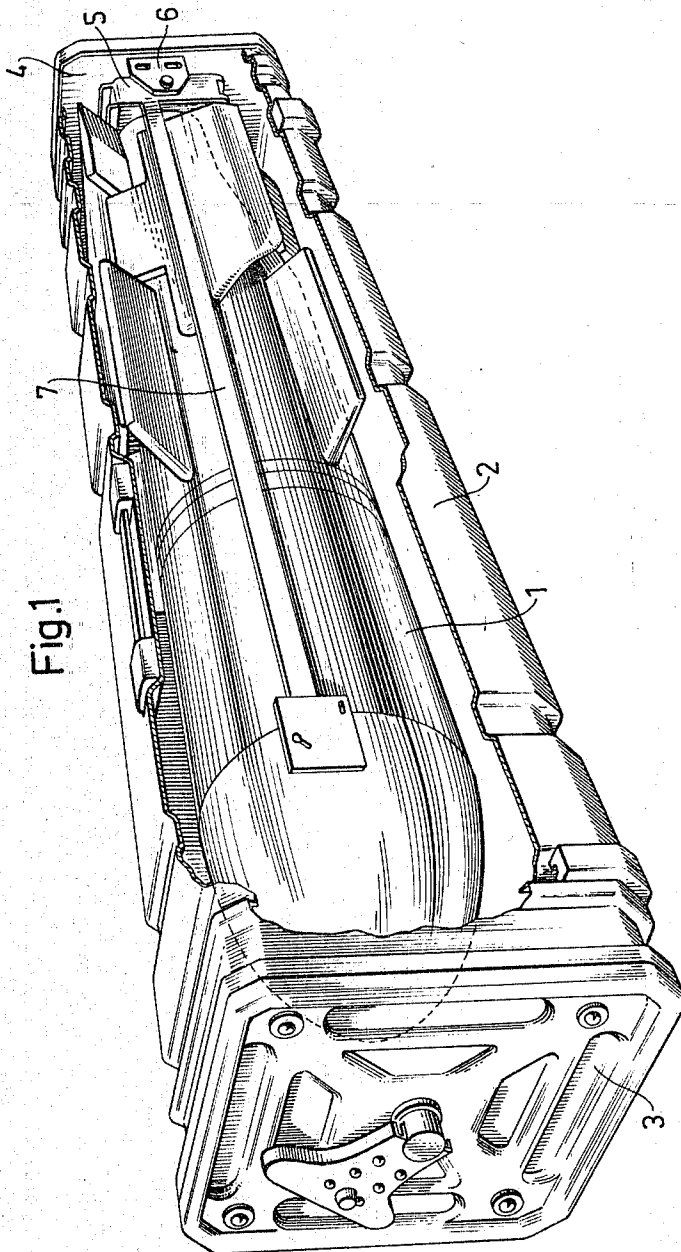


Fig. 1

INVENTOR

GUNNAR JACOBSON

Hauer and Nydick

BY

ATTORNEYS

Jan. 10, 1967

G. JACOBSON

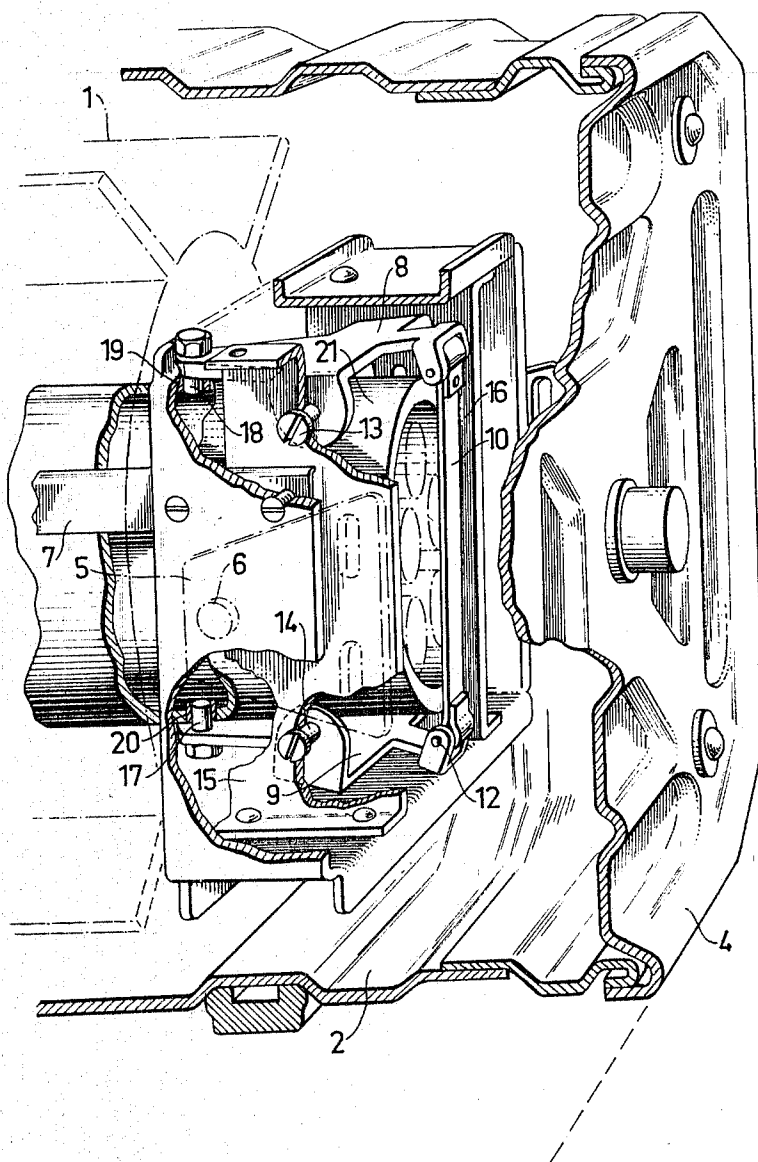
3,296,929

MISSILES

Filed Sept. 16, 1964

3 Sheets-Sheet 2

Fig.2



INVENTOR

GUNNAR JACOBSON

BY

Hane and Nydick

ATTORNEYS

Jan. 10, 1967

G. JACOBSON

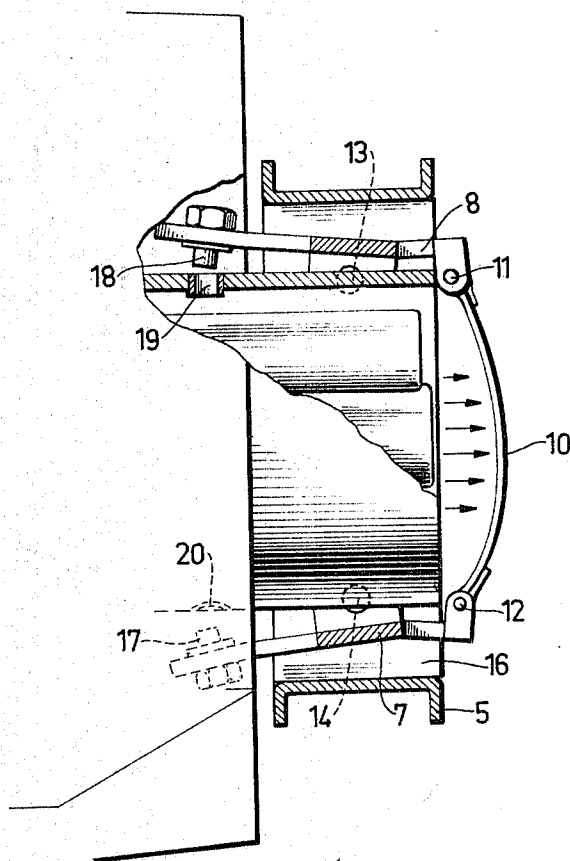
3,296,929

MISSILES

Filed Sept. 16, 1964

3 Sheets-Sheet 3

Fig. 3



INVENTOR

GUNNAR JACOBSON

BY

Hane and Nydick

ATTORNEYS

1

3,296,929
MISSILES

Gunnar Jacobson, Bofors, Sweden, assignor to Aktiebolaget Bofors, Bofors, Sweden, a corporation of Sweden

Filed Sept. 16, 1964, Ser. No. 396,869
Claims priority, application Sweden, Oct. 16, 1963,
11,370/63

2 Claims. (Cl. 89—1.806)

The present invention relates to an improvement in a missile which is disposed in a portable box which serves both as a support for the missile during transport and as a barrel for launching the missile.

A broad object of the invention is to provide a simple and reliable device for mounting the missile in the box, said device securely holding the missile in the box during transport or storage while automatically releasing the missile when it is launched.

According to the present invention, there is arranged, in the rear part of the box, a holding means comprising engagement members adapted to be received in recesses in the rear end of the missile and a strip connected to said members. This strip extends across the rear end of the missile and is so constructed that when the missile is started it is acted upon by the combustion gases generated by the missile to release said engagement members from the missile.

An embodiment of the invention is illustrated by the accompanying drawings, wherein:

FIG. 1 shows a perspective view of the missile disposed in the box;

FIG. 2 shows a perspective view, with parts broken away, of the rear end of the box; and

FIG. 3 illustrates the function of the device when the missile is launched.

Referring to FIGURE 1, the missile 1 is shown disposed in an elongate box 2, which is suitably provided with carrying means to enable it to be carried on the back of a person. The box 2 is also intended to support and guide the missile when it is launched and for this purpose it should suitably be provided with means for placing it in a suitable position for launching. The box 2 has a front cover 3 and a rear cover 4 which are removed when the missile is made ready for launching.

The missile 1 is secured in the box 2 only at its rear end. The means for this purpose are provided in a frame structure or back piece 5 which is attached to the walls of the box by brackets 6. The back piece 5 also carries two bars 7 which serve to carry electrical conductors extending to the missile for transmitting electric signals for its guidance.

The back piece 5 carries a hinged strap comprising upper and lower links 8 and 9 respectively and a joining rear strip 10 which is hingedly connected to the rear ends of the links 8 and 9 at 11 and 12 respectively. The links 8 and 9 are pivotally attached by means of pivots 13, 14 to two plates 15, 16 carried by the back piece 5.

At their front ends, the links 8 and 9 carry studs 17, 18 which are directed toward each other and in the mounting position enter holes 19, 20 in the rear end 31 of the missile, said end forming an exhaust nozzle for the starting motor of the missile. In the described position, the strip 10 is straight, as seen in FIGURE 2, and the length of the strip is such that in this position, the links 8, 9 diverge slightly at the ends adjacent to strip 10.

2

The back piece 5 and the members carried by it are suitably attached to the missile, before it is placed in the box, whereupon the missile is introduced together with the back piece into the box and secured by means of the brackets 6 and studs 17 and 18.

When the missile is to be launched, its starting rocket motor is started and the combustion gases thereof flow out backwardly as shown with arrows in FIGURE 3. The strip 10, while sufficiently rigid to retain its shape under normal stresses occurring in transport and handling, is sufficiently flexible to be bent out rearwardly by the pressure of the gases, as shown in FIGURE 3. Thereby, the rear ends of the links 8, 9 will be pulled closer together, which results in their front ends bearing studs 17 and 18 being moved further apart, so that the studs are withdrawn from the holes 19, 20, whereby the missile is released.

The hinged strap 8, 9, 10 gives the missile a limited desired freedom of movement within the box in the vertical direction. A corresponding freedom of movement in the transverse direction is obtained by the studs 13, 14 having such length that they can be displaced slightly axially with respect to the plates 15, 16.

What is claimed is:

1. A device for securing a rocket-type missile in a box constituting a support for the missile when in transport and a launching barrel for the missile, said device comprising releasable locking means for locking the box and a missile therein to each other, said locking means including two locking members pivotally mounted within the box on opposite sides thereof in reference to the lengthwise position of the missile, each of said locking members being pivotal into and out of locking engagement with the body of the missile and a release means for pivoting said locking means from the locking position into the release position, said release means including a flexible strip secured at each end to one of said locking members and extending across the path of gases generated by the missile when launched, said strip having an initial effective length such that the two locking members are held in locking engagement and being deformable by the impact of the gases into a curved configuration in which the effective length of the strip between the locking members is reduced to a length such that the locking members are pivoted out of locking engagement with the body of the missile.

2. A device according to claim 1 wherein a frame structure is secured to the walls of the box, each of said locking members comprising a two-arm lever pivotally mounted on the frame structure, one arm of each of said levers being engageable with the body of the missile and the other being secured to the respective end of the strip.

References Cited by the Examiner

UNITED STATES PATENTS

2,831,400	4/1958	Hosli	89—1.7
2,848,925	8/1958	Hood	89—1.7
3,011,405	12/1961	Moss et al.	89—1.7
3,015,992	1/1962	Ransom	89—1.7
3,138,064	6/1964	Choate et al.	89—1.7

BENJAMIN A. BORCHELT, *Primary Examiner.*

SAMUEL W. ENGLE, *Examiner.*