

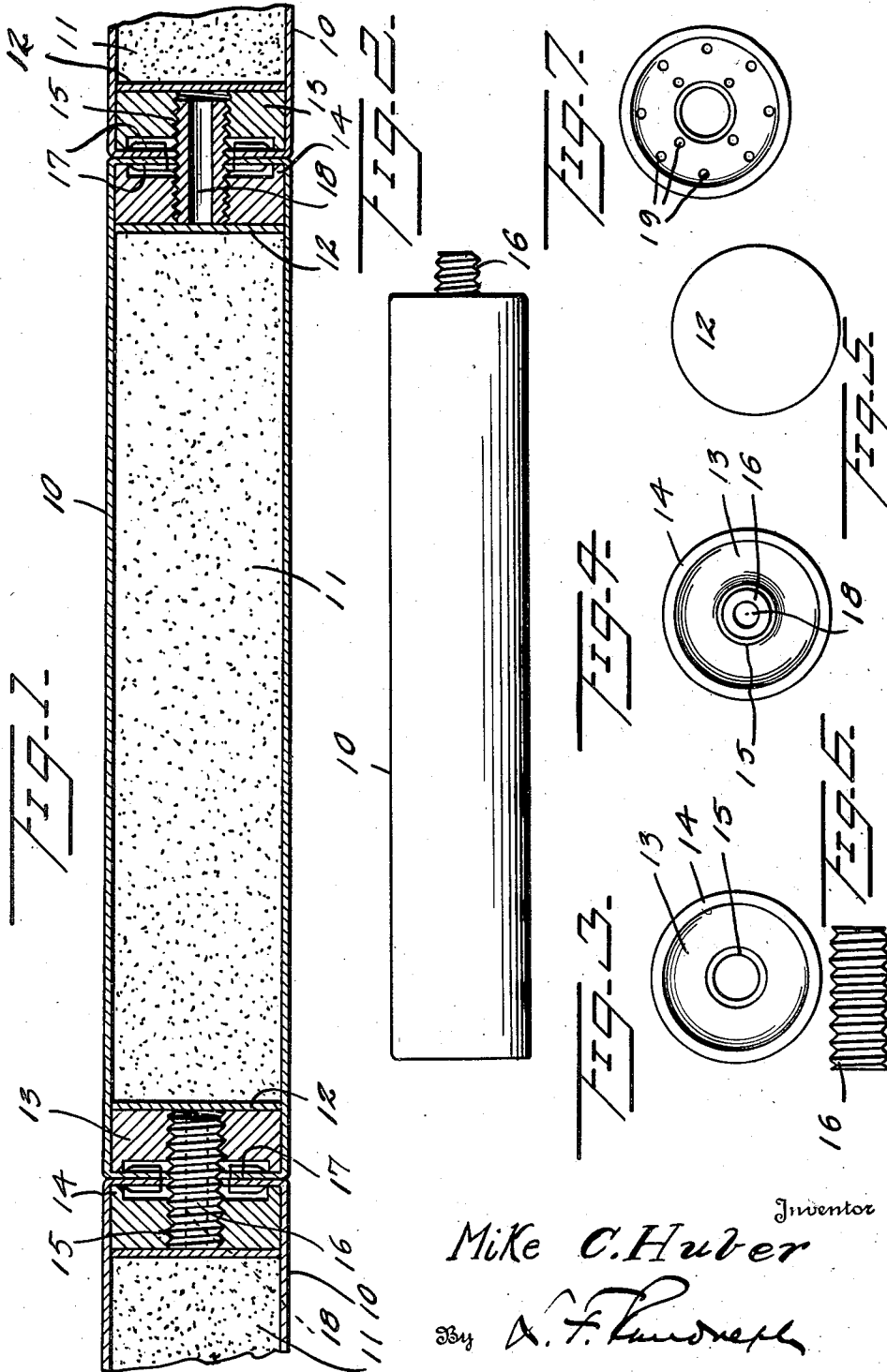
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MEANS FOR CONNECTING EXPLOSIVES

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MEANS FOR CONNECTING EXPLOSIVES

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4 Claims. (Cl. 102—24)

This invention relates to means for connecting or coupling explosive cartridges where the power of more than one is desired and the plurality is to be simultaneously exploded.

I particularly aim to provide a novel means which will avoid the use of friction tape, in which one end of the cartridge or unit will be rendered male and the other end female and also in which the strain of the connection will be placed on the casings of the cartridges when screwed together. The invention enables cartridges to be connected together in order that a unitary size may be built up into any desired size.

The more specific objects and advantages will become apparent from a consideration of the description following taken in connection with accompanying drawing illustrating an operative embodiment.

In said drawing:

Figure 1 is a central longitudinal sectional view through a cartridge and portions of others, according to my invention;

Figure 2 is a side elevation of a cartridge constructed in accordance with the invention;

Figures 3 and 4 are end views of the cartridge, the latter showing a stud in place;

Figure 5 is an elevation of one of the end discs;

Figure 6 is an elevation of one of the connecting studs, and

Figure 7 is an end elevation of a modified form of washer.

Referring specifically to the drawing wherein like reference characters designate like or similar parts, each cartridge consists of a tubular casing 10, usually of paper, containing an explosive charge 11 which is held in place by heavy paper discs 12 located inwardly of the ends of the casing 10.

Mounted in the ends of the casing 10 of each of the cartridges are non-ferrous washers 13 which preferably have a marginal flange 14 around their outer edges. Washers 13 have central screw-threaded openings at 15 which are adapted for screw-engagement with studs 16, also of non-ferrous metal. The washers 13 and 16 are preferably of non-ferrous metal like brass but they may be made of plastics, indurated fiber or otherwise.

It will be noted that the ends of the casings 10 are inwardly crimped over the flanges 14 as at 17.

I thus provide a unit as shown in Figure 2, which is female at one end and male at the other end since at the first end, one of the openings or washers 13 is devoid of a stud while the other washer has a stud extending therefrom. The

cartridges or units may thus be readily connected together by screwing the male or stud end into the other ends to make up an explosive cartridge of any desired length and capacity. Attention is called to the fact that the discs 12 are capable of slightly sliding or yielding within the casing 10 and that the washers 13 are also capable of slight sliding or yielding. As a result, when the parts are screwed or connected together, with the casings crimped inwardly at 17, all of the strain is placed on the casing.

According to the sensitivity of the explosives 11, the studs 16 are made solid as in Figure 6 or hollow as at 18 in Figure 1, and the washers 13 may be perforated to the extent desired as at 19 in Figure 7.

Various changes may be resorted to provided they fall within the spirit and scope of the invention.

I claim as my invention:

1. An explosive cartridge having a tubular casing, washers disposed in the opposite ends of said casing, the terminals of the casing being extended inwardly over said washers, said washers having central openings provided with screw-threads, and stud means detachably engaging the screw threads whereby the washers may be connected to corresponding washers of adjacent cartridges.

2. An explosive cartridge having a tubular casing, washers disposed in the opposite ends of said casing, the terminals of the casing being extended inwardly over said washers, said washers having central openings provided with screw-threads, and stud means detachably screw-threaded, to corresponding washers of adjacent cartridges, said washers being perforated.

3. An explosive cartridge having a tubular casing, washers disposed in the opposite ends of said casing, the terminals of the casing being extended inwardly over said washers, said washers having central openings provided with screw-threads, and stud means detachably screw-threaded to corresponding washers of adjacent cartridges, said stud means being hollow.

4. An explosive cartridge having a tubular casing, washers disposed in the opposite ends of said casing, the terminals of the casing being extended inwardly over said washers, said washers having central openings provided with screw-threads for detachable engagement with screw-threaded stud means whereby the washers may be connected to corresponding washers of adjacent cartridges, said casing being of paper, and discs within the casing engaged by the washers, and said washers and stud means being of non-ferrous material.

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