

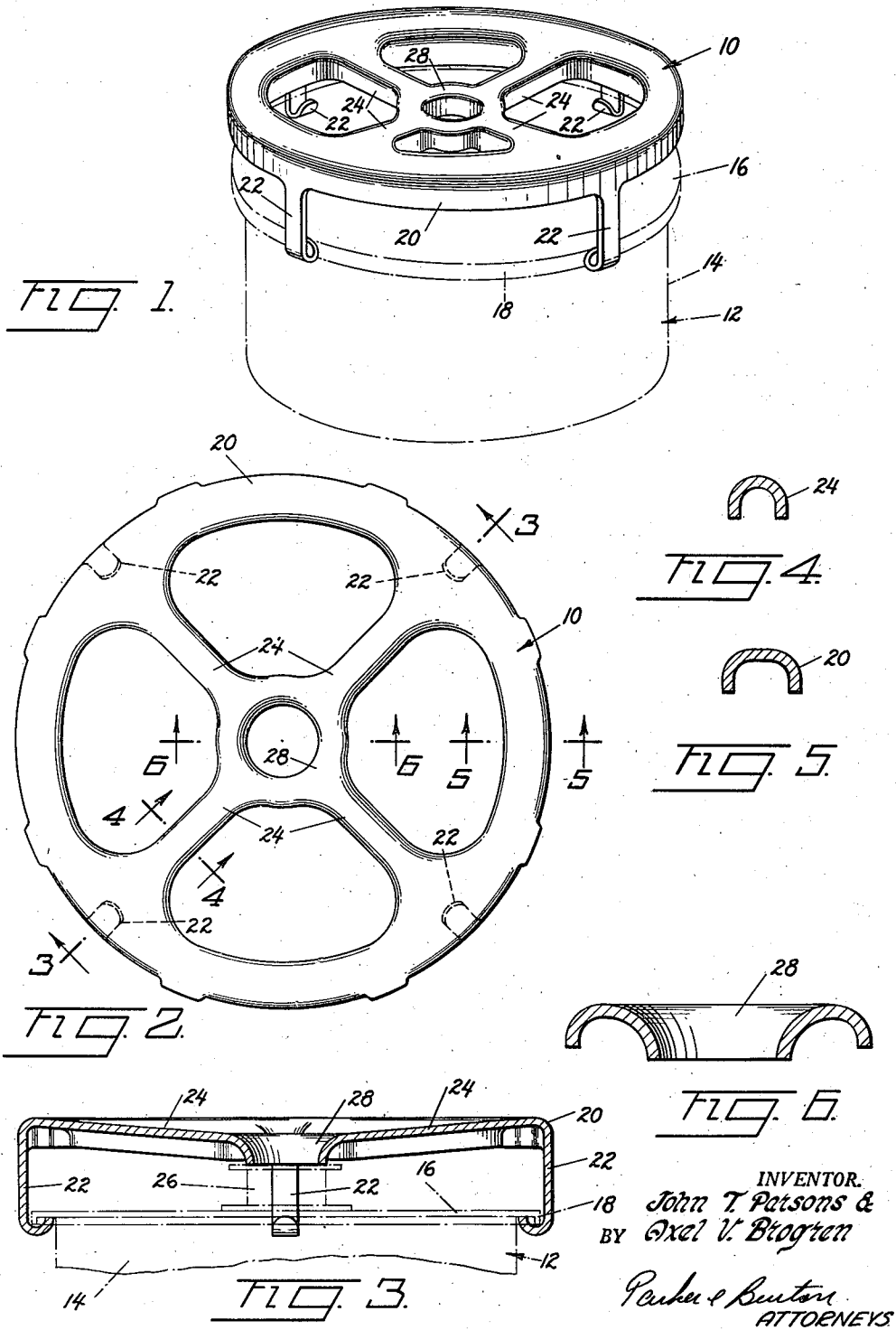
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IMPACT SPIDER

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IMPACT SPIDER

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2 Claims. (Cl. 102-8)

This invention relates to impact devices and particularly to an improved impact device for a land mine.

An important object of this invention is to provide a novel form of impact device for land mine and the like which is rugged in construction and can be manufactured in large quantities at very low cost. Another object of this invention is to provide an improved device of this character which is embodied in a single member composed of sections integrally connected together and formed from a single sheet of metal. A further object of this invention provides an impact member of this character to which is imparted a novel shape in order to facilitate detonation of the mine.

Other objects, advantages and meritorious features of the invention will more fully appear from the following description, appended claims and accompanying drawing, wherein:

Fig. 1 is a perspective view of the impact member of the present invention showing the manner of mounting it on the top side of a land mine,

Fig. 2 is a plan view of the impact member,

Fig. 3 is a cross-sectional view of the impact member along line 3-3 of Fig. 2,

Fig. 4 is a cross-sectional view of one of the rib sections along line 4-4 of Fig. 2,

Fig. 5 is a cross-sectional view of the outside frame section along line 5-5 of Fig. 2, and

Fig. 6 is a cross-sectional view of the central portion of the impact member taken along line 6-6 of Fig. 2.

The device of the present invention is adapted to be superimposed on a land mine and to explode the mine when a heavy object such as a tank goes over the mine. The device is in the form of a single member generally indicated at 10 in Fig. 1. In use, it overlies the body of a tank mine generally indicated in dotted outline at 12. As shown, the casing 14 of the mine body is circular in formation and is provided with a cover 16 which is slightly oversize the casing and is shaped to provide a downwardly extending lip 18 around the casing in the manner indicated in Fig. 3.

The impact member 10 is of novel construction and design. It is formed from a single sheet of metal and die stamped into the desired formation. The member has the character of an open frame or spider and in size approximates the lateral dimension of the cover 16. It is preferably formed of low carbon steel and stamped under pressure of dies in spider formation.

The impact member comprises an outer frame

or ring section 20 from one side of which project several hook shaped elements or legs 22 having turned extremities for engaging under the lip 18 of the cover. These legs are integrally joined to the ring section 20 and in the course of manufacture are die stamped into substantially perpendicular position which they assume with respect to the plane of the ring section. Extending radially inwardly from the ring section 20 are a plurality of web or rib sections 24 which meet approximately in the middle of the member to form an impact portion. These rib sections are integrally joined at their outer ends to the ring section 20 and at their inner ends to one another. Both the ring and rib sections are preferably channel-shaped in cross section as shown in Figs. 4 and 5 to provide a substantially rigid type of construction. The channel formations of these sections open downwardly toward the mine casing when the member is properly superimposed thereover.

The central impact portion of the member 10 rests upon the fuse or detonator of the mine which is indicated at 26 in dotted outline in Fig. 3.

The inner ends of the rib sections are shaped in a novel way to form the impact portion. As shown in Fig. 2 the inner end of each rib section 24 is forked to provide two lateral branches which are integrally joined with the branches of the middle adjacent rib sections. These branches merge to form an inner annular section or ring 28. The member 10 of the present invention may therefore be described as comprising inner and outer concentric frame or ring sections integrally joined to one another by connecting radially extending rib sections.

A novel feature of the construction is the offset relation of the impact portion 28 to the outside ring section 20 in order to dispose the central portion 28 in direct contact with the detonator. This is accomplished by correspondingly downwardly inclining the rib sections 24 with respect to the plane of the ring section 20. This will position the impact portion 20 below the level of the ring section.

The impact member has been described in connection with a land mine of circular formation. It is understood that the impact member can be modified to fit mine structures of different formation without departing from the scope of the invention.

What we claim:

1. An impact member for a land mine comprising, in combination, an outside frame section

having hook-shaped elements projecting from one side substantially perpendicular to the plane thereof, rib sections extending inwardly from the frame section and meeting at approximately the middle of the frame section to form an impact 5 portion, said rib sections being correspondingly inclined and disposing the impact portion offset to the plane of the frame section on the same side thereof as said hook-shaped elements.

2. An impact member for a land mine comprising, in combination, a circular section corresponding in size to approximately that of the land mine for which it is intended and provided with legs projecting substantially perpendicularly 10

from one side which are shaped to engage under a lip formation on the land mine, rib sections extending radially inwardly from said circular sections, each rib section branching laterally short of the center of the circular section and having the branched ends connected to those on the adjacent rib sections and forming a central impact portion, said rib sections being correspondingly inclined to dispose the impact portion offset to the plane of the circular section and on the same side as said legs.

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