

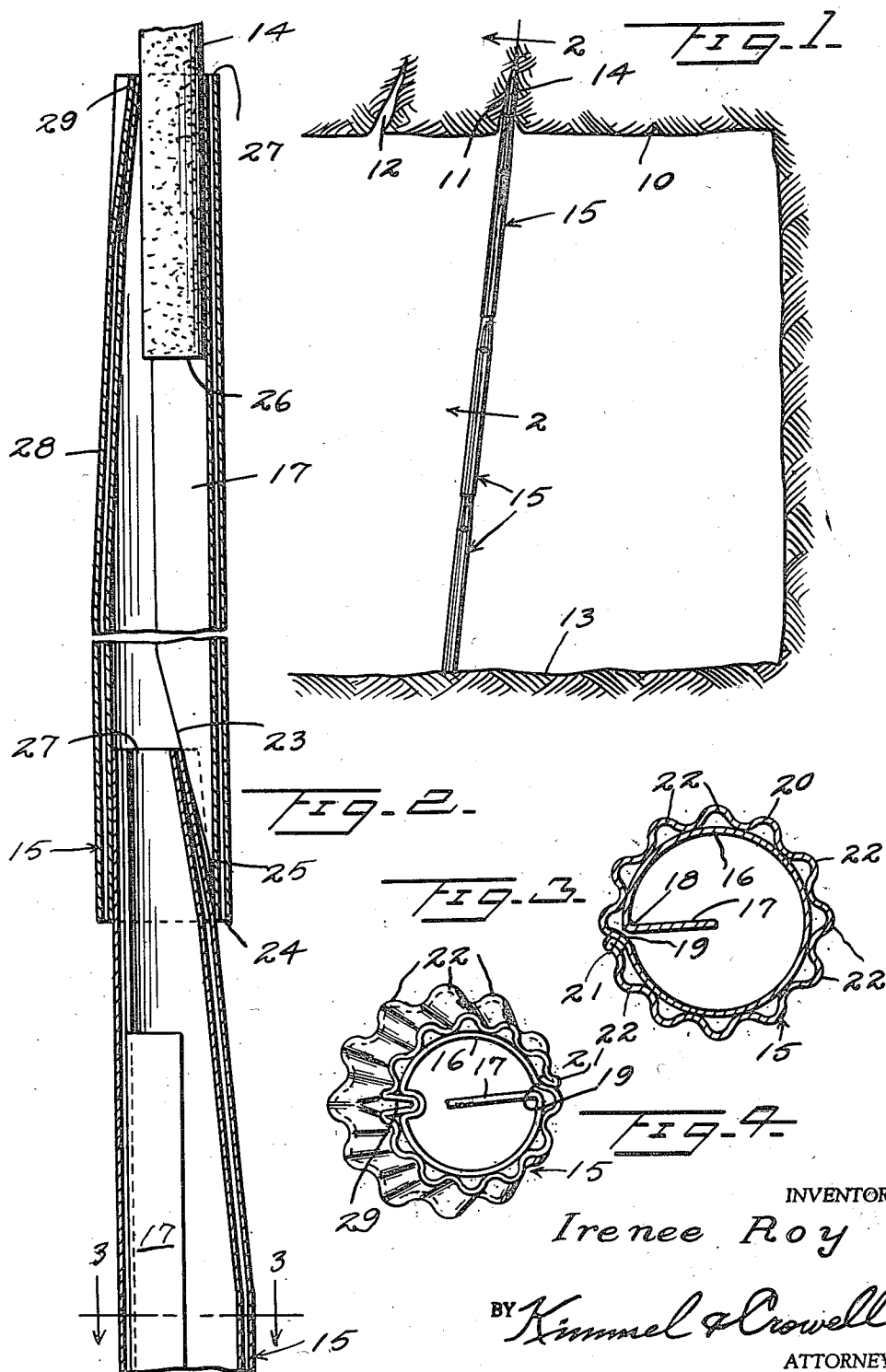
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I. ROY

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DYNAMITE CHARGE HOLDER

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INVENTOR

Irene Roy

BY

Kimmel & Crowell

ATTORNEYS

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2,818,809

DYNAMITE CHARGE HOLDER

Irene Roy, Thetford Mines, Quebec, Canada

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3 Claims. (Cl. 102—22)

The present invention relates to dynamite charge holders, and more particularly to a charge holder of the type adapted to hold a dynamite charge in "hard to get at" positions in asbestos mines.

The present invention comprises a continuation-in-part of my copending application, now abandoned, Serial No. 355,217, filed May 15, 1953, entitled "Dynamite Charge Holder."

In asbestos mining it is essential that foreign materials be excluded from the powdered asbestos to prevent contamination of the product and subsequent loss of the contaminated material. It has been found in practice that ferrous magnetizable metallic contaminate can be removed with ease by passing the powdered asbestos adjacent either an electro or permanent magnet. Non-magnetizable contaminate, however, is almost impossible to remove by any means and completely impossible to remove economically.

The primary object of the invention is to provide a plurality of end to end secured members which may be extended to any desired length and which have means for supporting the dynamite charge thereon with the members formed of magnetizable material.

Another object of the invention is to provide a device of the character described, in which the members are formed of lightweight metal formed into a coil with the outer wrap thereof corrugated.

A further object of the invention is to provide a dynamite support of the class described which is formed of sections of magnetizable sheet metal such that blown up fragments thereof may be easily removed from the blasted material by means of a magnet.

A still further object of the invention is to provide a dynamite holder of the class described which is inexpensive to manufacture, light in weight and extremely rigid.

Other objects and advantages will become apparent in the following specification when considered in the light of the attached drawing, in which:

Figure 1 is a vertical cross-section of an asbestos mine illustrating the dynamite charge holder supporting a stick of dynamite in a crevice in the roof of a mine;

Figure 2 is a fragmentary enlarged transverse cross-section taken along the line 2—2 of Figure 1, looking in the direction of the arrows;

Figure 3 is a horizontal cross-section taken along the line 3—3 of Figure 2, looking in the direction of the arrows, and

Figure 4 is an end elevation of the device illustrated in Figure 2.

Referring now to the drawings in detail, wherein like reference numerals indicate like parts throughout the several figures, the reference numeral 10 indicates generally a roof of a mine having crevices 11 and 12 therein. The crevices 11 and 12 may be either natural or man-made.

A floor 13 underlies the roof 10 and forms a bottom of

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the mine shaft. A stick of dynamite 14 is illustrated as extending into the crevice 11 supported by a plurality of support members 15 secured together in end to end relation with the lowermost one thereof engaging the floor 13 of the mine. Each of the support members 15 comprises an inner cylinder 16 formed of magnetizable light gauge sheet metal which terminates in an intumed radial rib 17 at one side edge 18 and integrally joined at the other side edge 19 with a corrugated outer cylinder 20 which terminates in a reverted side edge portion 21. The corrugations 22 of the corrugated cylinder 20 are formed with their axes extending parallel to the axes of the cylinders 16 and 20.

The rib 17 is tapered, as at 23, at the end 24 of the support member and terminates at a point 25 inwardly of the end 24 of the support member. The opposite end 26 of the rib 17 terminates a substantial distance inwardly from the end 27 of the support member 15. The end 27 of the support member 15 is crimped inwardly to provide a tapering portion 28 to reduce the over-all diameter of the end 27 and a tapered groove 29 is formed in one wall of the support member 15 extending inwardly from the end 27 thereof. The groove 29 is adapted to engage over the tapered portion 23 of the rib 17 to lock the end 27 of one support member 15 against rotation when it is inserted into the end 24 of another support member 15.

The dynamite 14 is inserted into the end 27 of the support member 15 and engages against the end 26 of the rib 17 to prevent the dynamite 14 from moving a greater distance into the support 15. The one-piece construction of the support members 15 and the particular combination of an inner smooth cylindrical portion and an outer corrugated cylindrical portion provide a support member of quite light weight and considerable strength.

In the use and operation of the invention, the support members 15 are assembled in end to end relation, as illustrated in Figure 2, in whatever quantity is necessary to support the dynamite at the desired point. It is quite evident that the blasting action of the dynamite stick 14 will damage one or more of the sections 15 to such an extent that they will be unusable in further operations. Hence it is imperative that the supports 15 be formed from not only magnetizable material, but light inexpensive material to permit blasting operations to be carried out without undue expense.

Having thus described the preferred embodiment of the invention, it should be understood that numerous modifications and structural adaptations may be resorted to without departing from the scope of the appended claims.

What is claimed is:

1. A dynamite charge holder comprising a sheet of magnetizable metal formed into a substantially cylindrical inner tubular member having a generally smooth surface, a substantially cylindrical longitudinally corrugated outer tubular member formed integrally with and encompassing said inner tubular member, said inner and outer tubular members having one end thereof crimped to form a tapering reduced end portion and having the opposite end thereof open, and a radial longitudinally extending rib carried by and extending inwardly of said inner tubular member, said rib having the end thereof adjacent the open end of said tubular members tapered outwardly and the end thereof adjacent the crimped end of said tubular members terminating inwardly of the adjacent end of said tubular members, said holder being adapted to have the crimped end thereof telescoped within the open end of a second similar holder.

2. A device as claimed in claim 1 wherein the crimped end of said holder is adapted to receive and support a

dynamite stick with the end of said rib adjacent the crimped end of said holder serving as a support for the inner end of said dynamite stick.

3. A device as claimed in claim 1 wherein the crimped end of said charge holder is provided with a longitudinally extending groove to engage the tapered end of a similar rib of a second similar holder upon telescopically joining two similar holders in end to end relation.

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