

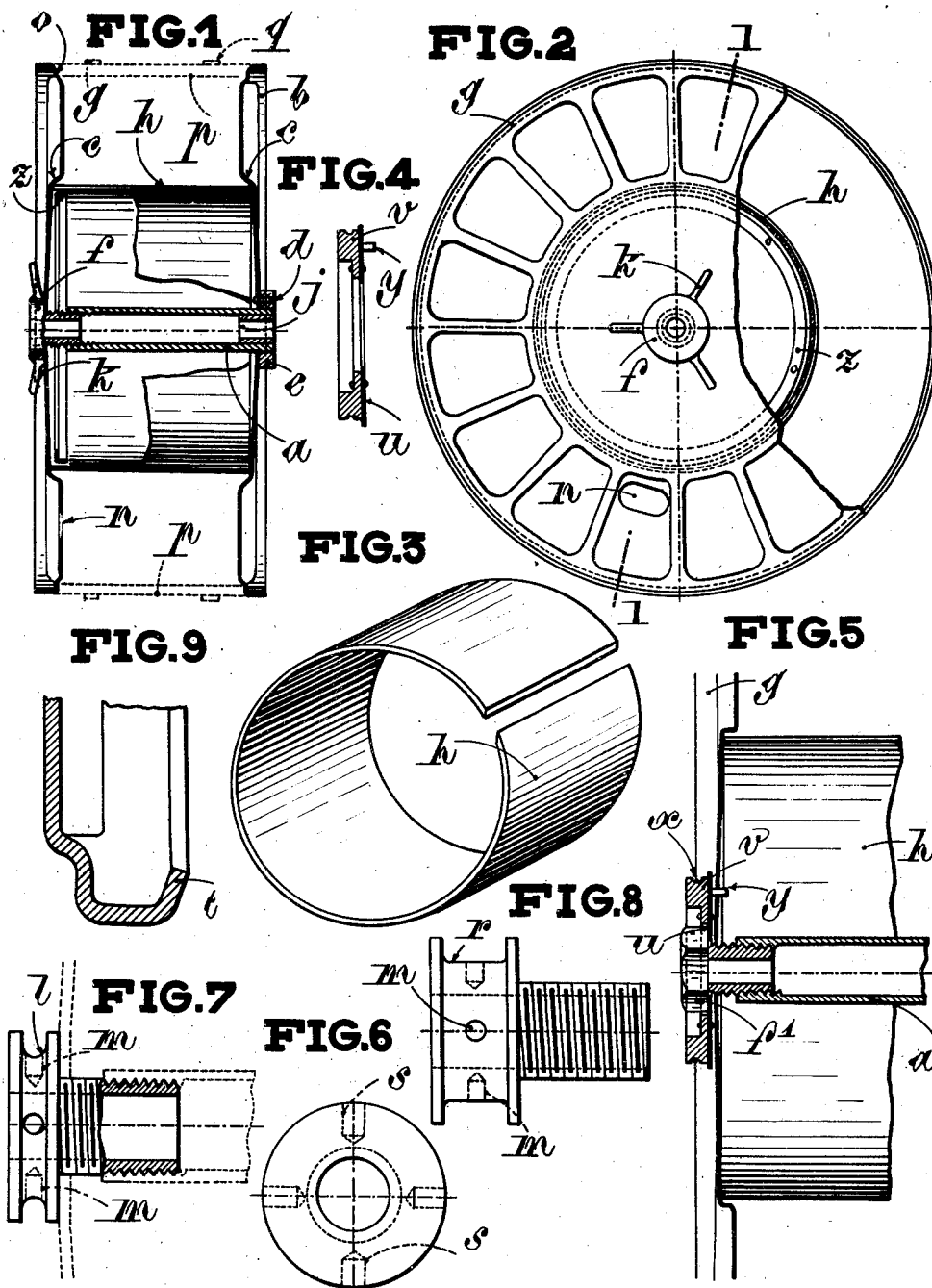
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DEMOUNTABLE METALLIC REEL FOR CABLES

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DEMOUNTABLE METALLIC REEL FOR CABLES

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Wooden reels as at present employed for the handling and transport of cables (metallic, electric, telephone) are unsatisfactory in that they deteriorate very quickly owing to the moisture which enters between the wood and the bolts which hold them together.

Repairs to such reels usually necessitate taking them completely to pieces which costs almost as much as a new reel.

Moreover it frequently occurs that the nails, bolts and studs which hold the various parts together become loose and damage or tear the insulating or lead covering of the cables. These reels also take up a large amount of room for storing and consequently the cost of transport when empty is relatively high.

This last inconvenience is equally present with metallic reels at present employed for replacing the wooden ones these not being demountable or only partially so. In known metallic reels the shaft or the drum is rigidly affixed to one of the discs and is not demountable.

The present invention relates to a demountable metallic reel for cables capable of being employed either for transport or for their handling in the workshops during the different phases of their manufacture.

The reels comprise a drum mounted between two metallic discs carried in a hollow, or removable solid, shaft by which it is rotated when assembled.

The drum of each reel is a split cylindrical member which permits a number of the drums of a corresponding number of the reels to be nested one within another so that the drums of the reels may be very compactly disposed for storage or transportation.

When assembling a rope or belt driving or braking means for the drum may be added.

The invention will be described with reference to the accompanying drawings.

Fig. 1 is a section on line 1—1 Fig. 2.

Fig. 2 is a side view with the flange *g* partly broken away.

Fig. 3 is a perspective view of the drum of the reel.

Fig. 4 shows a mounting ring detached and

Fig. 5 the ring in position on the reel.

Figs. 6, 7 and 8 are alternative forms of the locking means.

Fig. 9 shows to an enlarged scale a modified arrangement of reel flange.

On a hollow shaft *a* a pressed sheet disc *b* formed with ribbed portions for greater rigidity is mounted. The peripheral edges are bent outwards at right angles or approximately right angles as at *b'* so as to form a sufficient rolling surface or rim for the reel. The disc is pressed inwards at *c* to form an interior circular flange. A pin *d* carried by a nut *e*, shrunk or screwed into the shaft *a* or formed solid therewith, enters a hole drilled in the disc *b* to prevent this latter turning about the shaft *a*.

A second disc *g* stamped similarly to *b* is held in position on the other end of the shaft *a* by a hollow stud *f* screwed into the end of the shaft. A drum *h* of rolled sheet metal having open ends is arranged between the discs *b* and *g*.

In order to prevent the edges of the sheet metal from lapping over each other and in order to support each edge with relation to the other, each of the said edges is provided with one or more tongues such as *i* which serves as guides to prevent displacement of said edges.

The discs *b* and *g* are each formed with an opening *n* through which the ends of the cable rolled on the drum are passed, and are formed with flanged portions *o* between which slats *p*, held in position by iron hoops *q* for example, are arranged to protect the cable during transport. The slats may also be formed from sheet metal.

A tube *j* reinforces the unscrewed end of the shaft *a* being forced therein, the outer diameter of the tube being equal to that of the hollow stud *f* so that the reel in rotating about a bar passed through the shaft *a* is only supported at its two ends. The stud *f* is formed with lugs *k* for easy manipulation and adjustment.

It will be observed upon reference to Figures 1 and 5 that those portions of the discs within the flanges *c* are concavo convex in cross section and that the discs are arranged with their concave surfaces opposed to each

other so that the central portions of the discs form springs which cooperate with the stud *f* and lugs *h* and also with the shaft *a* and the nut *e* to resiliently hold the drum in place and to prevent casual loosening of the stud *f*. The flanges *c* serve to retain the drum in its position between the discs and to avoid damage during transportation incident to the weight of the cable which the reel carries and the shocks and stresses to which the reel is subjected in use.

To prevent buckling of the drum *h* if a fall occurs an angle iron stiffener *z* is affixed on to the inner surface of each disc outside which is the drum. In this way the drum mounted between the stiffening ring *z* and the flange formed by the portion *c* is held immovable.

The form of stud shown in Figs. 1 and 2 being somewhat cumbersome may be replaced by a round headed stud (Fig. 6) having holes *s* into which a bar or claw key can be inserted for turning.

In certain cases and particularly for workshops driving or braking means are provided.

As shown in Fig. 5 a plate or disc *u* is inserted between the disc *g* and the head of the stud *f*; to the periphery of this disc is affixed a rim *v* to receive the driving belt or rope *x*. This arrangement only necessitates employing a slightly longer stud. A pin *y* or *d* through the head of the stud affixes the disc *u* to the disc *g* or *b*. Figs. 7 and 8 show other forms of studs. They differ from those shown in Figs. 1 and 5 in that a groove *l* (Fig. 7) or a larger groove *r* (Fig. 8) is formed in the head for carrying the driving rope or belt, the reel being mounted on a suitable shaft (not shown).

In either case holes *m* are formed in the periphery for the insertion of a bar or lever for assembling the reel.

The grooves *l* or *r* may be formed in the periphery of a stud having an octagonal head or a winged nut.

Without changing the principle of the invention these different types of studs may be replaced by any other system or by a nut screwing on to an exteriorly threaded tube *a* which would be somewhat longer than that already described.

Fig. 9 shows a disc stamped or bent along the periphery into approximately U shape. The rolling track is thus reinforced and less liable to deformation due to shock.

The life of an all metal reel as described is almost unlimited and the simplicity of its assembly and small number of parts are due to the use of screwed studs.

After dismantling the drums are nested one inside another; the discs are piled one on top of another and in this way the reduction in the space occupied by empty reels facilitates storing and reduces transport costs. Also the smaller number of parts re-

duces the risk of loss. Repair is limited to changing the parts which is simple and cheap. Moreover their inner surface is perfectly smooth and does not damage the covering of the cables.

Another advantage of this type of reel is that with given discs it is possible to assemble different sizes of reels by employing sheet drums *h* and central tubes *a* of varying length.

What I claim as my invention and desire to protect by Letters Patent is:—

1. A metallic cable reel comprising a pair of end discs each having an annular seat on its inner side and concavo convex in cross section, the concave faces of said seats being opposed to each other, a drum having its ends arranged in said seats, a tube connecting said discs and extending through the center of the drum and provided with a threaded stud at one end extending through one of the discs and bearing against the outer side thereof, said tube and said threaded element coacting with said concavo convex seats to resiliently and detachably secure the drum in place.

2. A metallic reel of the class described, comprising a pair of discs having coaxial circular shoulders pressed therein and angle members coacting with said shoulders and forming coaxial grooves on the inner opposing faces thereof, a split cylinder between the discs concentric therewith and arranged with its ends in said grooves, a tube extending through the center of one of the discs and having a head on its outer end connected to said disc, and a stud extending through the center of the other, screwed into said tube and having a head bearing on the last named disc.

In witness whereof I affix my signature.
GEORGES DECOMBE.