

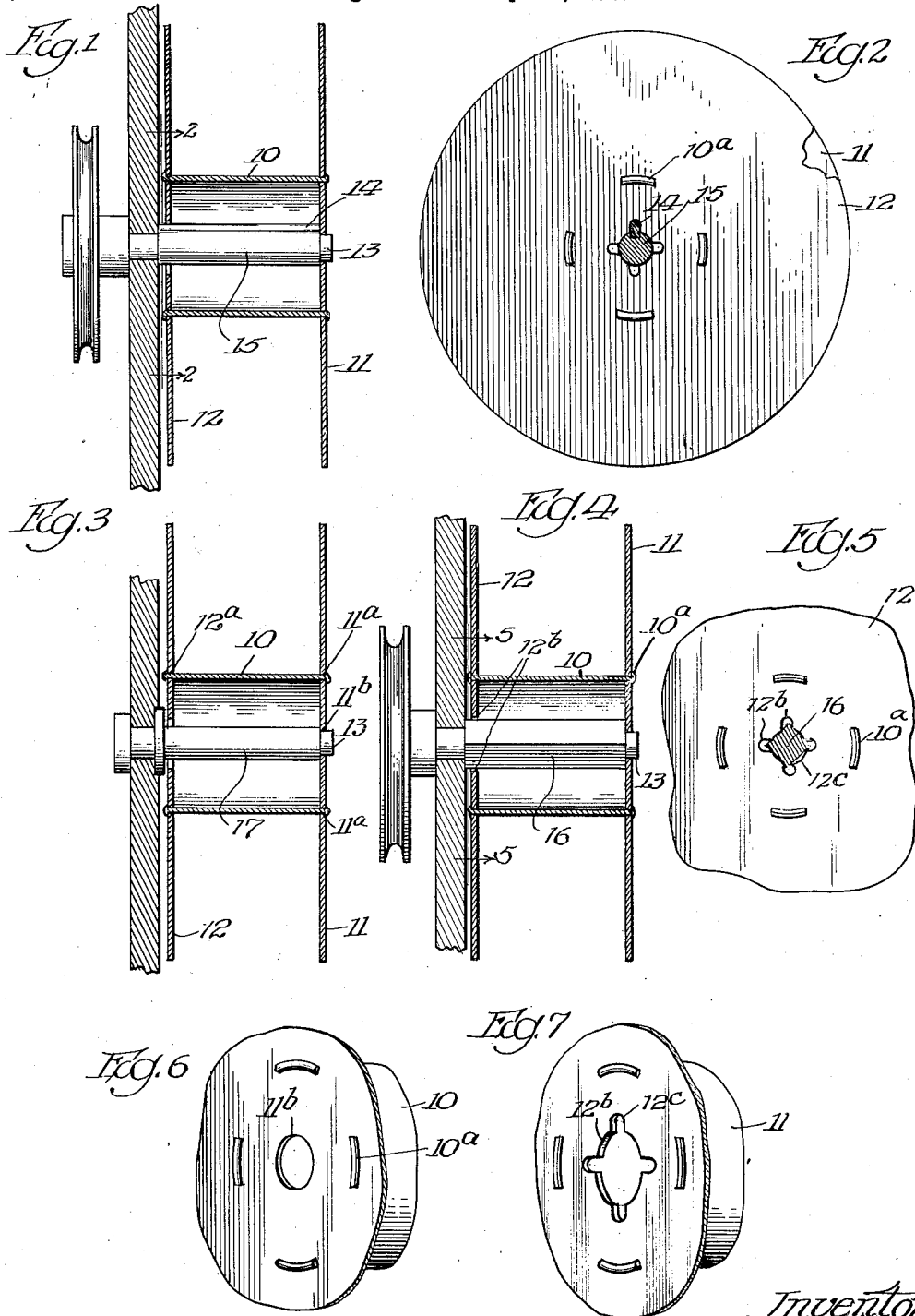
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FILM REEL

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UNITED STATES PATENT OFFICE.

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FILM REEL.

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The invention relates to reels or spools for films.

The primary object of the present invention is to provide a film reel or spool having an opening therein of an improved character which adapts it for use as a drive spool on either a polygonal shaft or a cylindrical shaft having a radially attached key, or as an idler spool on a cylindrical shaft.

A further object of the invention is to provide a film reel or spool which is of a new and improved construction and is adapted for universal use in different cameras or those which are provided with either cylindrical or polygonal drive shafts.

The invention consists in the several novel features hereinafter set forth and more particularly defined by the claims at the conclusion hereof.

In the drawing which accompanies this specification or disclosure and in which like numerals of reference denote like and corresponding parts throughout the several views: Fig. 1 is a vertical section of the improved film reel mounted on a cylindrical drive shaft having a single key for use as a take-up spool. Fig. 2 is a section taken on line 2—2 of Fig. 1. Fig. 3 is a vertical section of the improved film reel mounted on a cylindrical shaft for use as a supply spool. Fig. 4 is a vertical section of the invention mounted upon a square drive shaft for use as a take-up spool. Fig. 5 is a section taken on line 5—5 of Fig. 4. Fig. 6 is a detail perspective of the opening in one of the sides of the reel for receiving the reduced end of a shaft. Fig. 7 is a view similar to Fig. 6 and shows the opening on the opposite side for receiving either a polygonal or cylindrical shaft.

The invention is exemplified in a film reel or spool which is formed of sheet metal and comprises an annular hub portion 10 to which the end of a film may be secured by a clip of the usual construction, as well understood in the art, and around which a film may be wound, and circular sides 11 and 12. Hub 10 is provided at its ends with a plurality of integral tongues 10^a which are adapted to extend through arcuate slots 11^a and 12^a formed in the sides 11 and 12 respectively. Tongues 10^a are upset at their outer ends against the outer surface of the sides 11 and 12, so as to securely join the latter to the hub. Side 11 is provided at its

center with a circular opening 11^b which is punched therein and is adapted to fit around and engage the reduced end 12 of a drive or stationary shaft, as shown in Figs. 1, 3 and 4. Side 12 is provided at its center with a circular opening 12^b having a larger diameter than opening 10^a and is provided with four radial or outwardly extending notches 12^c which are spaced 90° apart and correspond in shape to the cross section of a key 14 (Fig. 2). Opening 12^b and radial notches 12^c exemplify means which permit the spool to be mounted on either a cylindrical or a polygonal drive shaft so that the reel may be used as a take-up spool, or a cylindrical stationary shaft so that the spool may be used as an idler spool.

When the spool is mounted on a cylindrical drive shaft 16, as shown in Fig. 1, the inner periphery of opening 12^b will fit around the shaft and the key 14 of the latter will be inserted into one of the notches 12^c so as to form a driving connection between the spool and the shaft, and thus form a drive connection between the shaft and reel. By having four notches 12^c the reel may be connected at points 90° apart and thus eliminate waste of the film when the film is being secured to the hub 10. When the spool is mounted in a square or polygonal drive shaft 16, the corners of the latter will fit into the notches 12^c of a predetermined size (Fig. 4), thereby forming a drive connection between the shaft 16 and the reel. When the spool is mounted on a stationary cylindrical shaft 17 (Fig. 3), the inner periphery of opening 12^b will fit around the shaft and permit the spool to run idly around the shaft 17.

The invention exemplifies an improved film spool or reel which may be used as a take-up spool on either a cylindrical or polygonal drive shaft, as found in different cameras, or as an idler spool on a stationary cylindrical shaft.

The invention is not to be understood as restricted to the details set forth, since these may be modified within the scope of the appended claims, without departing from the spirit and scope of the invention.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent, is:

1. A film reel comprising sides and a hub, one of the sides being provided with a cir-

cular opening to receive the reduced end of a shaft, and the other with a circular opening to fit around a cylindrical shaft of a predetermined size and a plurality of outwardly extending notches adapted to receive a key on a shaft, said notches being formed to receive the corners of a polygonal shaft of a predetermined size, whereby the reel will be adapted to be driven by a cylindrical shaft with a key thereon or a polygonal shaft.

2. A film reel comprising sides and a hub, one of the sides being provided with a cir-

cular opening to receive the reduced end of a shaft and the other with a circular opening of greater diameter to fit around a cylindrical shaft of a predetermined size, and four outwardly extending notches, said notches being formed to receive the corners of a square shaft of a predetermined size, whereby the reel will be adapted to be driven by a cylindrical shaft with a key thereon or by a square shaft.

Signed at Chicago, Illinois, this 4th day of August, 1925.

HERMAN A. DE VRY.