

# PATENT SPECIFICATION

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## COMPLETE SPECIFICATION

### Improvements in and relating to Spools for Roll-Films

We, KARL GUMPEL, a Citizen of the German Republic, of 8, Olivaerplatz, Berlin, W.15, Germany, and FRITZ KAFTANSKI, a Citizen of the German Republic, of 173/4, Kurfürstendamm, Berlin, W.15, Germany, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to improvements in spools for use in roll-film cameras, and has for its chief object to provide a novel, simple and cheap film spool for use in roll-film cameras, more particularly small type roll-film cameras such as are described in our co-pending Patent Application No. 34513/34 (Serial No. 448,127).

The spool according to the present invention is characterised by the provision at one end of a projecting short spindle and at the other end with a projecting rectangular or like non-slotted stud which is adapted to be engaged by a fork-like operating member in the camera with which the spool is to be used.

Preferably the rectangular or like stud on the spool is mounted on a circular plate which forms an efficient guide for the spool.

Heretofore it has been the practice to provide one of the stud spindles on the ends of the spool with a slot which is engaged by a projection on the operating member for the purpose of rotating the spool. In the present invention the operating member is provided with a fork-like end and the spool is provided with an unslotted projection. This enables the spool to be inserted laterally into the spool casing and avoids the necessity of providing any means for preventing axial movement of the spool.

In order that this invention may be the more clearly understood and readily carried into effect, we will proceed to describe the same with reference to the accompanying drawings, which illustrate by way of example one convenient embodiment of this invention, and in which:—

Figure 1 is an elevation of the spool according to the present invention. 55

Figure 2 is a plan view of the same, and

Figure 3 is a view showing the end of the operating member adapted to engage with the spool. 60

Referring now to the drawings, 6 is the spool proper, and 31 and 32 are the usual end plates which prevent the entry of light. 33 is the stud at one end for mounting the spool in the camera casing. 65 At the opposite end there is provided in accordance with the invention a stud 34, which may be shaped as desired so long as it co-operates with the operating member, as hereinafter described. 70 Preferably the form thereof will be rectangular. The operating member, which is mounted firmly on the camera, includes the lower portion 35, which is made of such form as to take over and 75 to enter into locking engagement with the stud 34 on the spool. The upper portion 36 is attached to the part 9 and serves for rotation of the spool for winding purposes. If desired, the stud 34 80 may be mounted on a circular plate 37 which is journaled in a suitable bearing in the casing to assist the guiding action.

The spool according to the present invention may be made in any suitable 85 manner, for example, the whole spool may be cast as a single piece. Alternatively, the parts 33 and 37 may be made separate and let into the spool, or these parts may be made in one with the end discs 31 and 32 and suitably mounted on the spool 6. 90

The spool according to the present invention is simple and cheap to produce and has the advantage that it may be readily and easily slipped into and out 95 of position in the camera.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we 100 claim is:—

1. A spool for photographic films provided at one end with a projecting short stub spindle and at the other end with a projecting rectangular or like non-slotted stud which is adapted to be en- 105