

PATENT SPECIFICATION

1,034,905

DRAWINGS ATTACHED.

Date of Application and filing Complete Specification:

Jan. 2, 1963.

No. 51874/65.

Application made in United States of America (No. 163,843) on Jan. 2, 1962.

(Divided out of No. 1,034,901).

Complete Specification Published: July 6, 1966.

© Crown Copyright 1966.



1,034,905

Index at Acceptance:—G2 A13F4.

Int. Cl.:—G 03 b.

COMPLETE SPECIFICATION.

Photographic Film Cartridge.

We, EASTMAN KODAK COMPANY, a Company organised under the Laws of the State of New Jersey, United States of America of 343 State Street, Rochester, New York 14650, United States of America (Assignees of HUBERT NERWIN), do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention concerns cartridges for use with photographic cameras and the term 'cartridge' is to be understood to include magazines, cassettes and other containers arranged to contain photographic film in a camera.

An object of the present invention is the provision of a cartridge for a photographic camera having means for facilitating the processing of film therein in an automated processing plant. A further object of the present invention is the provision of a cartridge having means whereby the sensitivity of the film contained therein may be fed to an automatic exposure control mechanism of a photographic camera.

The invention provides a photographic cartridge containing a film, having one or more film characteristics, the cartridge having a plurality of spaced stations related to the values of the characteristics, there being one or more mechanically explorable coding features each occupying a respective one of said stations in order to indicate one or more of said values.

By 'characteristic of the film' as used in this specification, is meant a factor such as the sensitivity, the film type or the particular manufacturer etc. of the film.

The invention will be described further, by way of example, with reference to the accompanying drawings, in which:

[Price 4s. 6d.]

Figure 1 is a perspective view of a photographic roll film cartridge constructed according to the present invention;

Figure 2 is a side elevation of the cartridge shown in Figure 1; and

Figure 3 is a view, similar to Figure 2, of a further form of cartridge of the present invention.

As shown in the drawings, the cartridge in accordance with the present invention is provided with a film supply chamber 52 and a film take-up chamber 62. A take-up spool 54 is accommodated in the take-up chamber 62 and is arranged to be driven by means (not shown) engaging a keyed end flange 96 of the take-up spool 54, to transport the film from the supply chamber 52 across an exposure aperture 63 of the cartridge to the take-up spool 54.

In order to enable an element of a camera to be adjusted automatically according to the sensitivity of the film in the cartridge, a mechanically explorable coding feature is provided on the cartridge as shown in the drawings. In Fig. 1 this coding feature comprises a coding notch 105, the position of which along the forwardly projecting rib 106, is empirically determined as a function of the sensitivity or speed of the particular film loaded in the cartridge. For example, as viewed in figure 1, the higher the film speed, the further the notch 105 would be from the left end of the rib 106. Figs. 2 and 3 show alternative coding feature in which the position of an abutment shoulder 105¹—or a projection 105¹¹—along the rib is determined by the speed of the film in the cartridge. These mechanically explorable features all involve the removal of material from the rib 106 and hence permit coding of a cartridge subsequent to the insertion of a film therein.

A second coding notch or other mechanic-

ally explorable feature is provided on the cartridge on a rib 107 and is shown at 108 in Fig. 1. The position of this mechanically explorable feature along the rib is empirically
5 determined as a function of the type of film in the cartridge in order that exposed cartridges may be sorted automatically prior to being processed. However, the number of combinations possible using only a single
10 mechanically explorable feature for each of the characteristics of the film i.e., film type and film sensitivity, is rather limited. In view of the great number of films of different types and sensitivities which are available, a binary
15 coding system consisting of mechanically explorable features at predetermined stations is employed along either or both of the ribs of the cartridge to indicate film type and film sensitivity. Thus, either or both of the ribs
20 may have two or more abutment surfaces in a binary coding system to indicate the film sensitivity and/or type of a film contained in the magazine.

The subject matter of the present application is closely related to that of our co-
25 pending Patent Applications Nos. 198/63 (Serial No. 1,034,901) of which the present application is a divisional, and 21501/65 (Serial No. 1,034,904).

30 WHAT WE CLAIM IS:—

1. A photographic cartridge containing a

film having one or more film characteristics, the cartridge having a plurality of spaced stations related to the values of the characteristics, there being one or more mechanically
35 explorable coding features each occupying a respective one of said stations in order to indicate one or more of said values.

2. A cartridge as claimed in Claim 1 wherein the characteristic or characteristics indicated by the mechanically explorable
40 features is or are film speed and/or film type.

3. A cartridge as claimed in Claim 1 or 2 wherein the mechanically explorable coding features are in the form of notches.
45

4. A cartridge as claimed in any of Claims 1 to 3 wherein there are at least two stations, an abutment, constituting the mechanically
50 explorable feature, being provided at each of the stations.

5. A photographic roll film cartridge containing a film of a particular sensitivity and/or type, the cartridge presenting a surface provided with two or more abutments, the
55 positions of the abutments, along the surface, being indicative of the particular sensitivity and/or type of film in the cartridge.

L. E. T. BRANCH, B.S.C., F.R.I.C.,
Patent Agent.

ally explorable feature is provided on the cartridge on a rib 107 and is shown at 108 in Fig. 1. The position of this mechanically explorable feature along the rib is empirically
5 determined as a function of the type of film in the cartridge in order that exposed cartridges may be sorted automatically prior to being processed. However, the number of combinations possible using only a single
10 mechanically explorable feature for each of the characteristics of the film i.e., film type and film sensitivity, is rather limited. In view of the great number of films of different types and sensitivities which are available, a binary
15 coding system consisting of mechanically explorable features at predetermined stations is employed along either or both of the ribs of the cartridge to indicate film type and film sensitivity. Thus, either or both of the ribs
20 may have two or more abutment surfaces in a binary coding system to indicate the film sensitivity and/or type of a film contained in the magazine.

The subject matter of the present application is closely related to that of our co-
25 pending Patent Applications Nos. 198/63 (Serial No. 1,034,901) of which the present application is a divisional, and 21501/65 (Serial No. 1,034,904).

30 WHAT WE CLAIM IS:—

1. A photographic cartridge containing a

film having one or more film characteristics, the cartridge having a plurality of spaced stations related to the values of the characteristics, there being one or more mechan- 35 ically explorable coding features each occupying a respective one of said stations in order to indicate one or more of said values.

2. A cartridge as claimed in Claim 1 wherein the characteristic or characteristics 40 indicated by the mechanically explorable features is or are film speed and/or film type.

3. A cartridge as claimed in Claim 1 or 2 wherein the mechanically explorable coding 45 features are in the form of notches.

4. A cartridge as claimed in any of Claims 1 to 3 wherein there are at least two stations, an abutment, constituting the mechanically 50 explorable feature, being provided at each of the stations.

5. A photographic roll film cartridge containing a film of a particular sensitivity and/or type, the cartridge presenting a surface provided with two or more abutments, the 55 positions of the abutments, along the surface, being indicative of the particular sensitivity and/or type of film in the cartridge.

L. E. T. BRANCH, B.SC., F.R.I.C.,
Patent Agent.

Abingdon: Printed for Her Majesty's Stationery Office, by Burgess & Son (Abingdon), Ltd.—1966.
Published at The Patent Office, 25 Southampton Buildings, London, W.C.2,
from which copies may be obtained.



* C L M S *