



Sawyer's Europe, s.a.

VIEW-MASTER
Stereo-System

MANAGEMENT AND FACTORY :
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BELGIUM

PANAVUE
Superdics and
Slide-viewers

November 27, 1963
Our letter n° 63/650

Dear Mr. Deibele,

Concerns : Synchronization of the View-Master Mark II
cameras

The timing is adjusted as follows :

X contact : Time zero at full opening of the shutter blades (as you have remarked, it is the upper contact under the front plate. Black or blue wire)

M contact : Time - 12 milliseconds from the half opening (this contact is connected with the red wire)

With Regula King, they adjust first the X contact by means of an Oscillograph system coupled with a photo-cell. After this is done, they adjust the M contact so that it closes 14 ms. before the X one. In other words, they measure the time between the 2 contacts and adjust it on 14 ms.

The setting or adjusting of the right contact time is made by means of fine pliers. The rough setting of about 14 ms. is given by the fixed distance of the 2 spring-contacts on the insulation plastic mtg. plate. To modify the time, they bend a little more or less the beginning of the spring (see drawing).

Attention : the time during which the contact happens is important (thus the time that the shutter blade pin touches the spring contact). Would this touching time be too short, some bulbs would not flash. Therefore, the "curve" of the spring (see drawing) may not be too flat.

To check the synchronization we use a synchronizer tester of Aerotronic Associates Inc. Contocook N.H., that gives us good results. When we do not have this instrument, we make the test with an electronic flash. For X we look into the objective and control the full opening. For M, we know by experience that only a little opening may appear (of about .040 - above for the right optic and below for the left optic).

The above timings are based on the European most used flash bulbs PFI, PFIB, XMI, XMI B, etc.

The enclosed diagram gives you the theoretical reason of this choice.

Hoping this will answer your question, we remain,

Yours faithfully,

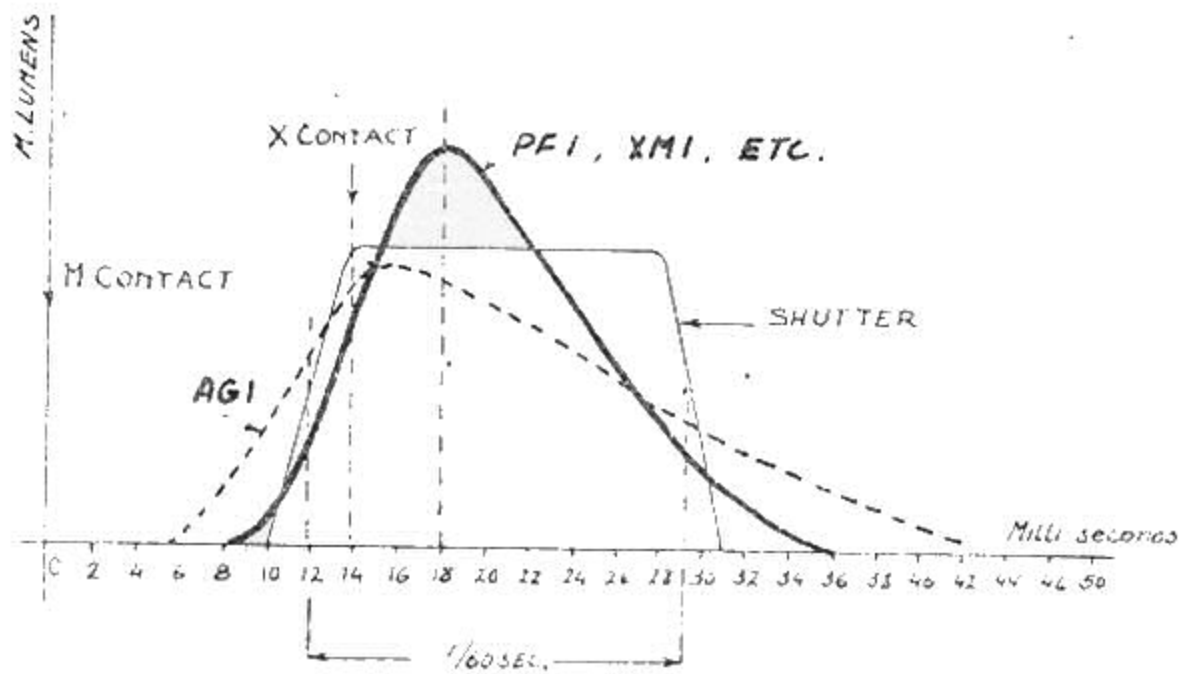
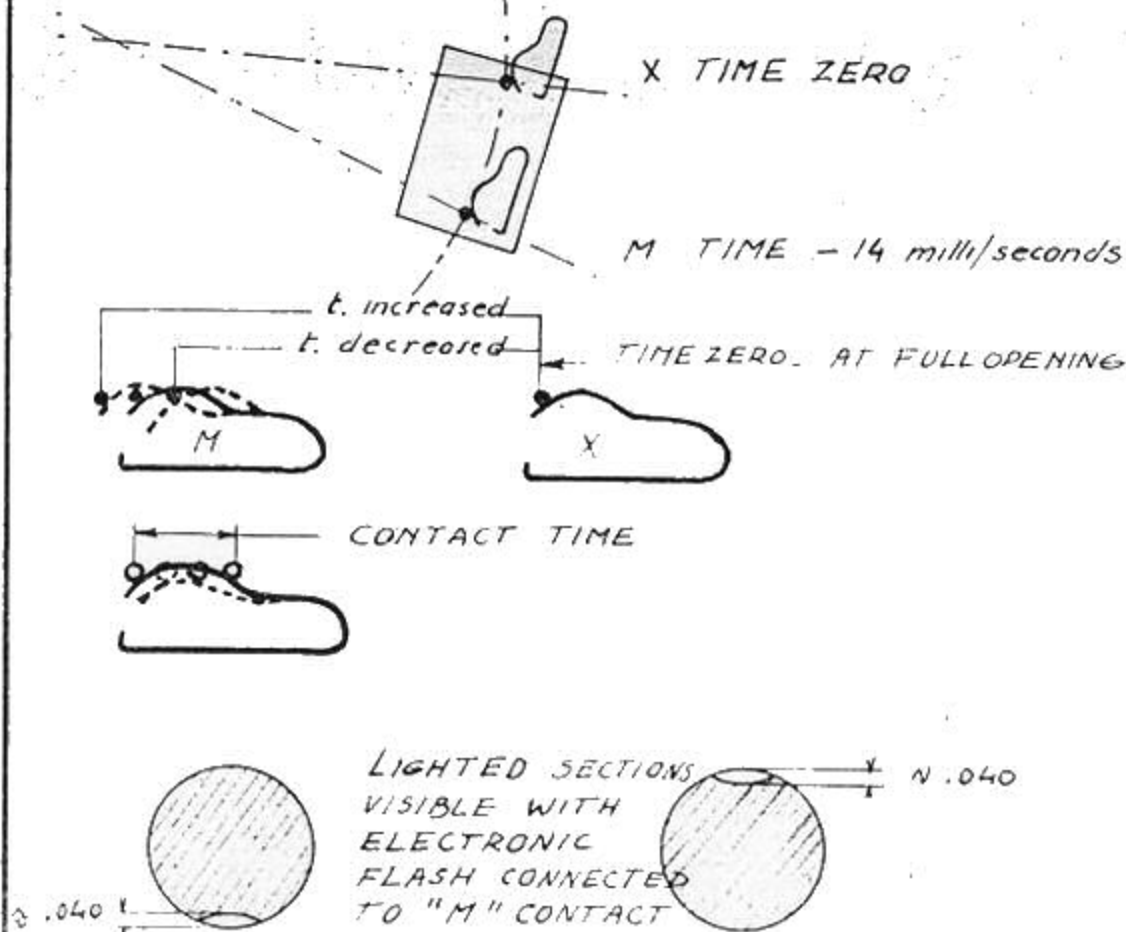
SAWYER'S EUROPE S.A.


E. Denis
Production Engineer

Datum: 22 03

Gerekind: DENIS. F. 27

Magicien:



SAWYER'S EUROPE S. A.

Sint-Niklaas

F. 27 03 22

Notes about faults encountered on the View-Master
camera Mark II

- 1° Rapid wind button jumps up (must remain locked in the lower position)
Increase a little the bending of the button stop. (drawing 1-A)
This can be done after removing the upper aluminium cover only.
- 2° Broken release button (appears during transport)
Replace button : pull out the little adhesive plate to unscrew the plastic button.
- 3° Little plastic particles of the rapid button, fallen in the transport mechanism.
Remove the upper aluminium cover and remove the plastic chips (drawing 1-B). This fault is being corrected by the use of another quality of plastic, probably delrin. We asked King to study a new all-metal button. We asked to change also the material of the release button and counter gear.
- 4° Shutter sticks on light values between 8 and 9 (shutter blades remain open)
This fault has been corrected by different improvements in the shutter mechanism - shutter blades spring system, timer levers, etc.
One reason for this fault which could happen is that the V-lever (drawing 2-A) should jump over the fork-lever - (B). We had this in a camera which fell on the floor (in his box, during shipping)
Disassemble : 1° the color code plate
2° the signal disc
3° the lens hoods front piece
4° fix the lever in the right position and bend it a little down
- 5° Leather case : we found out that some tripod screws were too short. (2-5 %°). We don't think this will happen further more.
- 6° Advance mechanism completely locked - button sticks down (fig. 3).
The shaft of the wind-button was slipped out of its fork (this shaft is normally pressed in the die cast mounting block).
Repair : we introduced again the shaft and flattened lightly one of its end. We wrote to Regula about this asking them to make this shaft longer.
- 7° Advance mechanism completely locked (fig. 4). The little ball-pin of the rewind winch was derivated and locked the advanced mechanism.
Repair : replace winch (or solder ball-pin in place)
- 8° The camera fell on the floor. The shutter release mechanism did not work. (fig. 5). The locking lever (A) jumped under the tie-bar (M) (dotted lines) making the double exposure security lever (L) immovable.
Repair : replace (A) upon the tie-bar M. Pull it a little by its end toward you to bring it a little forward.

RAPID WIND BUTTON

A. JUMPS UP

B. BROKEN CATCH
LOCKS MECHANISM

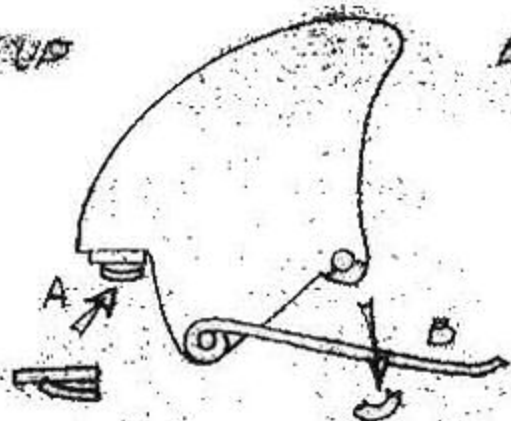


FIG 1

SHUTTER TIMER MECHANISM

STIKS ON LIGHT
VALUE 8-9

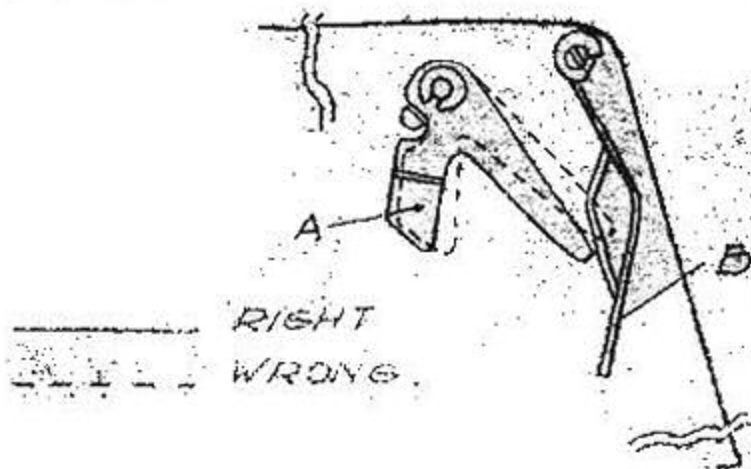


FIG 2

SHAFT SLIP OUT

LOOSE, FELL IN
THE TRANS. MECH.

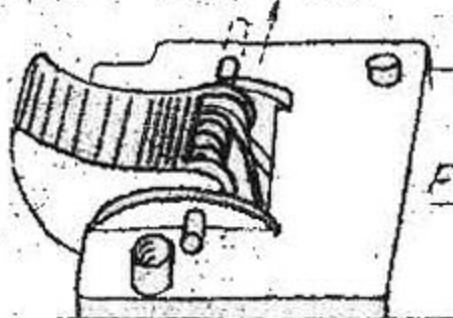


FIG 3

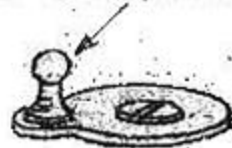


FIG 4

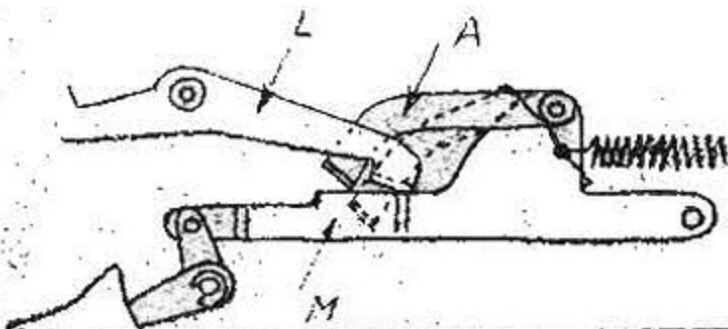
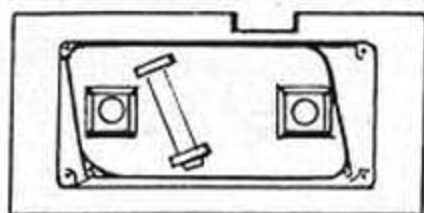


FIG 5



Gehäuse

K 50-101 m

case



Kerbstift Kerpin S 24
dowel pin Kerpin S 24

1,2 x 6



Lagerbuchse
bushing

K50-298 a



Rückspulmitnehmer
rewinding follower

K50-294 a



Mitnehmerbolzen
follower pin

K50-295 a



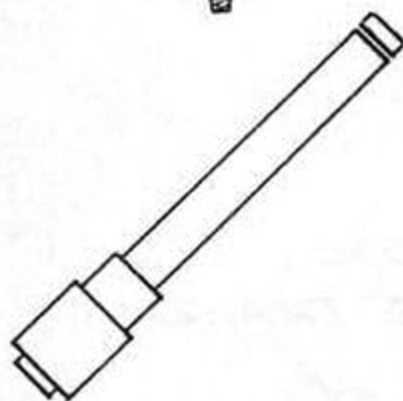
Rückspulwelle
rewinding shaft

K50-293 d



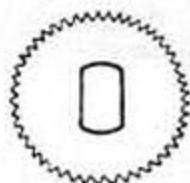
Schraube f. Rückspulwelle
screw for rewinding shaft

K50-289



Aufwickelwelle
winding shaft

K50-111 m



Zahnscheibe
gear

K50-113



Linsenschraube für
Aufwickelwelle
button screw for winding
shaft
Beilagscheibe
washer

K50-308



14x6,4x0,2

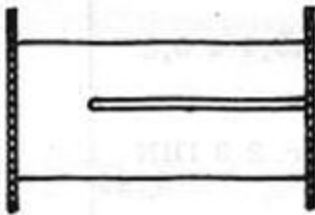




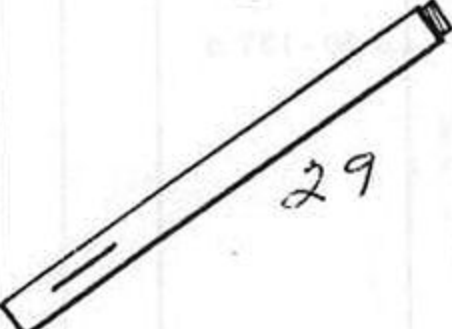




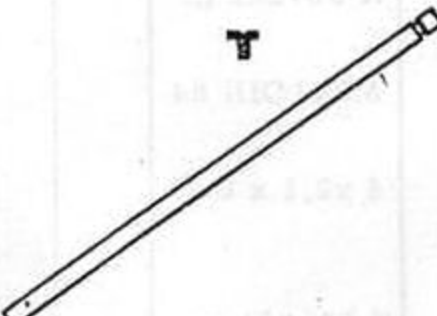






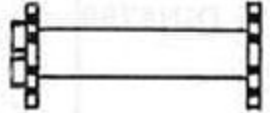
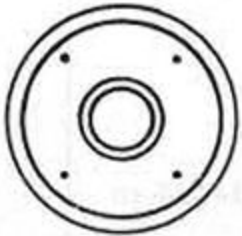
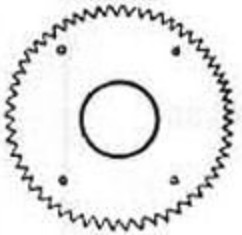





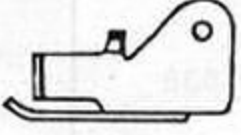
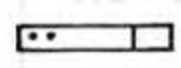



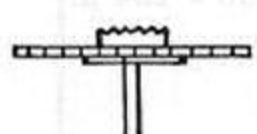
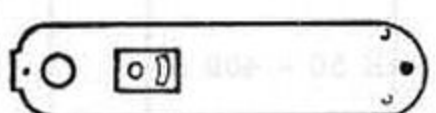
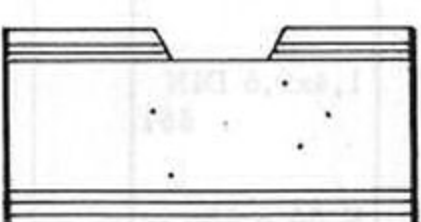









Abbildung	Benennung	Bestell-Nr.	Gew. gr./St.
	<p>Aufwickelspule film spool</p>	<p>K50 - 112 m</p>	
	<p>Friktionsfeder friction spring</p>	<p>S10 - 433 a</p>	
	<p>Beilagscheibe washer</p>	<p>14 x 6,4 x 0,3</p>	
	<p>Sicherungsscheibe lock washer</p>	<p>Nr. 5 DIN6799</p>	
	<p>Beilagscheibe washer</p>	<p>15x6,1x1,5</p>	
 <p>29</p>	<p>Mitnehmerhülse follower bushing</p>	<p>K 50-147 m</p>	
	<p>Mitnehmer f. Zahnscheibe follower for gear washer</p>	<p>K 50-307</p>	
	<p>Distanzhülse distance sleeve</p>	<p>K 50-348 m</p>	
	<p>Zahnscheibe gear washer</p>	<p>K 50-149 a</p>	
	<p>Zylinderschraube cylinder screw</p>	<p>M 1,7x2 DIN84</p>	
	<p>Transportwelle transport shaft</p>	<p>K 50-144 a</p>	
	<p>Druckfeder compression spring</p>	<p>S 10-638</p>	

Abbildung	Benennung	Bestell - Nr.	gr./St
	Unterlegscheibe washer	5x3,1 x 0,5	
	Sicherungsscheibe lock washer	Nr. 2.3 DIN 6799	
	Knebelkerbstift Kerpin S 8 toggle pin Kerpin S 8	1,2 x 8	
	Schaltscheibe dial disk	K50 - 335 m	
	Zylinderschraube cylinder screw	M 4x4 DIN 84	
	Zahntrommel gear drum	K 50-143 m	
	Schaltrad dial wheel	K 50 -137 d	
	Zahnscheibe gear	K 50-139 b	
	Niet rivet	K 50-138 m	
	Zylinder.- Ansatzschraube cylinder shoulder screw	K 50-114 m	
	Rastfeder rest spring	K 50-322 m	
	Zylinderschraube cylinder screw	M2x4 DIN 84	
	Unterlegscheibe washer	4 x2,1 x 0,2	
	Schalthebel dial lever	K 50-331 m	

Gew.
gr./St

Abbildung	Benennung	Bestell - Nr.	Gew. gr./St
	Schiebefeder slide spring	K 50-332 m	
	Halbrundniet half round rivet	1,4x2 DIN 660	
	Welle shaft	K 50 - 333 m	
	Schenkelfeder shank spring	K 50 - 334 m	
	Zählrad counting wheel	K 50 - 318	
	Bodenplatte floor plate	K 50 - 310 m	
	Rückwand back wall plate	K 50 - 272 m	
	Führungsniet guiding rivet	K 50 - 405 m	
	Kassettenhalteniet adapter rivet	K 50 - 406 m	
	Nietbuchse rivet bushing	K 50 - 404	
	Scharnier hinge	K 50 - 275 G	
	Senkniet countersink rivet	K 50 - 312	
	Velourstreifen velour plate	K 50 - 302	
	Filzstreifen felt plate	K 50 - 324	
	Filzstreifen felt plate	K 50 - 325	
	Rückwandverschluß backwall lock	K 50 - 274 G	



Ansatzschraube
shoulder screw

K 50 - 182 a



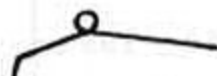
Winkelhebel
angle lever

K 50 - 184 m



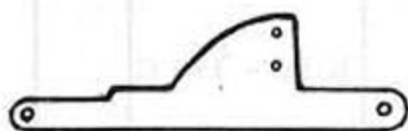
Sicherungsscheibe
lock washer

Nr. 1,5 DIN
6799



Schenkelfeder f. Winkelhebel
shank spring for angle lever

K 50 - 208 a



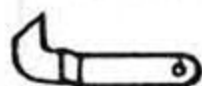
Spannhebel
cocking-handle

K 50 - 192 f



Spannhebelbolzen
cocking-handle bolt

K 50 - 193



Ausrückhebel
release lever

K 50 - 188 a



Ansatzniet f. Spannhebel
shoulder rivet for cocking-
handle

K 50 - 195



Schenkelfeder f. Ausrückhebel
shank spring for release lever

K 50 - 183



Feder f. Spannhebel
spring for cocking-handle

K 50 - 194



Sicherungsscheibe
lock washer

Nr. 1,5 DIN
6799



Kupplungsbuchse
clutch bushing

K 50 - 233 a



Drahtauslöserhebel
release cable lever

K 50 - 227 b



Einhängeniet
index rivet

K 50 - 231



Übertragungshebel
carrying lever

K 50 - 230 b



Distanzrolle
distance roller

K 50 - 126 a



Drahtauslöserstange
release cable bar

K 50 - 134 b






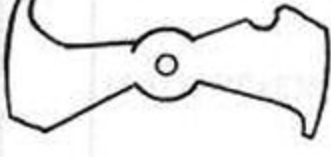
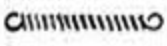
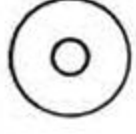

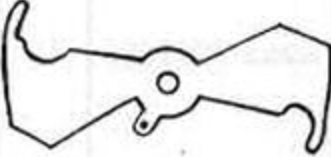






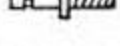

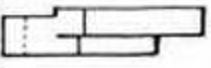

Sicherungsscheibe
lock washer

Nr. 1,5 DIN
6799



Objektiv "Rodenstock"-Trinar
objective "Rodenstock"-
Trinar

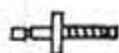
1 : 2,8 / 20

Abbildung	Benennung	Bestell -Nr.	Gew gr./St
	Verschlußsektor shutter sector	K50 - 212 m	
	Niet für Verschlußsektor rivet for shutter sector	K 50 - 213 a	
	Kontaktstift contact pin	K 50 - 214	
	Zusatzsektor supplement sector	K 50 - 205 b	
	Zugfeder tension spring	K 50 - 186	
	Beilagscheibe washer	14x4,1x0,1	
	Sicherungsscheibe retainer ring	Nr. 3,2 DIN 6799	
	Decksektor top sector	K 50 - 206 b	
	Sicherungsscheibe retainer ring	Nr. 1,5 DIN 6799	
	Beilagscheibe washer	11x4,1x0,2	
	Verschlußfeder shutter spring	K 50 - 207 m	
	Buchse f. Lichtwertscheibe bushing for light value scale	K 50 - 249	
	Paßkerbstift Kerpin S 2 dowel pin Kerpin S 2	1x6 DIN 1472	
	Zylinderschraube cylinder screw	M2,3x5 DIN 84	
	Lagerschraube bushing screw	K 50 - 223 a	
	Schenkelfeder f. Sperrhebel shank spring for release lever	K 50 - 211 b	
	Sperrhebel index lever	K 50 - 209 m	
	Steuerhebel steering lever	K 50 - 172e G	

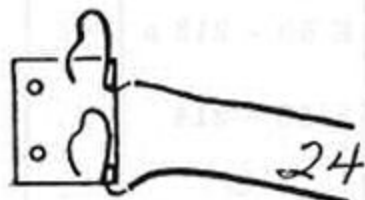
6

Feder für Steuerhebel
spring for steering lever

K 50 - 203 a

Lagerschraube
bushing screw

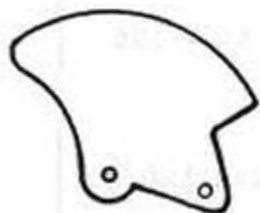
K 50 - 224 b

Isolierplatte
insulation plate

K 50 - 219 G

Senkschraube
countersink screw

M2x3WN1001

Transporthebel
transport lever

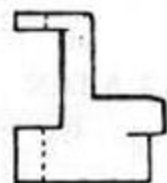
K 50 - 168 e

Anschlagbügel
stop ring bracket

K 50 - 169 c

Zylinderschraube
cylinder screw

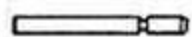
K2x5 WN1025

Transportschieber
transport carriage

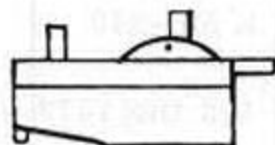
K 50 - 175 a

Feder für Transportschieber
spring for transport carriage

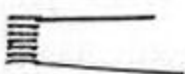
K 50 - 252 b

Achse
shaft

K 50 - 136 a

Lagerbock
bushing support

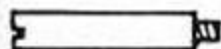
K 50 - 170 b

Feder für Transporthebel
spring for transport lever

K 50 - 173 a

Senkschraube
countersink screw

M2x4 WN 1001

Stützschraube
support screw

K 50 - 120 m

Film Transport

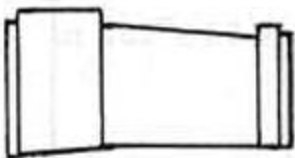

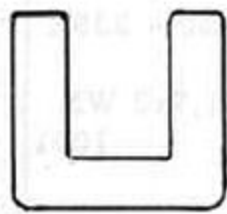



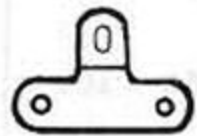





Abbildung	Benennung	Bestell-Nr.	Gew. gr./Stk
	<p>Sucher view finder</p>	<p>K 50 - 190G</p>	
	<p>Kamera - Oberteil camera top part</p>	<p>K 50 - 291m</p>	
	<p>Steckschuh contact shoe</p>	<p>K 12 - 585 a</p>	
	<p>Steckschuhfeder contact shoe spring</p>	<p>P12 - 573</p>	
	<p>Kontakt-nippelbuchse contact shoe bushing</p>	<p>S 10 - 116</p>	
	<p>Kontakt-nippel contact nipple</p>	<p>K 16 - U 2</p>	
	<p>Kontaktbrücke contact bridge</p>	<p>K 50 - 341m</p>	
	<p>Buchse f. Rückspultaste bushing for rewinding button</p>	<p>K 50 - 299m</p>	
	<p>Rückspulknopf rewinding button</p>	<p>K 50 - 327G</p>	
	<p>Sicherungsscheibe retainer ring</p>	<p>Nr. 12 DIN 6799</p>	
	<p>Rückspultaste rewinding knob</p>	<p>K 50 - 297 m</p>	
	<p>Linsensenkschraube button countersink screw</p>	<p>K 50 - 407m</p>	

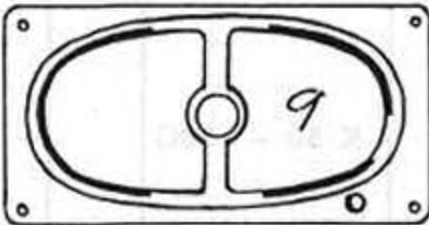



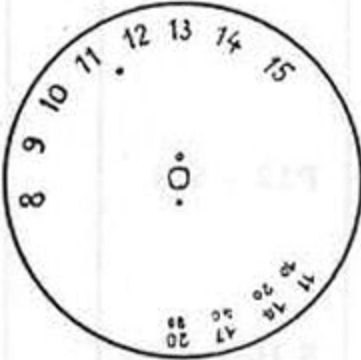

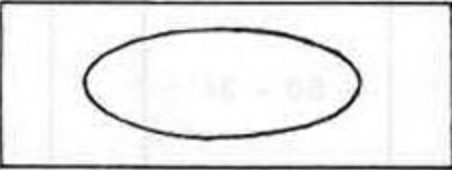
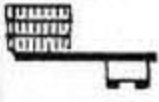


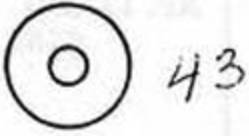
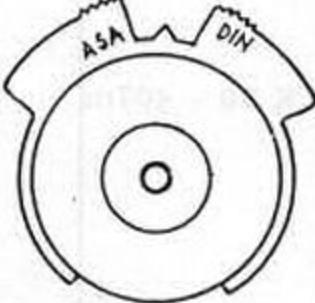


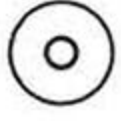
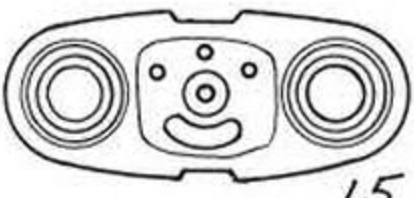



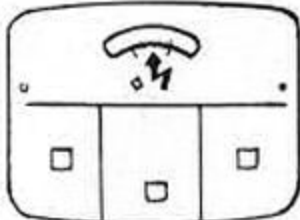

Abbildung	Benennung	Bestell -Nr.	Gew. gr./St
	<p>Frontplatte front plate</p>	<p>K 50 - 253 m</p>	
	<p>B - Hebel B-lever</p>	<p>K 50- 238 a</p>	
	<p>Gewindebuchse tread bushing</p>	<p>K 50 - 239 f</p>	
	<p>Senkschraube countersink screw</p>	<p>M1,7x3 WN 1001</p>	
	<p>Lichtwertscheibe light value plate</p>	<p>K 50 - 234 e</p>	
	<p>Senkschraube countersink screw</p>	<p>K 50 - 401</p>	
	<p>Gehäuseleder case leather</p>	<p>K 50 - 102 c</p>	
	<p>Auslösehebel release lever</p>	<p>K 50 - 343mG</p>	
	<p>Umstellhebel shifting lever</p>	<p>K50-243 b G</p>	
	<p>Linsenschraube button screw</p>	<p>K 50 - 330</p>	
	<p>Beilagscheibe (Fibre) fibre washer</p>	<p>14x4,2x0,2</p>	
	<p>Belichtungs - Einstellring exposure dial ring</p>	<p>K50 -245c G</p>	

Abbildung	Benennung	Bestell-Nr.	Gew. gr./St
	Beilagscheibe washer	14x4, 2x0, 1	
 59	Kronenfeder crown spring	K 50 - 329	
	Beilagscheibe washer	11x4, 1x0, 2	
 15	Frontplatten - Oberteil front plate top part	K 50 - 255hG	
	Senkschraube countersink screw	K 50 - 401	
	Signalscheibe signal disk	K 50 - 248 f	
	Linsenschraube button screw	M2x3 DIN921	
	Farbskala color scale	K 50 - 247 b	
	Linsenschraube button screw	K 50 - 402	