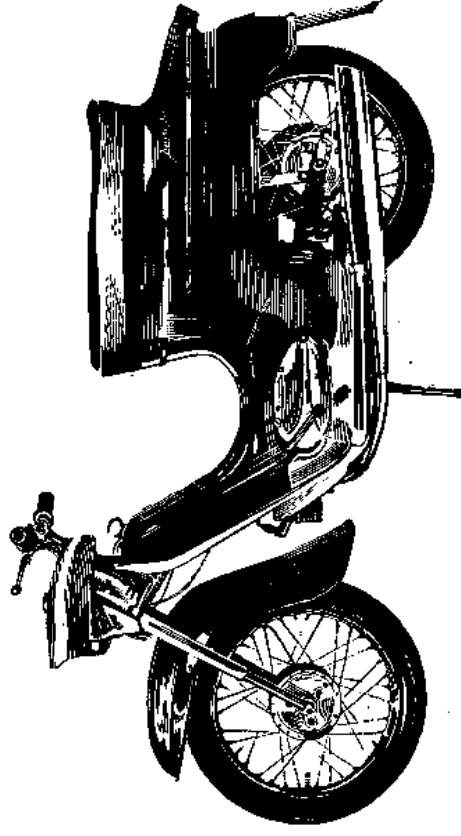


# WORKSHOP MANUAL

**Jawa 50, type 20**

**Jawa 50, type 21**

**Jawa 50, type 23A**



Manufacturer: Považské strojárne, n. c., Považská Bystrica  
Export: Motokov ● Praha ● Czechoslovakia

## TABLE OF CONTENTS

	Page
I -- Technical characteristics and maintenance -- -- --	4
1 -- Technical data of Jawa 50, types 20, 21 and 23 A -- --	4
2 -- Piston and cylinder grading -- -- --	6
3 -- Grading table for the crankpin bearing assembly -- --	7
4 -- Vehicle maintenance table -- -- --	8
5 -- Lubrication chart -- -- --	11
II -- Undercarriage -- -- --	13
6 -- Removing the front wheel -- -- --	13
7 -- Removing the rear wheel -- -- --	15
8 -- Change of bearings in the wheels -- -- --	15
9 -- Dismantling the brakes -- -- --	15
10 -- Dismantling the rear chain wheel and change of bearings	15
11 -- Disassembly and assembly of the cowls -- -- --	16
12 -- Dismantling the headlamp -- -- --	18
13 -- Dismantling the handlebars -- -- --	18
14 -- Dismantling the headlamp guard -- -- --	18
15 -- Dismantling the fork from the frame -- -- --	18
16 -- Dismantling the sliders from the front fork shoulders	18
17 -- Dismantling the rear telescopic shock absorbers -- --	20
18 -- Dismantling the rear swinging fork -- -- --	20
19 -- Change of speedometer flexible shaft -- -- --	27
20 -- Change of gas cable -- -- --	27
21 -- Change of clutch cable -- -- --	27
22 -- Change of front and rear brake cables -- -- --	27
III -- Carburetter -- -- --	29
23 -- Disassembly and assembly the carburetter -- -- --	29
24 -- Cleaning and maintenance of carburetter -- -- --	29
IV -- Engine -- -- --	31
A -- Disassembly and assembly without removing the engine from the frame -- -- --	31
25 -- Dismantling the head and cylinder -- -- --	31
26 -- Change of piston rings -- -- --	31
27 -- Disassembly and assembly of piston -- -- --	32
28 -- Dismantling the cylinder and the head -- -- --	32
29 -- Disassembly and assembly of starting and shifting levers	33
29a -- Dismantling the R. H. cover -- -- --	33
30 -- Disassembly and assembly of secondary chain wheel --	33
31 -- Advanced ignition adjustment -- -- --	34
B -- Disassembly and assembly as to remove the engine from the frame -- -- --	
32 -- Magneto disassembly and assembly -- -- --	35
33 -- Dismantling the primary transmission and the clutch -- --	36
34 -- Change of the cork inserts -- -- --	37
35 -- Change of sealing rings -- -- --	37
36 -- Dismantling the exhaust silencer and carbon deposit removal -- -- --	38
V -- Electrical equipment -- -- --	
50 -- Electric energy source and electrical equipment connector	48
51 -- Ferrite magdynamo -- -- --	48
52 -- Ignition -- -- --	49
53 -- Lighting and sound signalisation -- -- --	52
VI -- Failures and their clearing -- -- --	
54 -- Small engine output -- -- --	53
55 -- Seizing and whistling in the engine -- -- --	53
56 -- The engine knocks -- -- --	54
57 -- Carburetter failures -- -- --	54
58 -- Gear shift failures -- -- --	55
59 -- Defects of clutch and its adjustment -- -- --	56
60 -- The defects of the undercarriage -- -- --	57
61 -- Ignition defects -- -- --	57
62 -- Defects of lighting -- -- --	58
63 -- Defects of the sound signalling -- -- --	59
VII -- Service tools for Jawa 50'20, 21, 23 A motorcycles -- --	
60 --	60

# I. TECHNICAL CHARACTERISTICS AND MAINTENANCE

## OF JAWA 50, TYPE 20 JAWA 50, TYPE 21 JAWA 50, TYPE 23A

### Weights

Weight of vehicle without fuel — 65 = 2 % kg or 143.3 lbs. = 2 %  
 Max. load of front wheel axle — 62 kg or 136.7 lbs  
 Max. load of rear wheel axle — 168 kg or 370.4 lbs

Engine type — 20, 21, 23 A — two cycle  
 Cylinder capacity — 49.9 cm<sup>3</sup>  
 Cylinder diameter (bore) — 38 mm or 1.496 in.  
 Piston stroke — 44 mm or 1.732 in.  
 Compression ratio — 1 : 9.5  
 Max. engine output — 4 HP (2.6 kW) at 6,500 r. p. m.  
 Kind of scavenging — inverted  
 Basic advanced ignition — 2.7 — 3 mm  
 Breaker contact distance — 0.4 mm  
 Bearings of engine — 6202 Ø 15/35×11 — 1 pc  
 — 6303 Ø 15/42×13 — 2 pcs  
 — 6004 Ø 20/42×12 — 1 pc

Material of cylinder — aluminium alloy with grey cast iron insert

Plug — PAL 14—8  
 Carburettor type — Jikov 2917 PSb  
 Main nozzle — 68  
 Idling run nozzle — 38  
 Diffuser diameter — Ø 17 mm  
 Weight of engine — 12 kg  
 Min. specific consumption — 544 g/kWh at 5800 r. p. m.  
 Max. noise level — 80 dB  
 Under load — of two persons — one person (80 kg)  
 Average consumption — 3.2 l/100 km 2.3 l/100 km.  
 Max. speed — 50 km/h. 65 km/h.  
 Max. gradient — 15 % 25 %

### Gears

Number of gear ratios — 3  
 Clutch — twin-disk clutch in oil bath  
 Primary chain transmission — 3.8"×3/8" — 44 links  
 Secondary chain transmission — 1×12.7×5.21 mm×111

Overall ratios: 1-st gear ratio — I 1:27.72 II 30.03  
 2-d gear ratio — 1:15.18 or 16.44  
 3-d gear ratio — 1:10.27 11.13

### Frame

Front wheel suspension — telescopic fork  
 Front suspension stroke — 90 mm  
 Rear suspension — swinging fork with two telescopic shock absorbers  
 Rear suspension stroke — 85 mm  
 Brakes — 125 mm  
 Drum shoe dia — 20 mm  
 Band lining width —

Wheels  
 Version — identical in the front and in the rear, mutually exchangeable

Size of rim — 1.5A×16"

Size of tyre — 2.75×16"

Drums — all hub version

Wheel bearings — 6201 Ø 12/32×10—4 pcs

Bearing of second transmission gear — 6004 Ø 20/42×12-1 pc

Pressures: front tyre — 1.5 atm (147k Pa)

rear tyre — 1.9 atm (186k Pa)

### Fuel tank

Capacity — 5.5 lit. (Jawa 50/23A — 8 lit.)  
 Speedometer — Ø 48 mm, 0—80 km/h.

### Electric equipment with accessories

Ignition — 6 V magneto

Lighting-output-front light — 25 W

rear light — 5 W

Generator — 6 V, 20 W magneto

Ignition coil — 8 V, 02—9210.30

Condenser — 0.27 µF

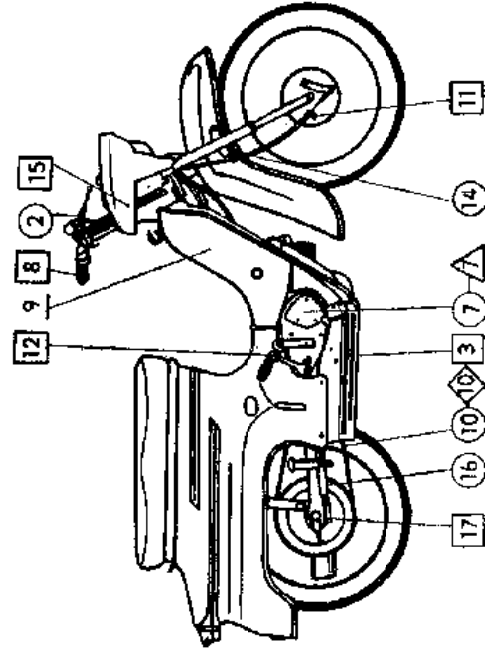
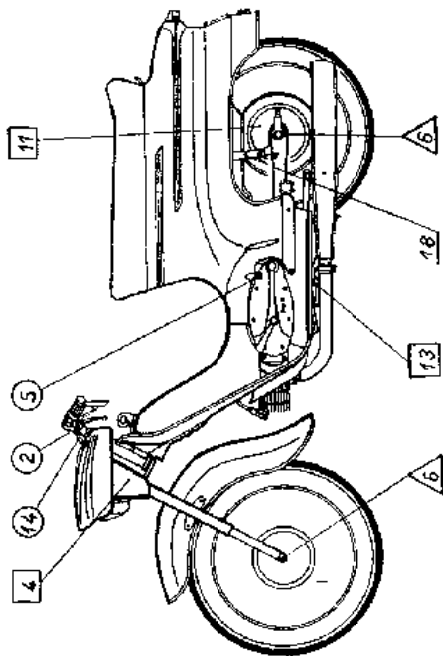


4. Maintenance table

	Operation
1.	Thorough cleaning of the scooter
2.	Check tyre pressure — inflation
3.	Check the lights and buzzer
4.	Check and adjust the brakes
5.	Check the sparking plug, clean it and set the point gap
6.	Descarbonise the exhaust silencer
7.	Decarbonise cylinder head, piston, exhaust port and exhaust pipe
8.	Clean the induction silencer (9)
9.	Check and tighten all leads in their terminals
	Check lead insulation
10.	Check and tighten spoke nipples
11.	Check and tighten all surface screws, bolts, nuts and pins, incl. engine fastening studs
12.	Check and clean the carburetter and the fuel tap
13.	Check and adjust the clutch
14.	Clean the contact breaker points and check the ignition advance
15.	Lubricate the contact breaker arm pin and felt (7)
16.	Clean and lubricate the rear chain on the machine (10)
17.	Check the rear chain tension
18.	Remove the rear chain, wash and lubricate it with graphited grease. Fit and adjust (10)
19.	Lubricate the hand lever pins (2) and foot brake pedal pin (3)
20.	Lubricate the telescopic front fork (4)
21.	Lubricate the wheel ball bearings (6)
22.	Lubricate the twist grip (8)
23.	Check and top up oil in the gearbox (5)
24.	Change the oil in the gearbox (5)
25.	Lubricate the throttle, clutch and brake control cable (14)
26.	Lubricate the kickstarter pedal pin (12), centre stand pin (13), speedometer drive (17), brake cams (11), and speedometer flexible shaft (16)
27.	Lubricate the steering head ball bearing (15)
28.	Check the operation of the pivoted rear fork dampers, if necessary, top up the damper liquid (18)

Note	Mileage covered:										
	0	1000	3000	5000	7500	10000	12500	15000	17500	20000	22500
If necessary	×	×	×	×	×	×	×	×	×	×	×
	×	×	×	×	×	×	×	×	×	×	×
Before every ride											
Before every ride											
Before every ride											
If necessary											
First time after 900 miles											
Every 600 miles											
Every 500—600 miles											
Every 500—600 miles											
Every 500—600 miles											
Every 500—600 miles											
First time after 300 miles											
If necessary											

Fig. 3 — The lubrication chart may be used for all the types



5 — Lubrication chart

Miles (km) covered	○	◊ □	△
	<p><i>In hot weather:</i> Gearbox oil PP 7 Castrol SAE 50 Shell Spirax 90 E. P. <i>In cold weather:</i> Gearbox oil PP 7. Castrol SAE 20-30 Shell Spirax 90 E. P.</p>	<p>Grease A OO Castrolase CL Castrolase Graphited Shell Retinax A</p>	<p>Grease AV2 Castrolase heavy</p>
Lubrication point			
500-600 (900-1000)	<p>2 Hand lever pins 5 Gearbox (topping up) 10 Rear chain (add grease)</p>	<p>3 Foot brake pedal pin 4 Telescopic front fork</p>	
1,500-1,600 (2,400-2,600)	<p>7 Contact breaker arm pin (oil drop) 14 Control cables</p>	<p>8 Twist grip 10 Rear chain (place in hot lubricant)</p>	<p>7 Contact breaker felt (saturate with grease and oil) 6 Wheel bearings</p>
3,000-3,200 (4,800-5,200)	<p>16 Speedometer flexible shaft (after detaching oil some drops)</p>	<p>11 Brake cams 12 Kickstarter pedal pin 13 Centre stand pin 15 Steering head (grease after dismantling and washing) 17 Speedometer drive gear</p>	
	<p>18 Rear suspension telescopic dampers — top up, if necessary, 30 c. c. of damper liquid per damper (Shock Oil, Damper Oil, X 100 20 W). When dismantling grease the damper spring with grease (Castrolase CL, Shell Retinax A). Change oil once in two years.</p>		
6,200 (10,000)	<p>5 Gear-box — during running-in after the first 300 miles (500 km) and next 6,200 miles (10,000 km) change the oil.</p>		
	<p>Fuel mixture: During running in (up to 900 miles — 1500 km) petrol with oil at a ratio of 20 to 1 (petrol with Castrol SAE 40-50 or Shell at a ratio of 20 to 1). After running in period (having covered 900 miles — 1500 km) with Castrol SAE 40-50 or Shell at a ratio of 24 to 1 and 30 to 1.</p>		

## II. UNDERCARRIAGE

### 6. Removing the front wheel (fig. 4)

Unscrew the nut (29) with help of socket spanner (19), remove the elastic washer (30) and get out the wheel axle (28). By a slight lowering the wheel downward remove the brake drum cover pin (17) from the reaction catch and remove the wheel. The brake cover together with shoes (17) remains on the front brake cable.

### 7. Removing the rear wheel (fig. 6)

Dismantle the axle with nut as with the front wheel (chapter 6). Loosen the cable bowden of the rear brake from beneath the catch (from inside the pivoted fork). The reaction catch (27) at the L. H. side pull out, backward. Remove the wheel from the engaging pins of the chain wheel (32), shift it to the upper rear guard cover, remove the brake cover from the wheel and put it aside freely through the pivoted fork L. H. arm. Lift the motorcycle by the handle on the rear cowlings to enable the free falling out the wheel.

Take care, while assembly of rear wheel on the motorcycle, to avoid the reversed assembly of the reaction catch (fig. 5).

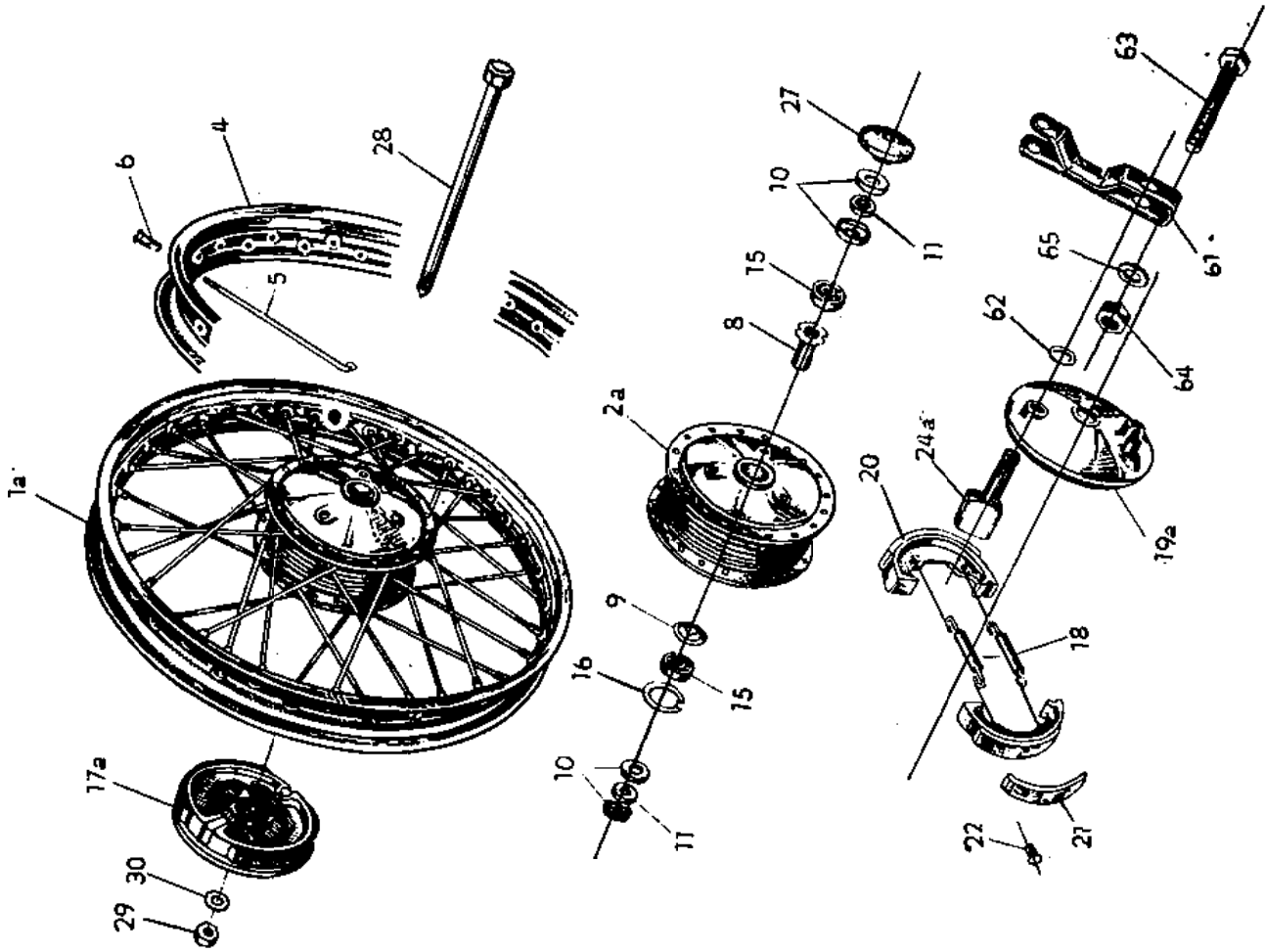


Fig. 4

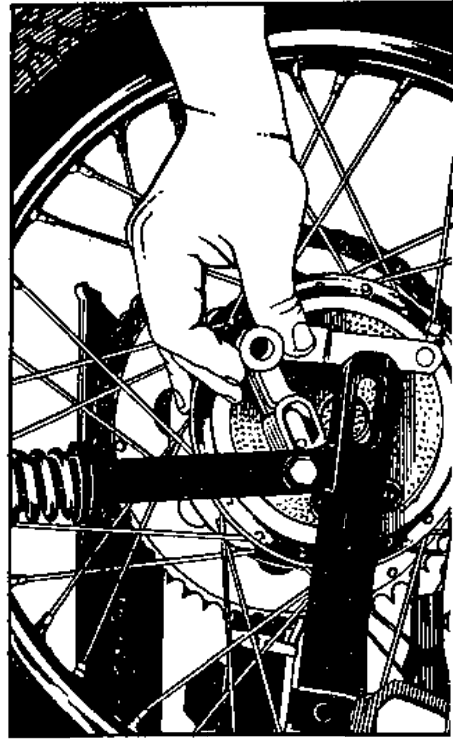
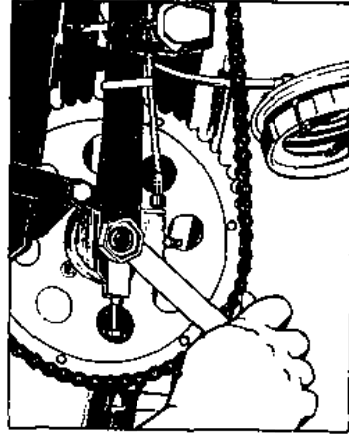


Fig. 5

8. Change of bearing in the wheels (fig. 4)

The change of bearing is the same in both wheels. Remove the packing (10) from both wheel hub sides. Remove the lock ring (16) from the L. H. hub side with help of pliers. Force out bearing. Proceed in the same way when assembly of R. H. bearing (15). After dismantling clean all the parts from the ancient grease and wash them in petrol, should the bearings be worn, change them by new ones. When assembly of bearings proceed in the following way. To make easier the assembly of bearings heat up slightly the brake drum hub to abt. 80 °C. Insert the bearing onto the L. H. side, lock this one by the lock ring and introduce the packing with felt. Press the vaseline into the hub, introduce the spacer, the R. H. bearing with packing and felt. Impregnate the felt packing with engine oil before assembly.

Fig. 7

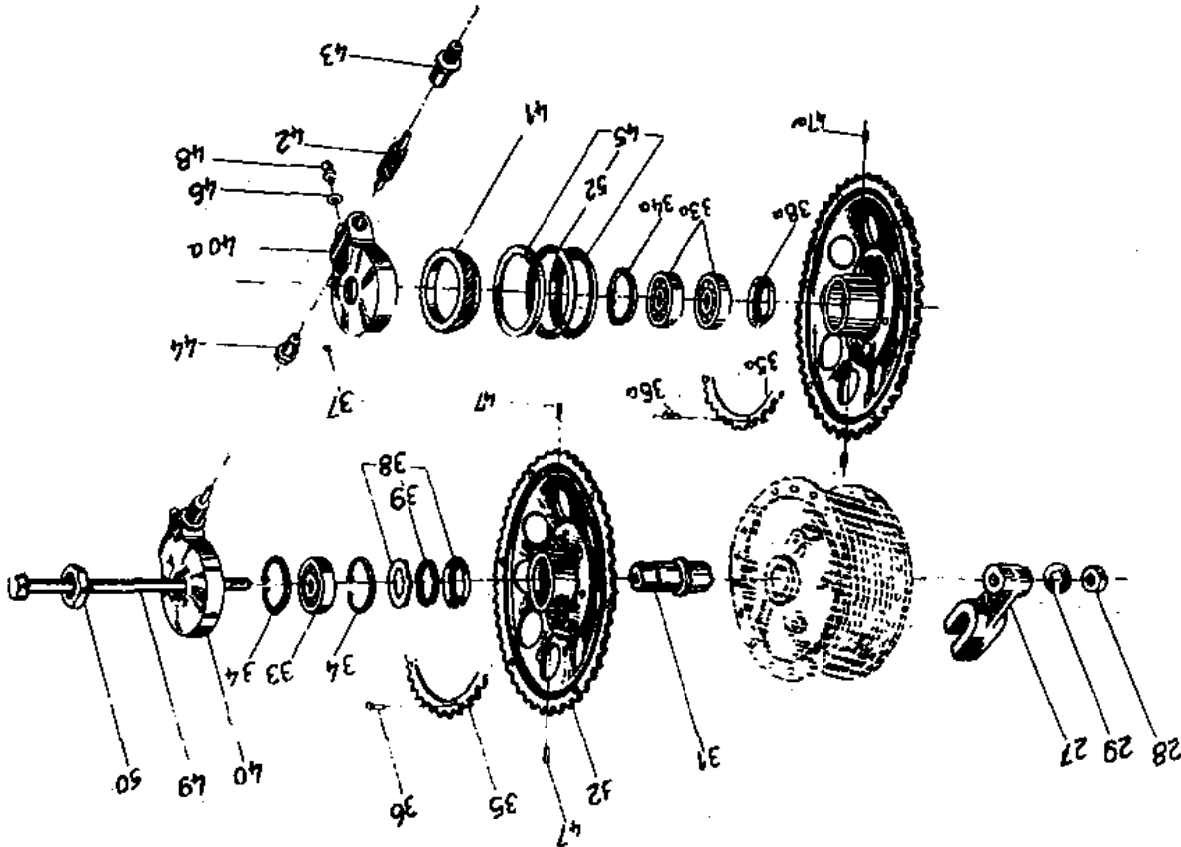


9. Dismantling the brakes (fig. 4)

After dismantling the brake cover (17a) from the wheel hub expand the brake cams (20) and remove them from the brake cover (19a). Proceed vice versa when assembly. Grease slightly the pin and the brake cam.

10. Dismantling the rear chain wheel and change of bearings (fig. 6)

The rear chain wheel is able to be dismantled after removing the rear wheel from the vehicle. Disconnect the secondary chain and the flexible shaft from the speedometer drive (40). With help of # 27 key unscrew the ring nut (50) and remove the complete chain wheel (32) from the pivoted fork R. H. shoulder. Remove the speedometer drive from the chain wheel hub (40) and with a slight knocking with wooden hammer drive the hub (31) out of bearing. Remove the packing (38) together with felt (39). With help of pliers remove the lock ring (34). With N 16 puller remove the bearing (33). Proceed vice versa when assembly. Grease the bearings and impregnate the felt with oil.



## 11. Disassembly and assembly of the cowls (fig. nos. 8, 9)

### a) Front cowl

Having rotated partially the safety pin backward, grasp the front cowl (1) on the lower part which is to be slightly extended and lifted (fig. 8). Pull then the whole cowl backward till a hook in its upper part is thrown out of frame hole.

### b) Protective front shield

Proceed in the following way while dismantling:

Unscrew the headlamp screw and tilt the headlamp. Disconnect the flexible shaft from the speedometer. Unscrew the cable shoe from the sparking plug cable. Pull the flexible shaft and sparking plug cable together with rubber bushing from the protective shield toward the engine. Unscrew each one  $M5 \times 10$  screw on both foot rest sides, fastening the tunnel (17) to the foot rests and remove the tunnel. Unscrew 4 screws in the front shield upper part (16), 5  $M5 \times 10$  screws in the lower part, fastening the front shield to the frame and floors and remove the front shield.

### c) Rear cowl

Unscrew three  $M6 \times 10$  screws beneath the saddle in its upper part and remove the saddle. Disconnect the rear light yellow cable in the bakelite box above the engine. After unscrewing two  $M6$  nuts in the rear cowl upper part, one  $M6 \times 10$  screw, fastening the cowl to the frame and four  $M5 \times 10$  screws with nuts fastening the rear cowl part to the floors, remove the cowl by extending it slightly. Proceed vice versa while cowls assembly.

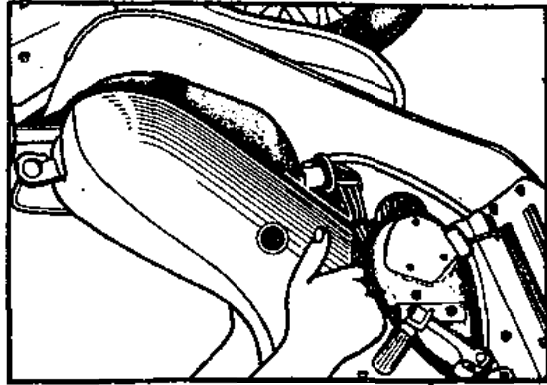


Fig. 8

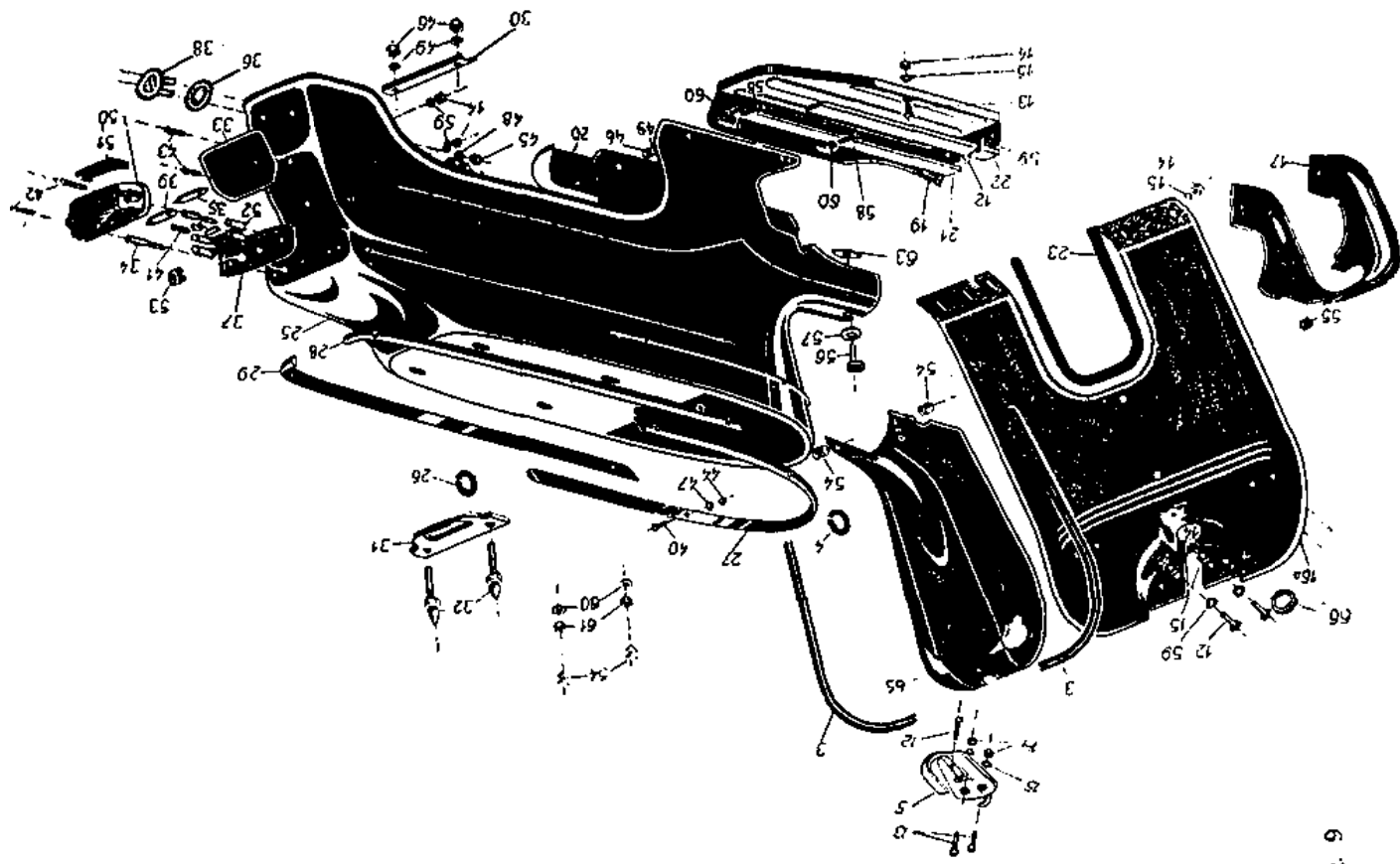
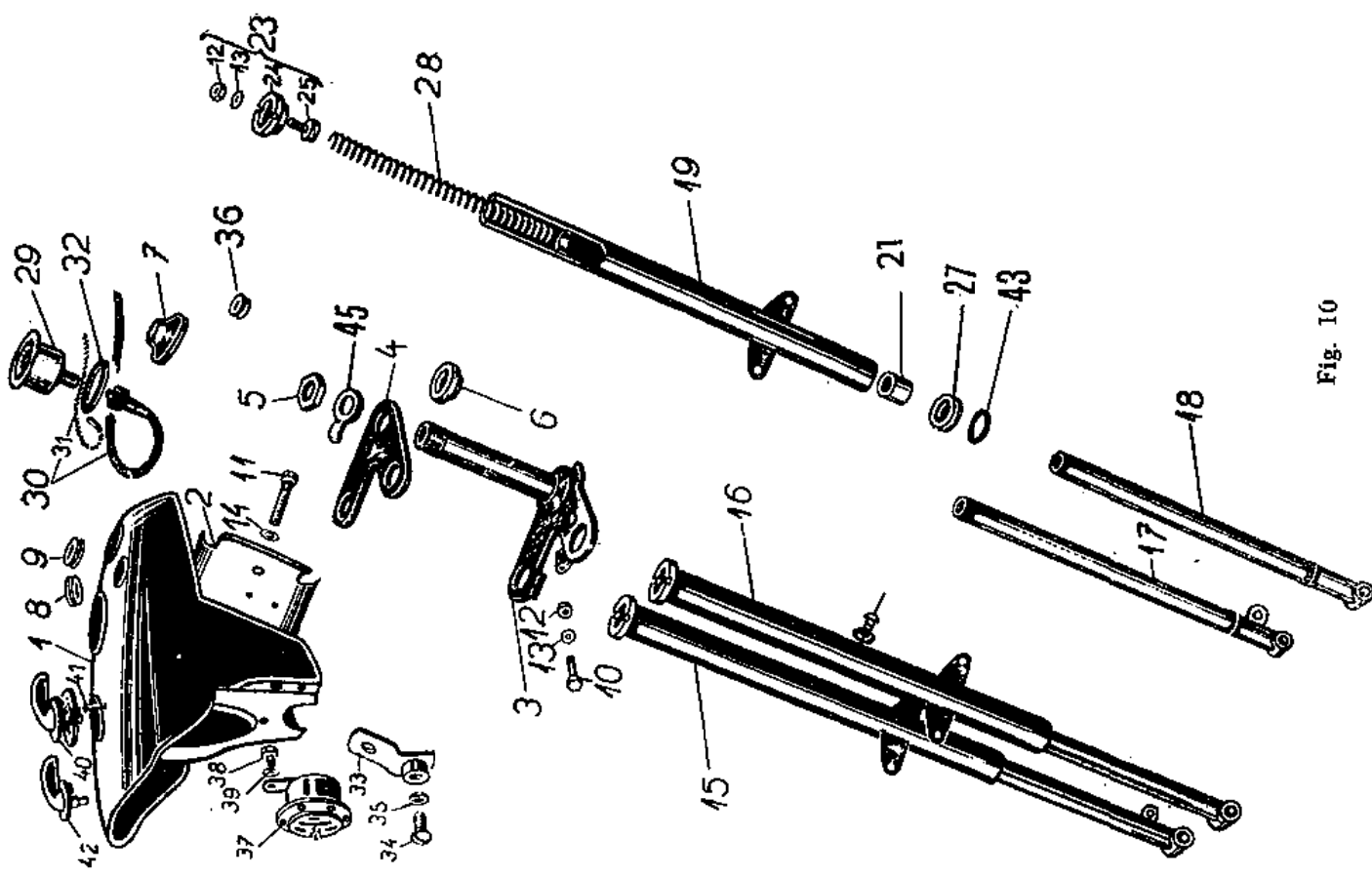


Fig. 9

## 12. Dismantling the headlamp

Unscrew the M5 screw on the frame lower part and tilt the headlamp. Remove the headlamp after rotating partially the bulb holder with cover on the parabola rear part.



## 13. Dismantling the handlebars

Dismantle the handlebars with gas cable bowden. Remove the front cowl, R. H. engine cover and disconnect the gas cable (chapter 23). Dismantle the headlamp (chapter 12) from the cover on the handlebars, from the choke coil and buzzer disconnect the cables leading from the dipswitch on the handlebars. Loosen the handlebars spindle with spanner 10 and knock it down with help of wooden hammer. Pull the handlebars by rotating them slightly together with gas cable and cables. Proceed vice versa while assembly.

## 14. Dismantling the headlamp guard (fig. 10)

While dismantling the headlamp guard, dismount first of all the handlebars and the headlamp. Disconnect then the speedometer flexible shaft in the headlamp guard space and its upper part unscrew two screws fastening the switch box. Disconnect the remaining cable from the buzzer. Unscrew two screws and nuts fastening the headlamp guard to the carrier and remove the headlamp guard.

Proceed vice versa while assembly. See, however, that in the clutch and brake levers are found all the bushes.

## 15. Dismantling the fork from the frame (fig. 10)

Dismantle the front wheel, handlebars and headlamp guard as described in the preceding chapters. Unscrew the M6-nuts (12) and both plugs (24) from both shoulders. Unscrew two M6x7 nuts (11) and remove the cover plate with choke coil. Unscrew 2 nuts (5) and remove the upper carrier (4), the cover plate (2) and the front fork are to be pulled. Take care, however, when pulling the fork from the frame to prevent the steering head balls from to be scattered.

Proceed vice versa while assembly. Grease the balls and pans and tighten the fork with nuts (5) to enable the free rotation of same and to avoid the excessive play.

## 16. Dismantling the sliders from the front fork shoulders (fig. 10)

Dismantle the front wheel. Loosen the tightening band (26) from the rubber cup (27) and by the L. H. rotation unscrew and pull out the slider. Proceed vice versa while assembly. Grease the sliders before to assemble them.

### 17. Dismantling the rear telescopic shock absorbers (fig. 11)

Dismantle the saddle.

Remove the front cowl.

Dismantle the rear cowl.

Unscrew the screws and nuts with no. 14 spanner which fasten the shock absorbers to the frame and to the swinging fork shoulders and remove the shock absorbers.

Compress the telescopic shock absorber so as to be able to insert the spanner no. 7 into the groove milled in the pull rod locking thus the same. Pull the pin from the suspension and unscrew the suspension.

Pull the spanner from the pull rod grooves and loosen the compressed parts. Remove the upper guard, the spring and the lower guard as well as the rubber stop from the complete cylinder.

Unscrew the complete sealing bush which is to be pulled commonly with complete piston from the complete cylinder. Pour the ancient shock absorber oil from the complete cylinder and wash the cylinder together with piston in the kerosene.

When repair the complete piston or complete sealing bush carry out the dismantling in the following way: remove the complete sealing bush from the pull rod piston. Unscrew the M8 nut on the pull rod lower part and remove the piston together with the cup. Remove two pins locking the plug screw to the bush and unscrew the screw.

Should the shock absorber leak, change the silicon ring or two rubber rings from the plug screw or the whole plug screw, if required. Before the assembly of the silicon ring on the plug screw warm up the ring in the oil heated up to abt. 150 °C.

Proceed vice versa while assembly. After screwing the nut onto the pull rod, lock the same by clinching the pull rod ends. Before the complete piston assembly charge into the cylinder the prescribed 30 ccm quantity of shock absorber oil.

### 18. Dismantling the rear swinging fork (fig. 12)

Procedure when dismantling the rear swinging fork pin from the frame: Pressing out the rear swinging fork axle is carried out in such a case only, if the frame or the swinging fork are damaged. Since the rear swinging fork axle is pressed firmly in the frame and in the bushes of the swinging fork, it is difficult to be dismantled.

The simplest method of separation is the following one: Saw the rear swinging fork axle in two points marked (see figure). Deburr the axle after sawing. The remaining axle parts remove under hand operated press.

Procedure when pressing-in the insert and swinging fork axle: Into the swinging fork part no. 05-3221 introduce a rubber insert part no. 05-3211 which is to be gently moistured in trichlorethylene before to be inserted.

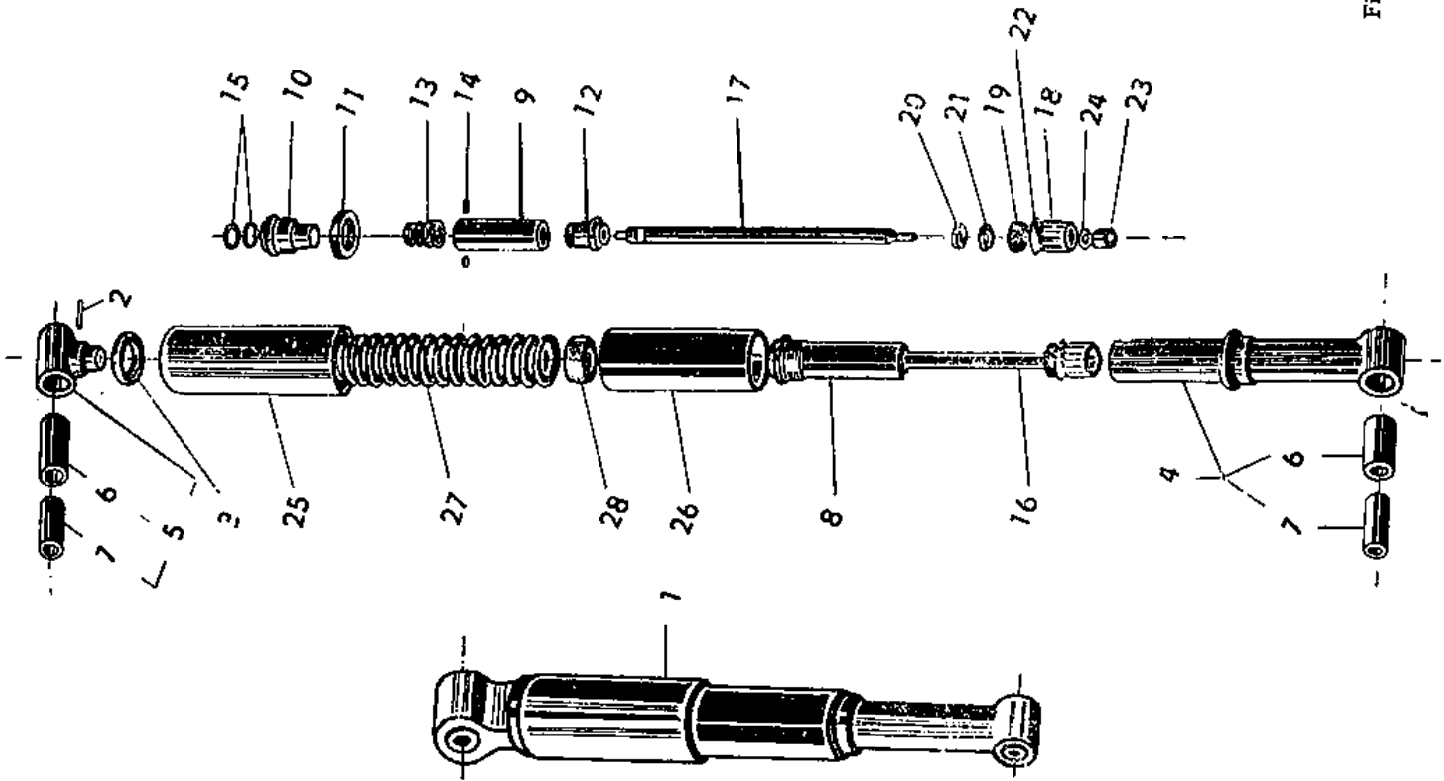


Fig. 11

With help of fixture A and B introduce the bush part no. 05-3210 into the hole in the rubber insert and press in the bush. Slide the stretchers, part no. 05-3001 and the swinging fork onto the frame. Insert the auxiliary pin C into the bushes to guide the parts. Put slightly the swinging fork axle into the bush and press it in the fixture under the press. (Detailed drawings of fixtures are shown in the fig. nos. 13, 13a, 13b).

This work is very difficult and it is not recommended to be carried out without special fixtures as the parts could be destroyed otherwise.

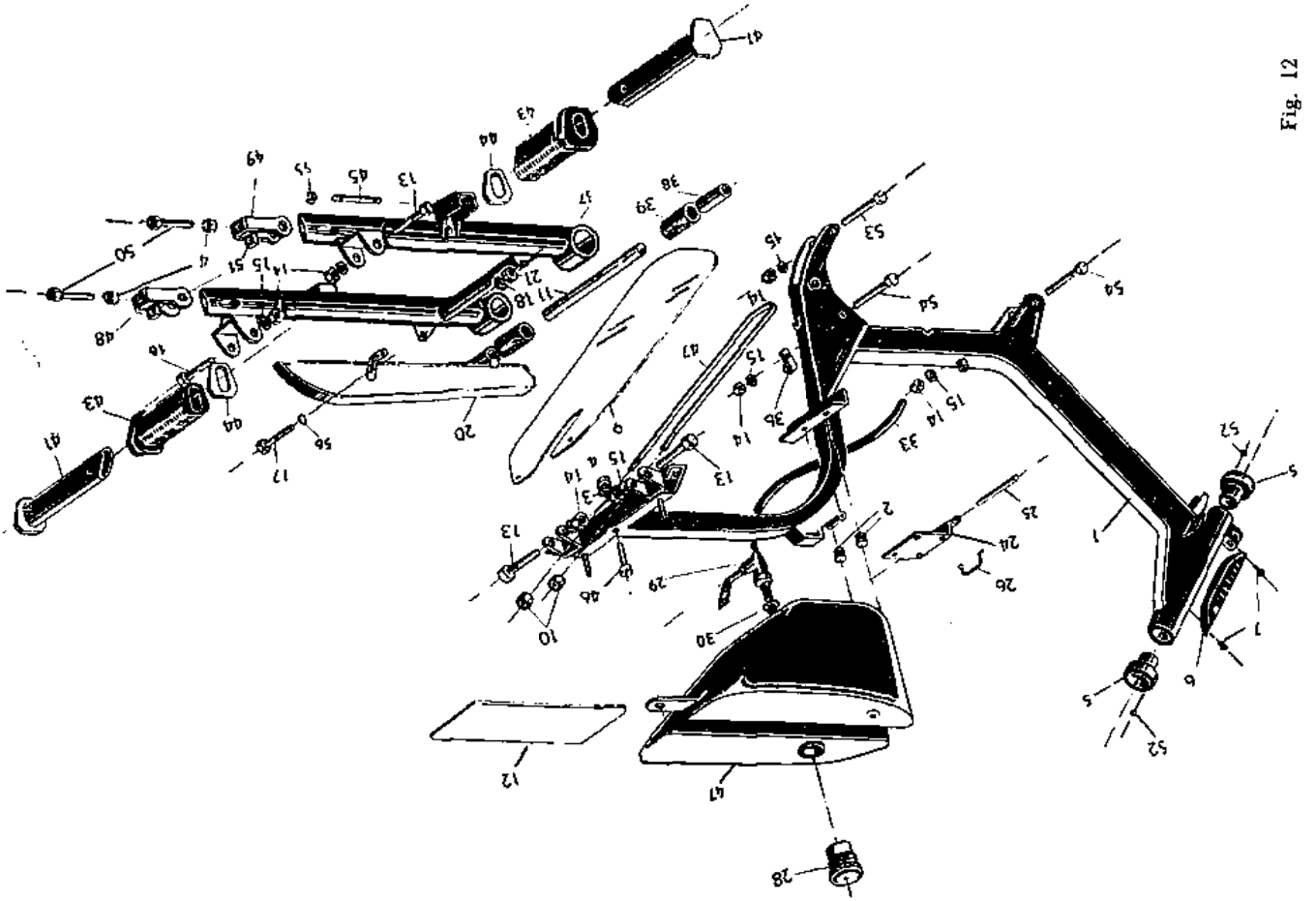


Fig. 12

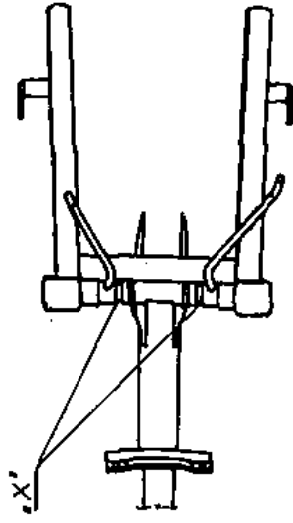
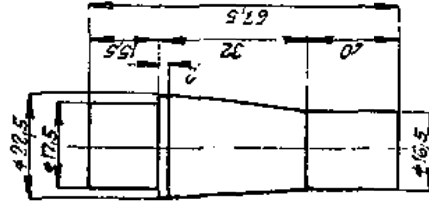
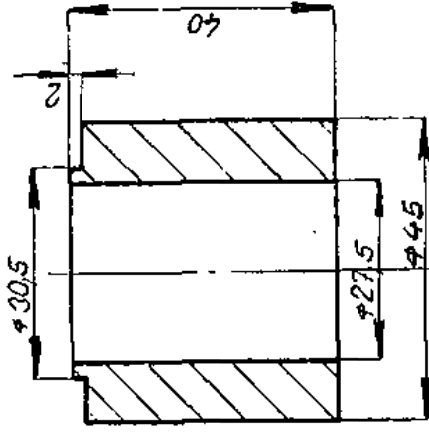


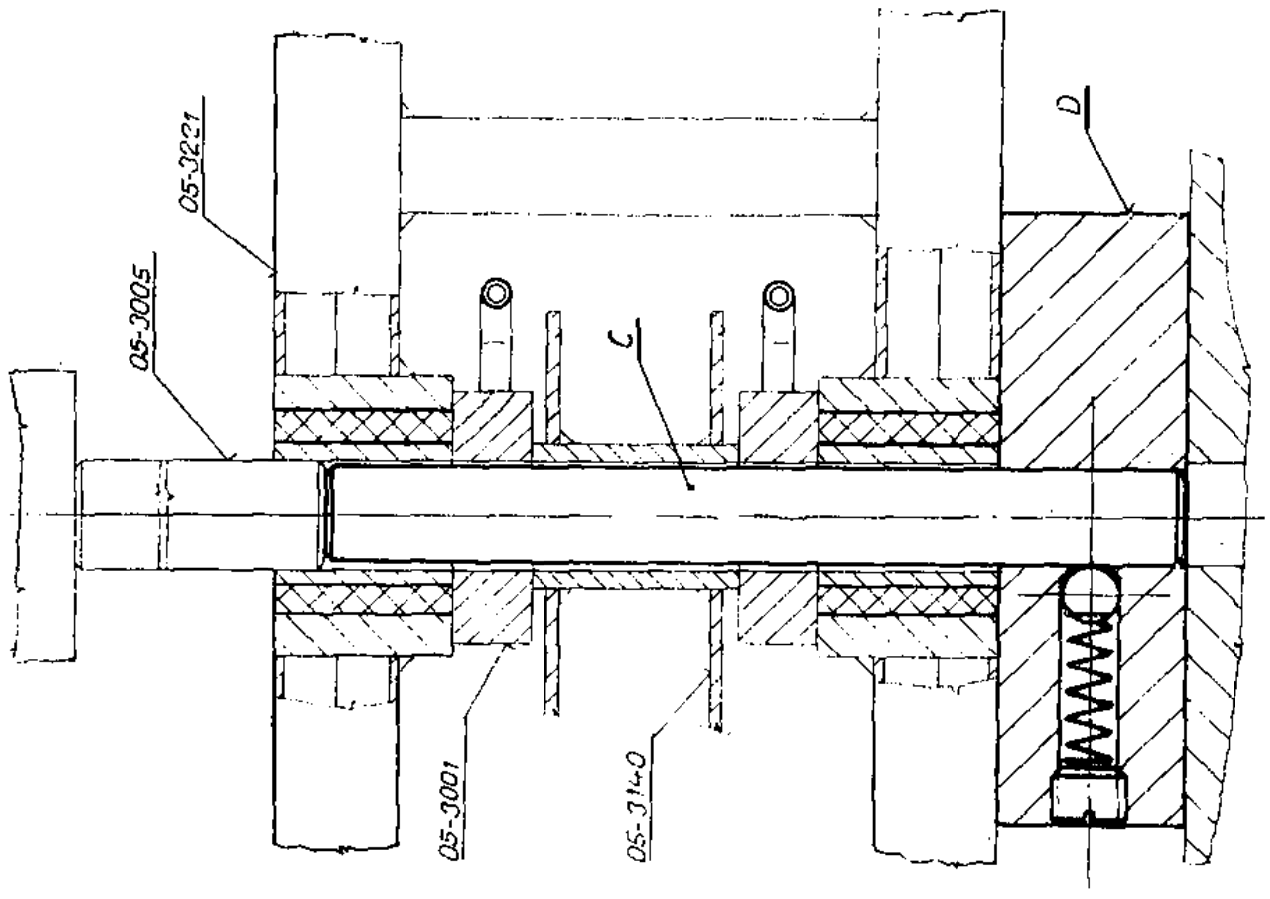
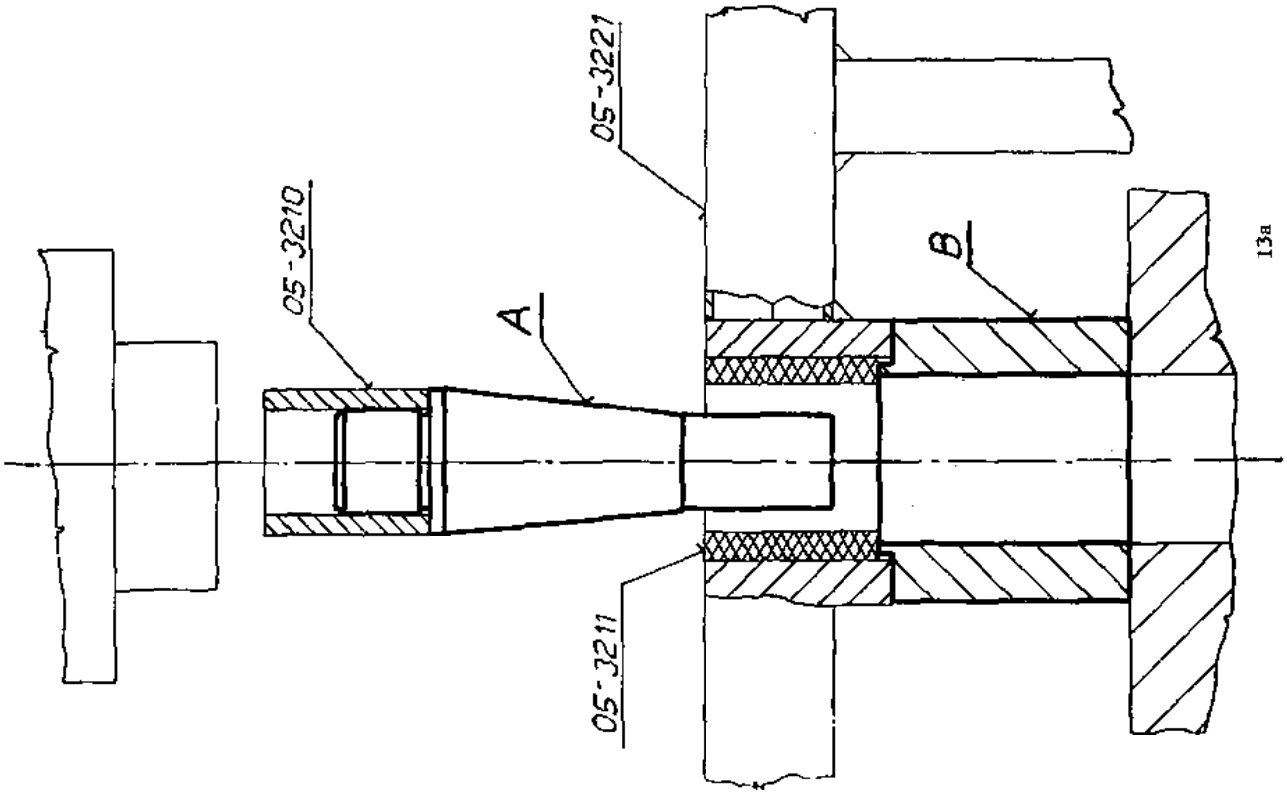
Fig. 13



Part A, from composition 13a



Part B, from composition 13a





### III. CARBURETTER

#### 23. Disassembly and assembly the carburetter 2917 PSb (fig. 15)

Remove the front guard (chapter 11).

Shut the fuel supply cock and disconnect the fuel hose from the float chamber cover. Remove the air filter from the diffuser which forms at the same time also the intake silencer. Unscrew the mixing chamber cover (10) on the carburetter which is to be pulled out together with mover (14) from the carburetter body (2).

Disconnect the gas cable terminal from the mover by compressing the spring (11) and pull the mover with spring and cover.

Dismantle the float chamber by loosening two M5 screws (18), remove the cover (4) and pull the float with needle (3).

Unscrew the main nozzle (15) on the carburetter body L. H. side. Unscrew also the idle run nozzle (5) and mover screw (16) with spring (17).

Remove the carburetter body together with the carburetter socket after unscrewing two nuts fastening the carburetter socket to the cylinder.

The intake silencer is to be dismantled after removing the rubber ring and from the silencer jacket a micro-filter is to be taken out.

Proceed vice versa when assembly.

#### 24. Cleaning and maintenance of carburetter (fig. 15)

The cleaning is carried out in the following way. Dismantle the carburetter from the motorcycle (chapter 23). Having dismantled it wash all the parts in the clean petrol. The nozzles and the holes in the carburetter body are to be blown out. The cleaning and the maintenance are carried out according to the maintenance table.

#### Warning:

It is prohibited to clean the nozzle holes and the parts of carburetter body with hard objects (wire).

The carburetter is correctly fixed on the machine from works already. The main nozzle corresponds with correct carburetter efficiency (68). The carburetter is generally provided with two nozzles i. e. with main nozzle 68 (15) and the idle run nozzle no. 38 (5). The mover set screw (16) with spring adjusting the engine idle run is arranged in the center of both nozzles in the carburetter body. The mover needle is adjusted during the running-in on the 3-d notch from upward. The idle run is adjusted by the mover screw (16) and after adjustment the play is taken up by the grooved screw on the mixing chamber cover.

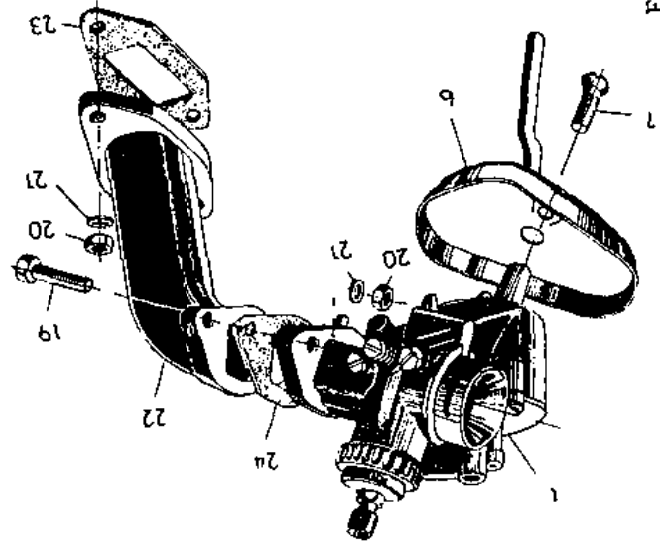
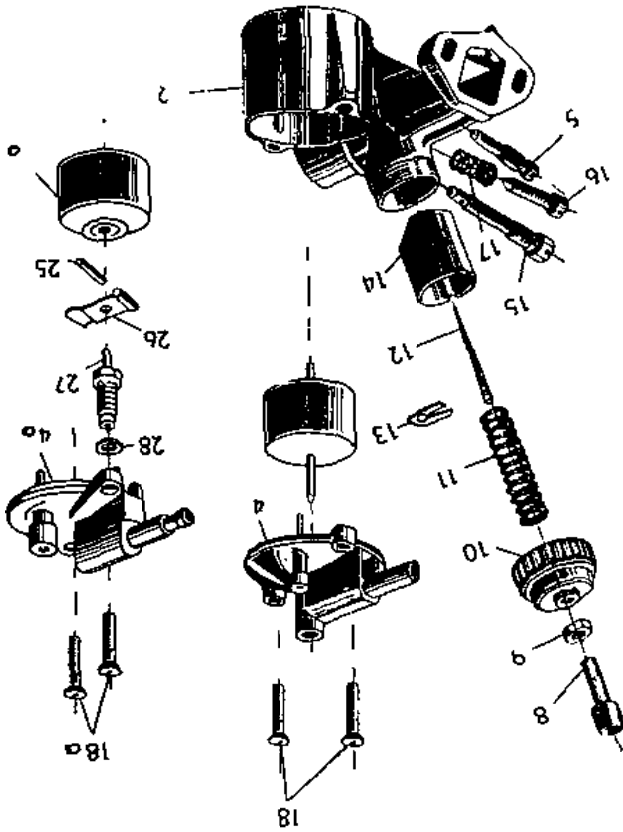


Fig. 15

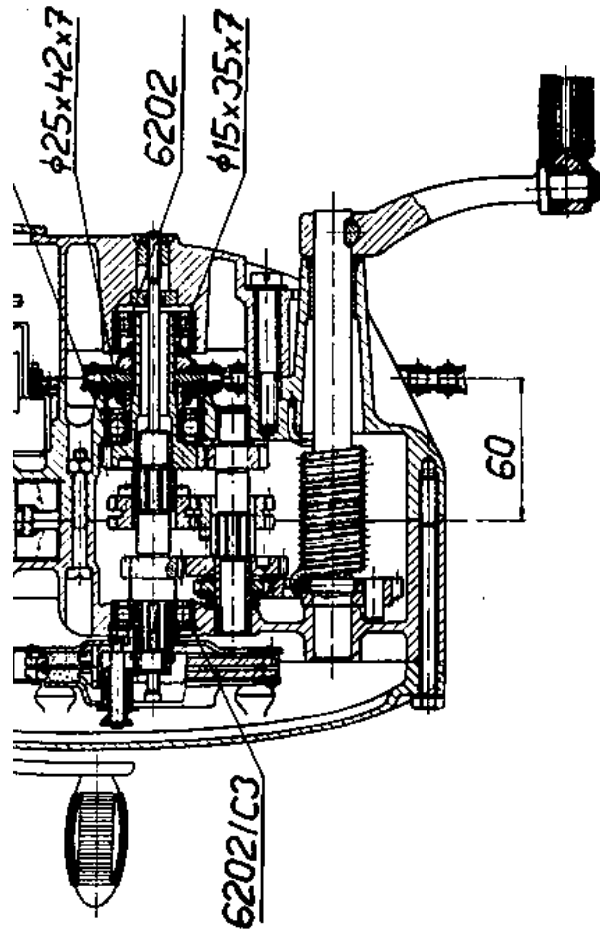


Fig. 16 — Jawa 50, types 20 and 21

The disassembly is effected as mentioned in the chapter no. 25. Remove the rings with help of three iron sheet bands. Introduce one band into the middle and two bands. Introduce one band into the middle and two bands to the piston ring ends and remove then successively the rings. The change can be effected also by extending the rings with fingers. Take care, however,

Fig. 17

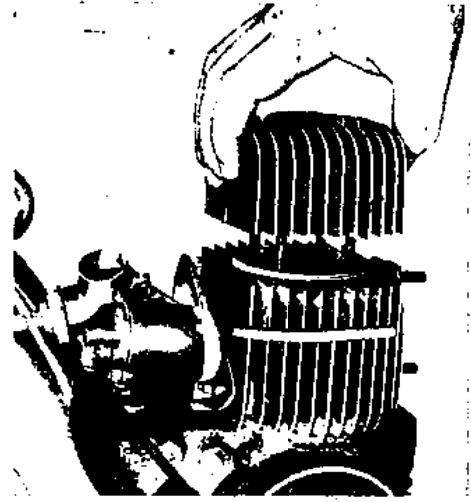
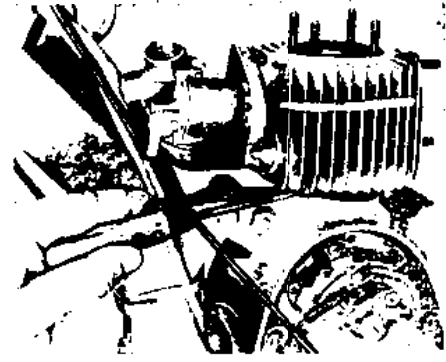


Fig. 18



to avoid their breakage when extending the ring. Change the rings if the space in the lock is bigger than 0.8 mm. The correct space with amounts amounts 0.2 mm or 0.007 in. The space amount is ascertained if the removed ring is inserted in the cylinder upper part and the space is measured with help of feelers. The assembly of new piston ring is effected by careful extending of the rings.

#### 27. Disassembly and assembly of piston (fig. no. 34)

Remove the head, the cylinder and the piston rings. With help of flat pliers remove 2 lock rings (12) locking the piston pin (11). With M 10 puller pull the piston pin (11) from the piston (9).

Proceed in the following way while assembly:

Heat up the piston with hot water to 80°C and with help of M 10 puller put on the pin. The pin is to be locked by safety both sides.

#### 28. Dismantling the cylinder and the head

Clean the contact surface of cylinder on the engine box and the packing moistured in the oil is to be slided onto the studs. Move the piston by depressing the start lever to the upper dead center. Oil the rings on the piston, set them to the correct position as compared with safety pin in the piston groove compress the rings and slide on the cylinder. Lubricate inside the cylinder before to put it on. Remove the socket after putting the cylinder onto the piston. Take care that after sliding the head onto the studs the washers are placed under every nut with which the head and the cylinder are tightened to the engine box. The head nut is tightened so that the head contracts uniformly the whole circumference of cylinder. Clean thoroughly, dry and oil gently the cylinder surface while assembly of cylinder head.

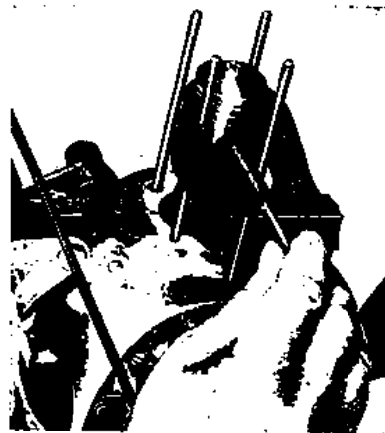


Fig. 19

Neither the packing nor the sealing putty is to be put beneath the cylinder head. The packing is ensured with two recesses (labyrinths) on the cylinder liner.

#### 29. Disassembly and assembly of starting and shifting levers

Unscrew the M8-nut with spanner no. 14 in the upper R. H. engine part and remove the lever (16) from the hole. Disconnect the gear shifting pull rod from the automatic and remove the shifting lever. Remove the starting lever after unscrewing the M6-nut, pull the starting lever wedge and remove the lever from the starting shaft. Proceed vice versa when assembly of both levers.

#### 29a. Dismantling the R. H. cover

3 fastening screws are removed from the cover. Disconnect the cable from the clutch disengaging finger and remove the cover. Dismantle the disengaging finger by knocking it on the cover outer side and remove the finger. Dismantle the bearing after removing the sealing ring "gufero" and heating the cover. While changing the sealing O-ring of the disengaging bar, dismantle the bearing and gufero sealing ring from the cover; remove the ring out of groove by means of screwdriver.

#### 30. Disassembly and assembly of secondary chain wheel

Dismantle the R. H. engine cover and disconnect the secondary transmission chain. Straighten the safety under the nut with M 15 straightener and with # 19 spanner unscrew the nut, remove the secondary wheel.

Fig. 20

