



MOTO GUZZI

ZIGOLO. 110 cc

**INSTRUCTIONS FOR THE USE
AND MAINTENANCE**

SHELL **X100** MOTOR OIL



MOTO GUZZI

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ZÍGOLO 110 cc

INSTRUCTIONS FOR THE USE
AND MAINTENANCE

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TOOL KIT

Tyre inflator.

Screw driver with tommy bar

Tyre levers (2)

Double ended box spanner, 11-14 mm.

Double ended box spanner, 19-21-22 mm.

Flat spanner, 9-10 mm.

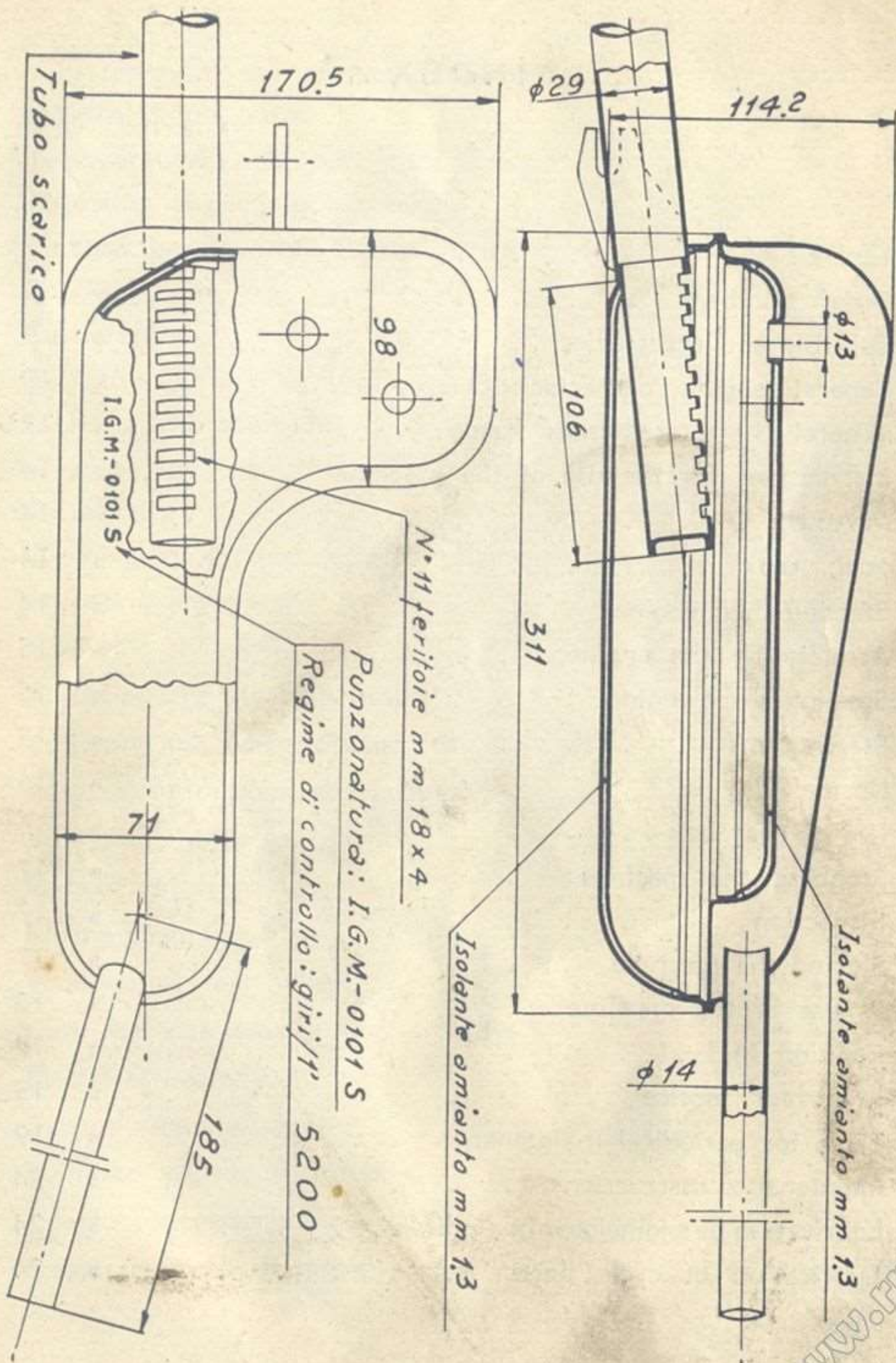
Flywheel cover nut socket spanner.

Serial number

Each machine has a single serial number for both frame and engine. This number is stamped on the central down tube, also on top of the engine crank-case cover. It is the only number valid for all legal and selling purposes and it appears also in the certificate of origin and circulation book.

Always refer to this number when ordering spare parts

VGE 51



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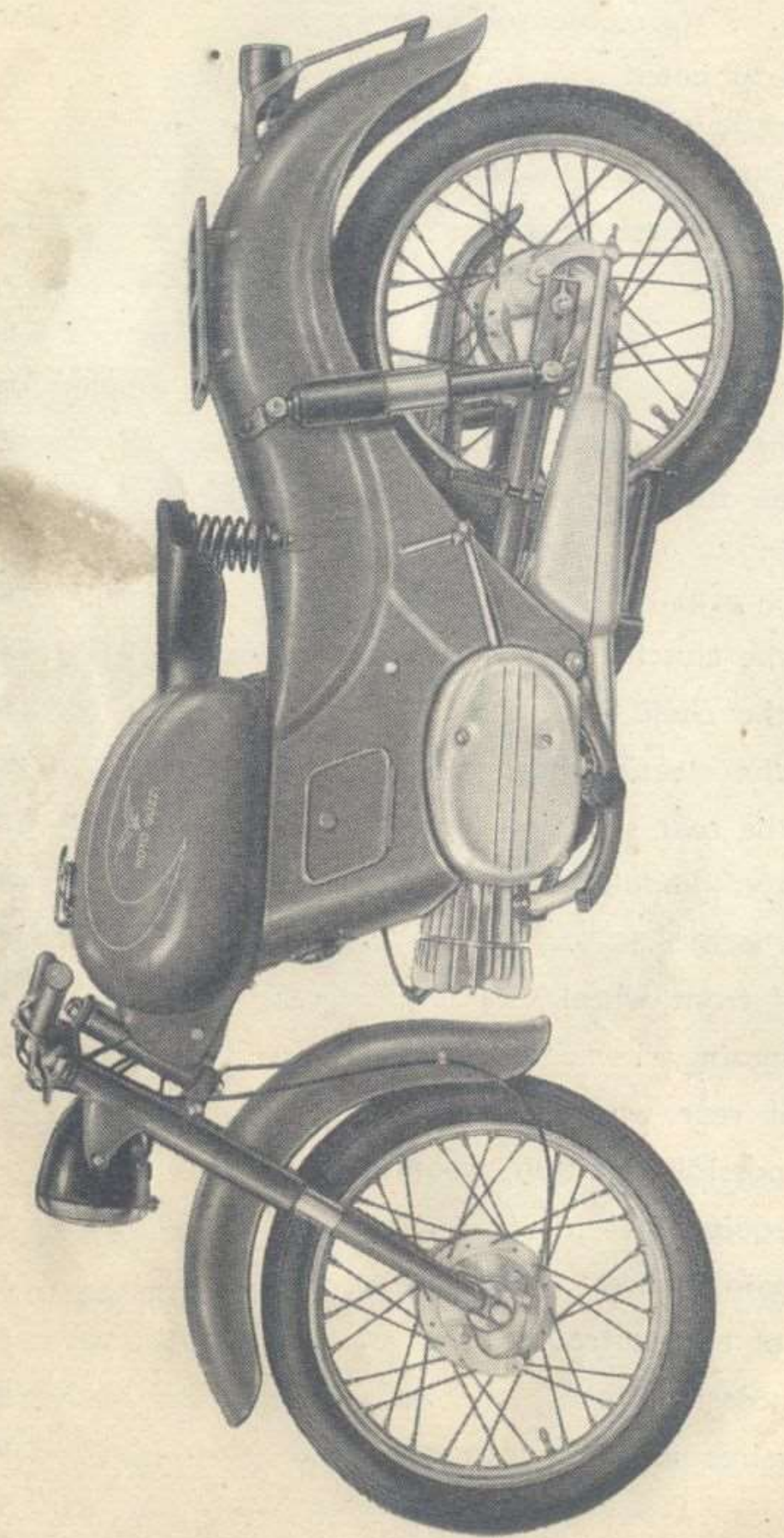


Fig. 1 - Zigolo 110 cc. left hand view

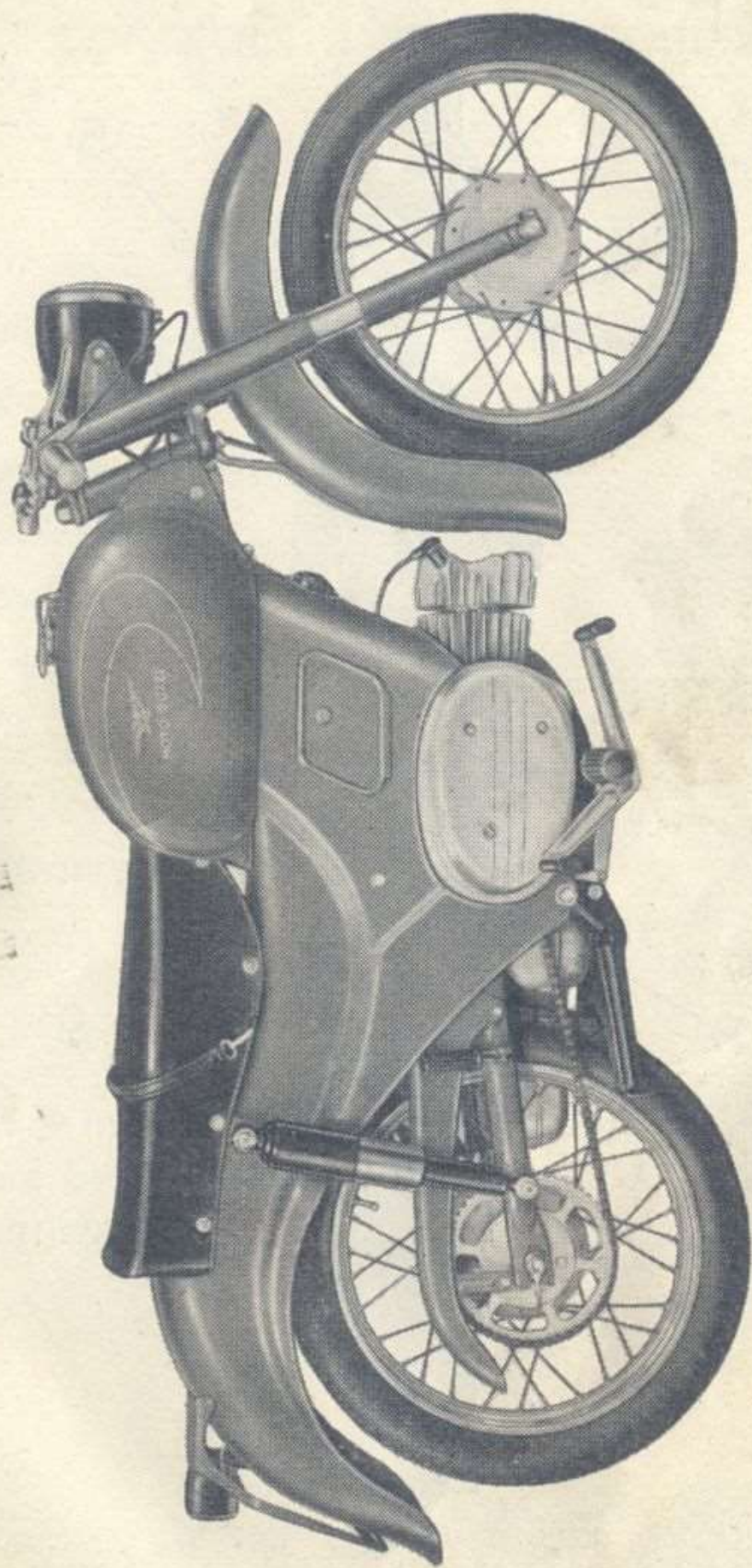


Fig. 2 - Zigolo 110 cc., right hand view

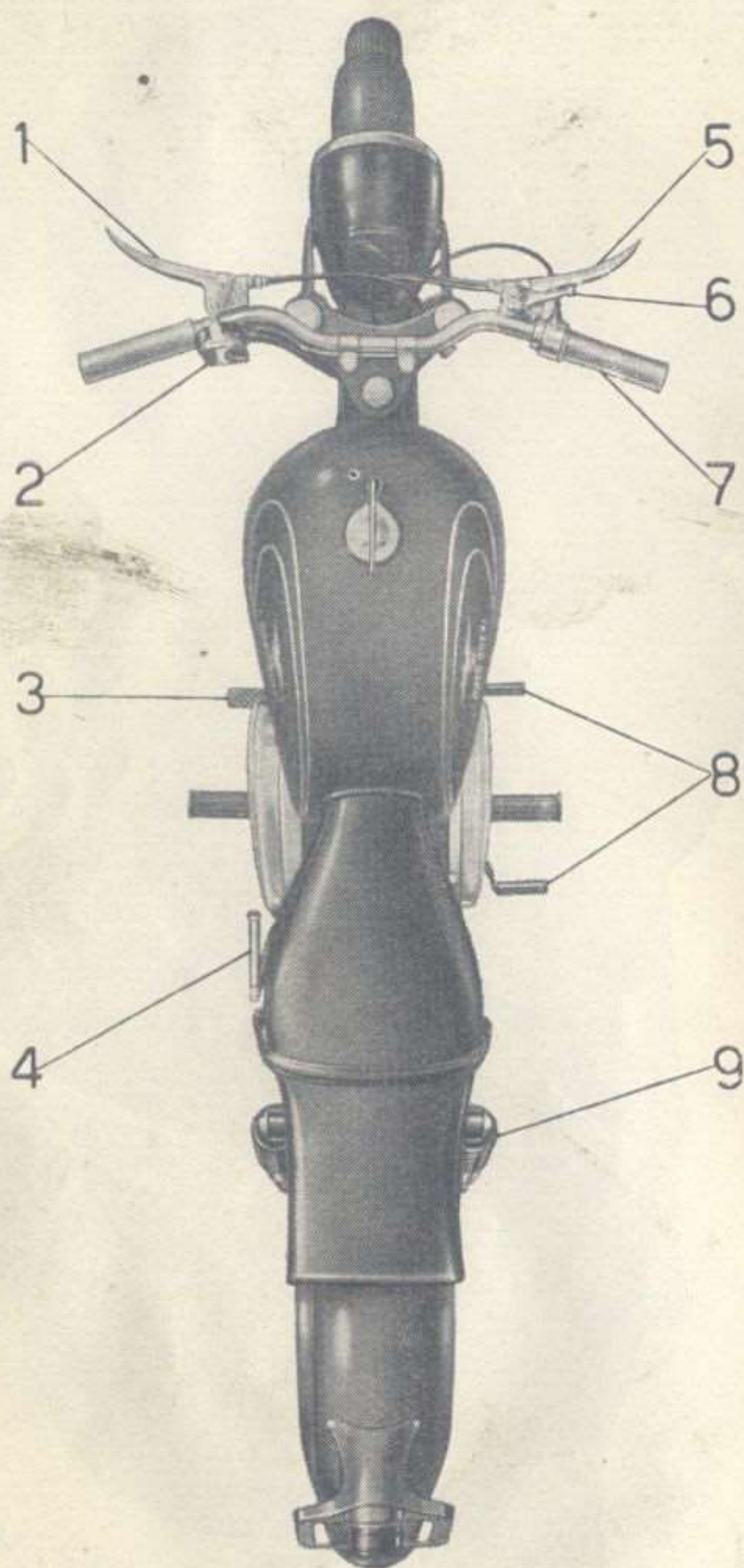


Fig. 3 - Controls and accessories

CONTROLS AND ACCESSORIES

(see fig. 3)

1. - Clutch lever.
2. - Light switch and horn button.
3. - Rear brake pedal.
4. - Kickstarter.
5. - Front brake lever.
6. - Air lever.
7. - Twist grip control.
8. - Gear lever.
9. - Rear damping unit.

NOTICE - In the text the terms « right » and « left » are used in the sense they would appear to one sitting on the saddle.

GENERAL ENGINE CHARACTERISTICS

Two stroke with rotary inlet valve.

Light alloy cylinder head.

Single light alloy cylinder, chromium plated liner.

Stroke		mm.	52
Bore		mm.	52
Cubic capacity		cc.	110
R.A.C. Rating		Hp	2
Maximum B.H.P.		HP	4,8 at 5200 r.p.m.
Compression ratio			7,5 to 1

Fuel supply

By gravity. Tank capacity about 3 gallons including 2 pints reserve.

Dell'Orto carburettor MAF 18 B 1 fitted with inlet silencer and air filter.

Lubrication

The engine is lubricated by the petroil system, the entire lubrication being cared for by the oil in the mixture.

The gear box is lubricated by oil in the crankcase.

Cooling

By air. Both cylinder and cylinder head are radially finned.

Clutch

Multiplate discs in oil bath.

Ignition

By 6 Volt 30 Watt flywheel alternator and remote high tension coil.

Sparking plug

Marelli C W 225 F.

Gear box

Three speed, unit construction, pedal operated.

1st gear ratio	1 to 2,627
2nd gear ratio	1 to 1,542
3rd gear ratio	1 to 1

Transmission

By helical gear from engine to gear box.

By roller chain from gear box to rear sprocket.

Gear ratios

From engine to gear box	2,171 to 1
From engine to rear wheel	3,4 to 1

Overall gear ratios (from engine to rear wheel)

1st gear	19,4 to 1
2nd gear	11,4 to 1
3rd gear	7,38 to 1

GENERAL CHARACTERISTICS OF FRAME

The main member of the frame is a single solid central down tube integrated with a steel pressing having both bearing and protective functions.

Overall dimensions:

Wheelbase		about	49"
Length		»	75 1/3"
Width		»	24 1/2"
Height		»	34 1/2"
Minimum ground clearance		»	5 1/3"
Weight (dry)		»	170 lbs.

Suspension

Telehydraulic front fork - Rear swinging arm with helical springs in the shock absorbers.

Wheels

Light alloy rims 17 x 2 1/4.

Tyres

Front 2 1/2 x 17, ribbed.

Rear 2.75 x 17, studded.

Brakes

Light alloy expanding type. Two brakes, the front hand operated by a lever on the right handlebar, and the rear by a pedal on the left side of the machine.

Lighting equipment

The flywheel alternator serves both the engine and lighting equipment whilst the engine is running. Front light with anti-dazzle bulb and pilot bulb. Tail light combining number plate illumination and rear stop light.

Performance

The machine can easily climb gradients of about 1 in 4 riding solo on good surfaced roads.

Petrol consumption

2,2 liters per 100 kms. (127 m. p. g.), measured according to CUNA specifications on a straight road at 2/3rd of maximum speed.

Maximum speed in each gear:

1st gear	.	.	.	.	.	about	30 kms.	(18 m. p. h.)
2nd gear	.	.	.	.	.	»	50	» (31 m. p. h.)
Top gear	.	.	.	.	.	over	80	» (50 m. p. h.)

INSTRUCTIONS FOR THE USE OF THE MACHINE

Mixture

With every gallon of petrol oil should be mixed in the ratio of 1 in 50 (2 %). Only good quality oil should be used and our recommendation is Shell - 2T.

Important: In the running in period (first 1000 kms. - 600 miles), use mixture in the ratio of 1 in 20 (5 %).

Fuel tap

It is closed when the lever is turned towards the pipe leading to the carburettor and open in the opposite direction. To bring reserve fuel into use, the lever should point downwards.

Starting the engine

Make sure there is enough fuel in the tank, open the tap and depress the tickler on top of the carburettor, inside the right hand door.

Close the air lever and slightly turn the twistgrip control. Make sure the gear lever is in neutral. Depress the kickstarter sharply and as soon as the engine begins to fire, open the air lever halfway and regulate the engine speed by means of the throttle control.

N.B. - The engine can also be started with an engaged gear, depressing the kickstarter with the clutch lever withdrawn.

Accelerating the engine

When starting from cold, and especially in cold weather, the engine should be driven on a light load until it has had time to get thoroughly warm.

Starting a hot engine

It is advisable to open completely the air lever but not to flood the carburettor.

N.B. - Particular care should be taken never to flood the carburettor when the engine is hot. This will make re-starting very difficult and in such conditions it is necessary to push the machine along in second gear with the clutch withdrawn and the air control fully open.

Starting off

After starting the engine, the machine can be pushed forward off its stand.

Then, after sitting on the saddle, the clutch lever should be fully withdrawn, bottom gear engaged, and finally the clutch lever slowly released, accelerating at the same time as the clutch « bites ».

When riding, the air lever should always be in the fully open position. If you are faced with a long hill climb, the air lever should be conveniently manipulated to avoid overheating of the engine.

Under no circumstances should hills be climbed — even for very short distances — by slipping the clutch instead of changing gear, nor should hills be descended with the machine in neutral or with the clutch disengaged. It is far better to utilize the braking effect of the engine with the throttle control at minimum opening. Descending steep hills, a lower gear should be engaged, as this will reduce wear of the brake linings and save overheating the drums.

On wet or slippery roads proceed with utmost care, avoiding violent acceleration and braking. Consider decreasing the tyre pressure slightly.

Normal use

Particular care should be taken never to exceed the maximum revs. permissible, especially in the lower gears. This can be checked by strictly complying with the table of maximum speeds in the different gears in section « performance ».

Use of gear box

(see fig. 4)

To change up: withdraw the clutch, closing at the same time the throttle control. The gear lever should then be shifted

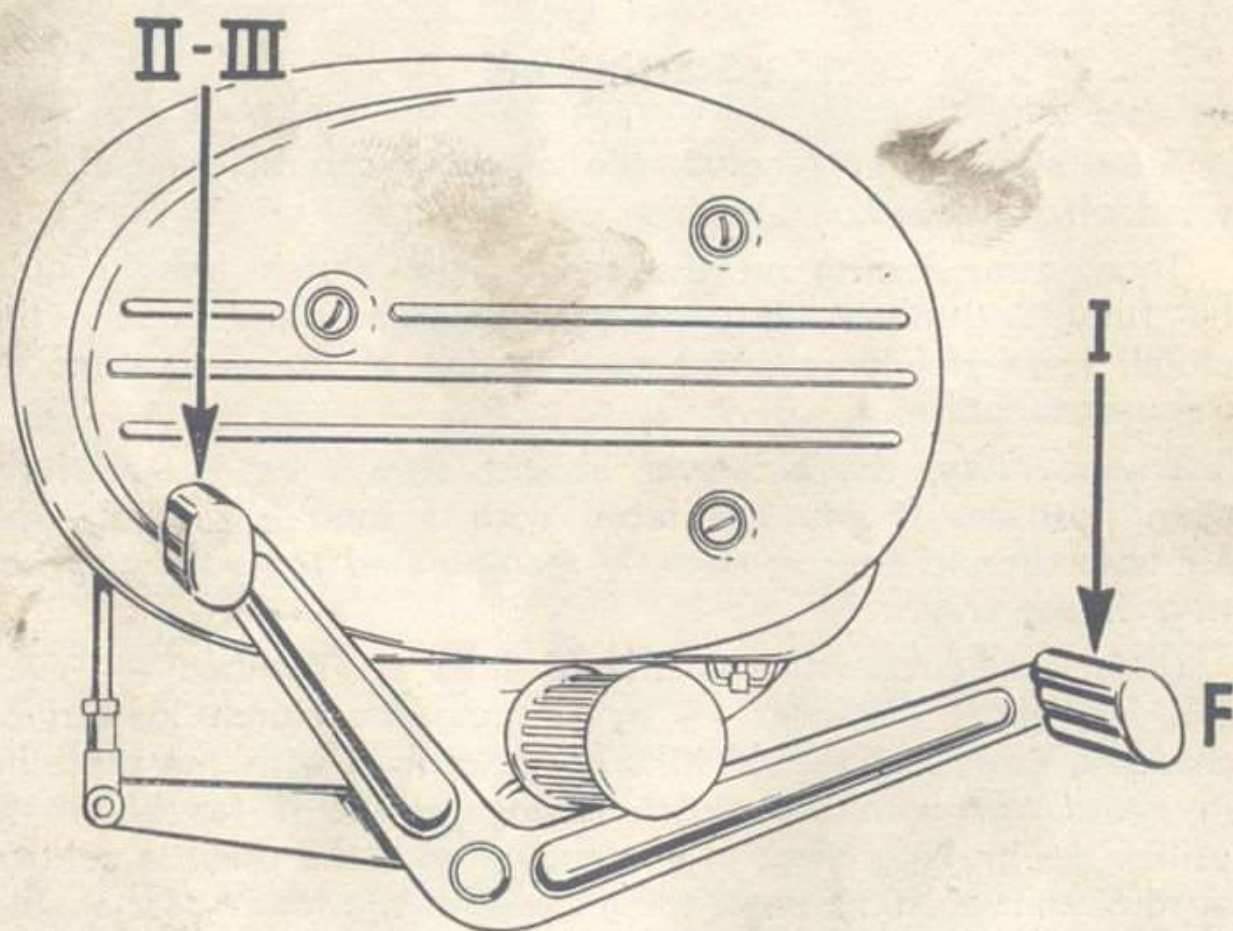


Fig. 4

into the next position, slowly releasing the clutch and re-opening the throttle.

To change down: follow the same procedure, except that the throttle should not be fully closed.

Change up rather than let the engine « race ». Change down rather than let it « slog ». Both these are bad for it!

Stopping the machine

Close the throttle and withdraw the clutch, using both brakes together, and not releasing the clutch until the machine is nearly to a standstill. Select neutral as soon as the machine stops. In the case of an emergency stop whilst going in a straight line, more effect can be had from the front than the rear brake, which would lock the wheel and so lead to a danger of a fall.

Inspection

After a difficult journey, especially one over bad roads or in wet weather, it is advisable to clean the machine at once and to check it over externally.

Storing the machine

If the machine is going to be put away for a fairly long period:

- clean it thoroughly (see « General Maintenance »).
- raise the machine so that the tyres do not touch the ground, especially if the floor is greasy or wet. It is advisable to keep the tyres slightly inflated.
- with an antirust compound or vaseline, cover all those metal parts which are not enamelled.

III use of the machine

Treat your machine well and do not ill-use it by violent acceleration and braking. If possible, ride at fairly constant speed.

Harsh riding leads to greatly increased fuel consumption, and generally shortens the life of every engine component.

Running in

Too much emphasis cannot be laid on the advantages of a careful running in. In order that the machine may be gradually run in, for the first 600 miles it should never be allowed to go very fast or run under a heavy load.

Important notice

After the running in period all nuts and screws should be checked for tightness, especially the cylinder head nuts.

This is a precaution which is well to follow periodically, since one loose nut can lead easily to an accident or cause serious engine trouble.

TABLE FOR PERIODICAL MAINTENANCE

Periodically or every 300 kms. (200 miles)

- 1) Check tyre pressure which should be 24 lbs solo and 25 lbs with passenger for the front wheel and 26 and 35 lbs solo and with passenger respectively for the rear wheel.

After the first 1.000 kms. (600 miles)

- 2) Change the oil in the gear box, using oil of the same quality as used for the mixture (this operation should be done with the engine hot).
- 3) Ensure all nuts and screws are tight, especially the cylinder head nuts (Check these with the engine cold).

Every 2.000 kms. (1.200 miles)

- 4) Check oil level in the gear box and if necessary add oil of the same quality used for the mixture.
- 5) Using a grease gun inject some Shell Retinax A grease through the nipples on the front fork.
- 6) Wash the chain thoroughly with petrol and when dry lubricate it with Shell Retinax A oil. Check length and if necessary adjust. (See « Chain Adjustment »).
- 7) Clean out air filter, washing it down with petrol and dipping it in Shell Donax A1 oil, making sure it is well drained before refitting. Clean out the air vent in the tank filler cap.

Ogni 300 Km.:

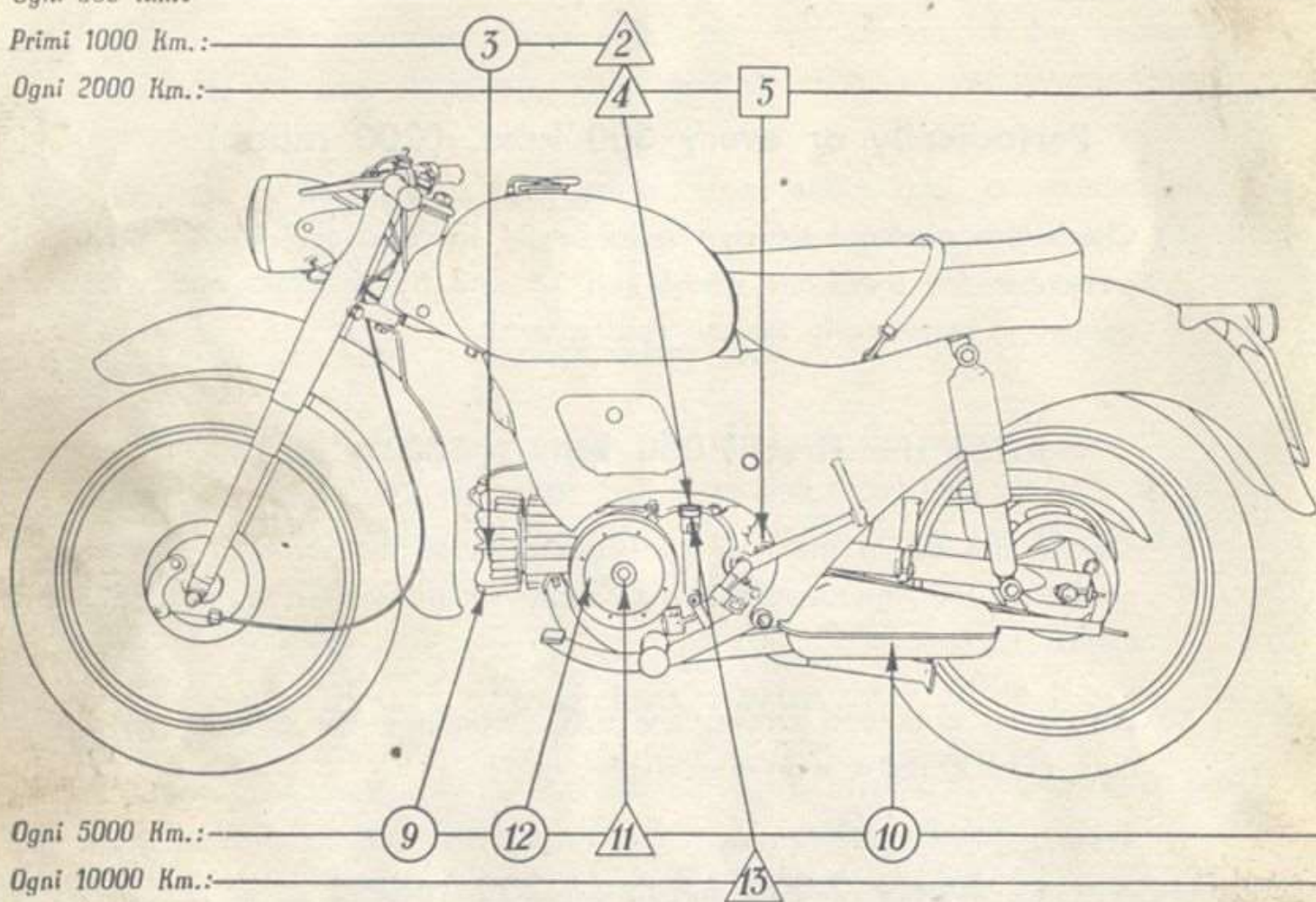
Primi 1000 Km.:

Ogni 2000 Km.:

Ogni 5000 Km.:

Ogni 10000 Km.:

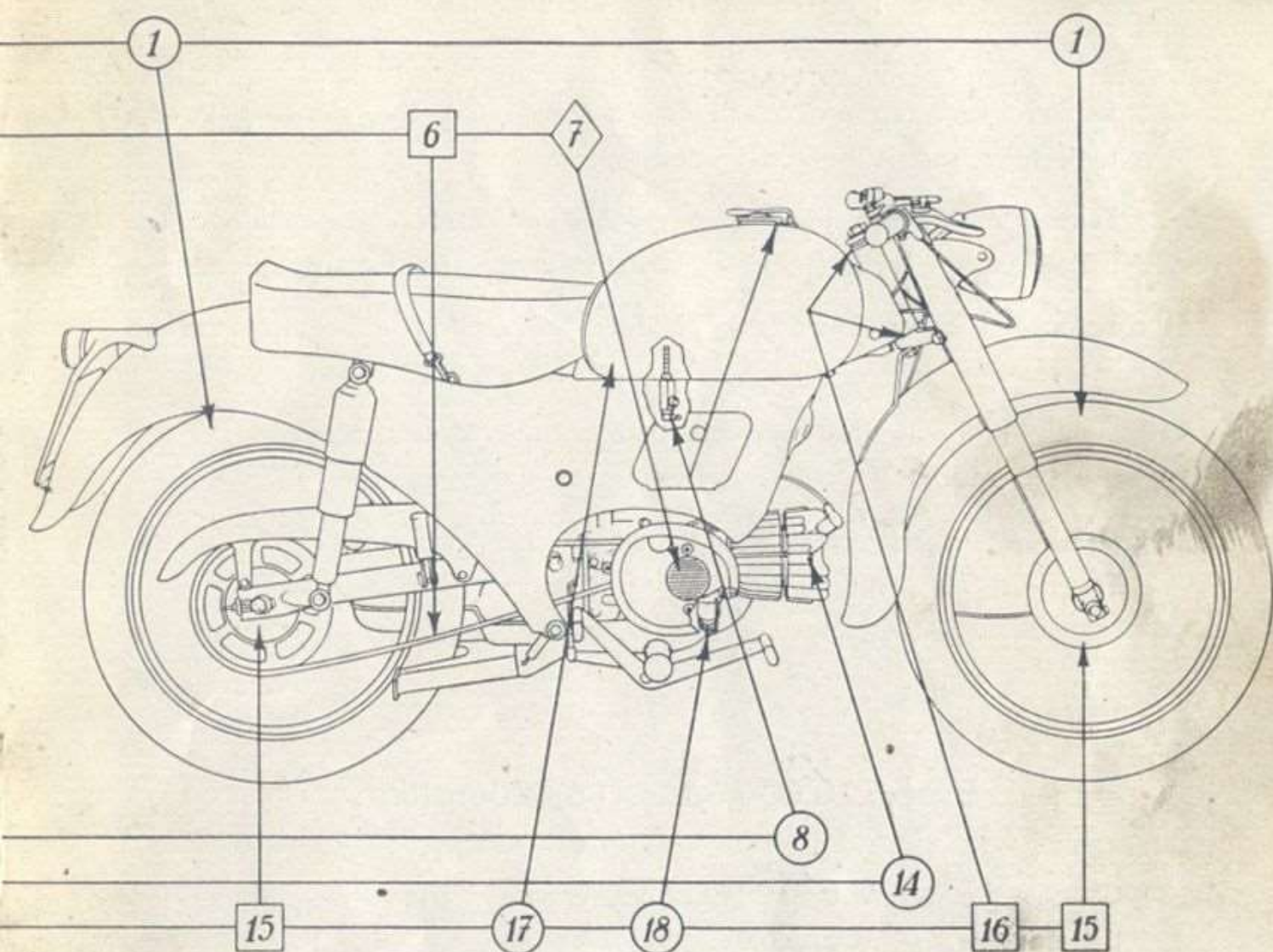
Annualmente



LUBRICATION

See text for

- △ - Shell X 100 SAE 40
- - Shell Retinax A
- ◇ - Shell Donax A¹
- - Maintenance



ON CHART

or numbers

Every 5.000 kms. (3.000 miles)

- 8) Remove fuel tap and clean filter. Make sure the air vent in the tank filler cap is not obstructed.
- 9) Take off cylinder head and remove all carbon deposits on the piston crown, cylinder head, exhaust port, and exhaust pipe.
- 10) Remove silencer and clean it out. See section « Cleaning the silencer ».
- 11) Lightly lubricate the cam felt pad on the contact breaker. Do not use too much oil or it may get on to the contacts.
- 12) Make certain the contact breaker gap is 0,35 - 0,45 mm (.013 - .017"). To adjust see section « Adjustment of contact breaker ». If necessary, the points should be cleaned using a very fine Swiss file.

Every 10.000 kms. (6.000 miles)

- 13) Change the oil in gear box (hot engine). Use same oil as for the mixture.
- 14) Make sure all nuts and screws are tight, especially the cylinder head nuts.

Every year

- 15) Dismantle, clean, and grease the wheel hubs.
- 16) Dismantle, clean, and grease the steering head cups.
- 17) Remove and wash out petrol tank (see « Cleaning of Fuel tank »).
- 18) Dismantle carburettor and check all parts.

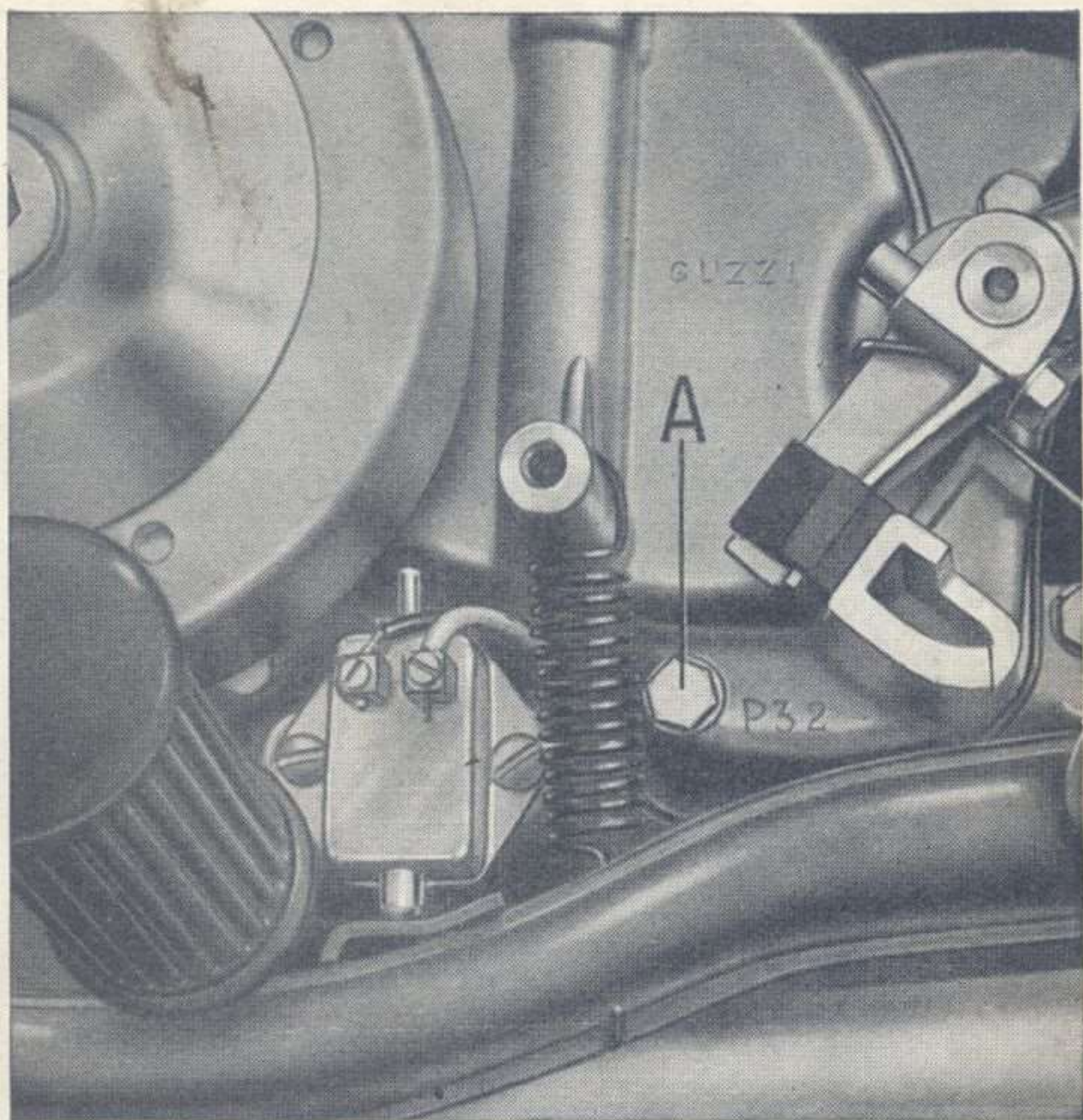


Fig. 4 bis

MAINTENANCE INSTRUCTIONS

Lubrication of engine-gear box unit

The engine is automatically lubricated by the presence of oil in the mixture. To replenish the gear box and transmission take off the left hand crankcase cover and through the filler plug (fig. 5) introduce a fresh supply of oil of the same quality as used for the mixture.

Its level should not exceed the mark on the dipstick fitted to the oil filler plug. This oil should be changed after the first 600 miles, and then annually, or every 6000 miles. This operation ought to be done with the engine hot.

Every 1200 miles it is advisable to check the oil level and if necessary to top up. The oil is drained by removing the left hand crankcase cover and unscrewing nut A in fig. 4 bis which combines the functions of a crankcase securing nut and drain plug.

Lubrication of cycle parts.

Using Shell Retinax A grease, the swinging fork and spindle should be greased about every 1200 miles by means of a pressure gun to force the grease through the suitable nipple. (see fig. 5, A).

The wheel and steering head bearings should also be lubricated every 6000 miles, when they should be dismantled and packed with grease.

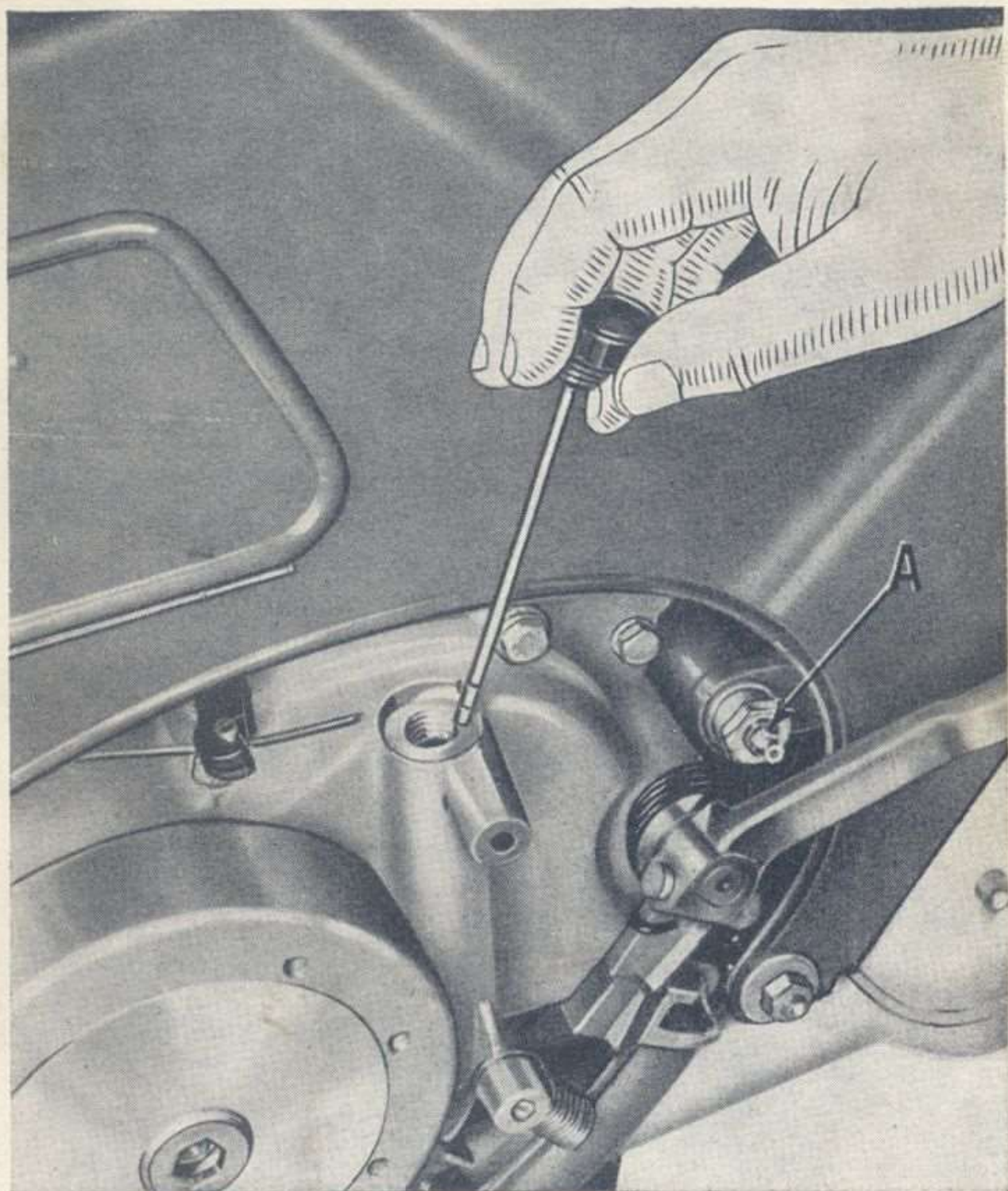


Fig. 5

To lubricate the wheel bearings, remove the brake block and spacer.

Lubrication of the contact breaker

Every 3000 miles it is necessary to lubricate the felt rubbing on the flywheel cam. Apply only a few drops of oil, as excessive lubrication may result in some oil getting on to the breaker

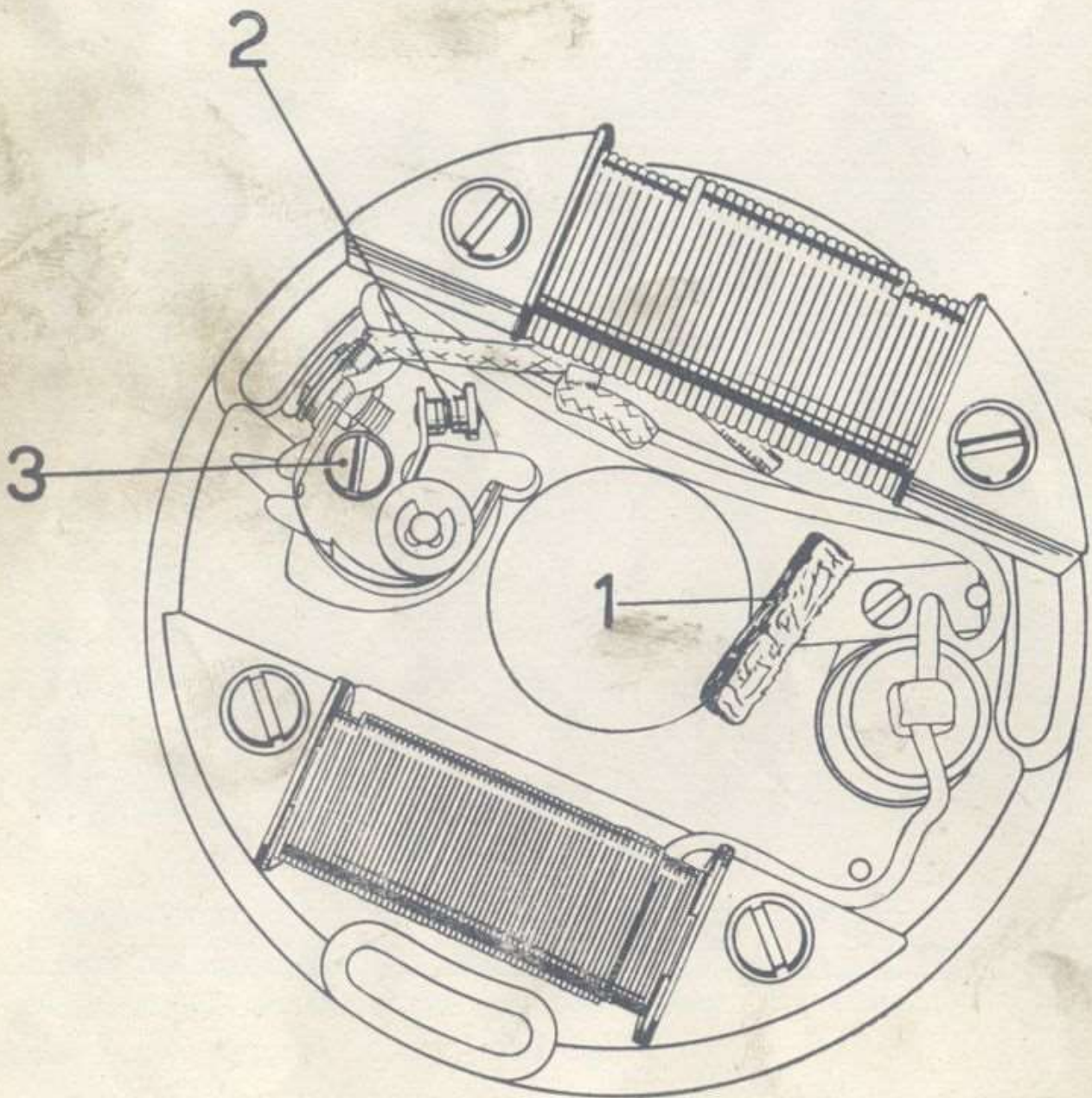


Fig. 6

points (See fig. 6, 1). This operation can easily be carried through the webs of the flywheel, removing the left hand cover plate and the flywheel cap.

In fig. 6 the flywheel itself is shown removed but this is only done for clarity's sake. It is neither necessary nor advisable.

Lubrication of chain

Smear it lightly with grease every time it appears to be dry, which is often the case after a wet ride. Periodically, every 1200 miles, it is well to wash it in petrol and allow it to dry before smearing it with Shell Retinax A grease. This will get into the rollers and make lubrication unnecessary for long periods.

Telehydraulically damped front fork

(see fig. 7)

Does not require normally any maintenance but whenever it is deemed necessary to add oil, proceed as follows:

- set up machine on the stand;
- loosen the handlebar securing bolts (A) and turn the handlebar just enough to allow the removal of both fork caps (B);
- Check the oil level by means of a steel ruler introduced into the fork tube down to its full length (55,5 cm. - 21 7/8"), as shown in fig. 7.

Correct oil level is 22 cm. (8,5/8"), corresponding to 125 cc. in each tube. Oil recommended is Shell X SAE 20.

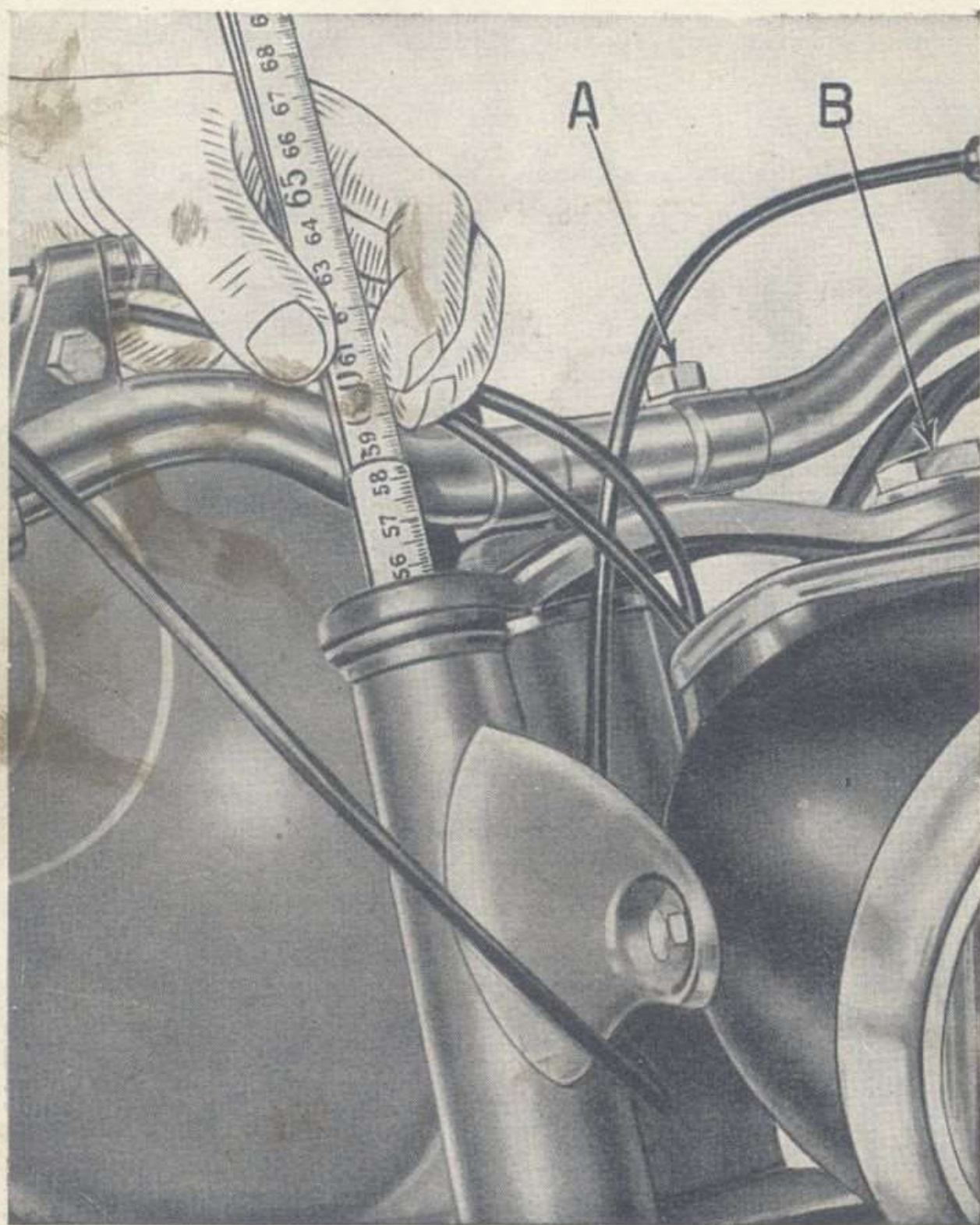


Fig. 7

Beware of using a light steel rod to make this measurement as it may pass through a hole in the inner fork and thus give a false reading.

Adjusting the contact breaker

(see fig. 6)

The contact breaker points should be checked every 300 miles. Ensure the gap is 0,35 - 0,45 mm. (.014 - .017") and if not, adjust as follows. Slacken screw 3 by half a turn (the screw which holds the block carrying the fixed points) and then turning the block to a position which gives the required gap. Relock screw 3.

This adjustment should be made with the eccentric in its fully open position. If the points have become pitted or dirty they should be dressed with a dead smooth Swiss file.

This operation can be conveniently carried out through the webs of the flywheel in the same way as when lubricating the cam felt pad.

Timing of flywheel alternator

Proceed as follows:

1) Remove crankcase cover on the left hand side of the machine, centre lock nut and dust cover.

2) Make sure the contact points are correctly set.

3) Time ignition so that the breaker points begin to open when the mark AR on the flywheel is in front of the mark on the crankcase.

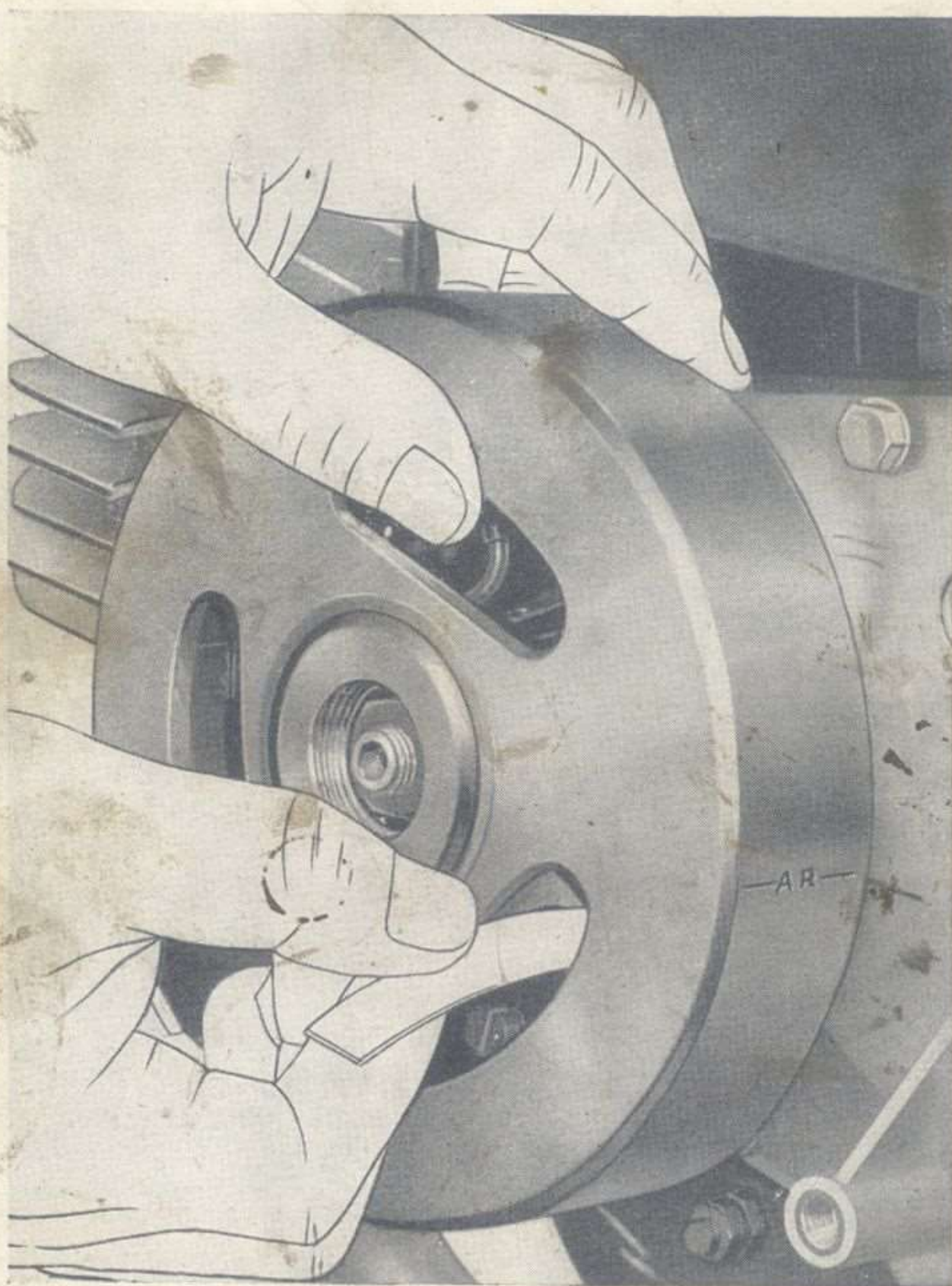


Fig. 8

In this position the piston should be about 40 mm. (1,57") before the TDC position, measured on the flywheel rim.

In each case when the above marks do not coincide when the points begin to open, proceed as follows: remove the rotating section of the flywheel and loosen the three screws

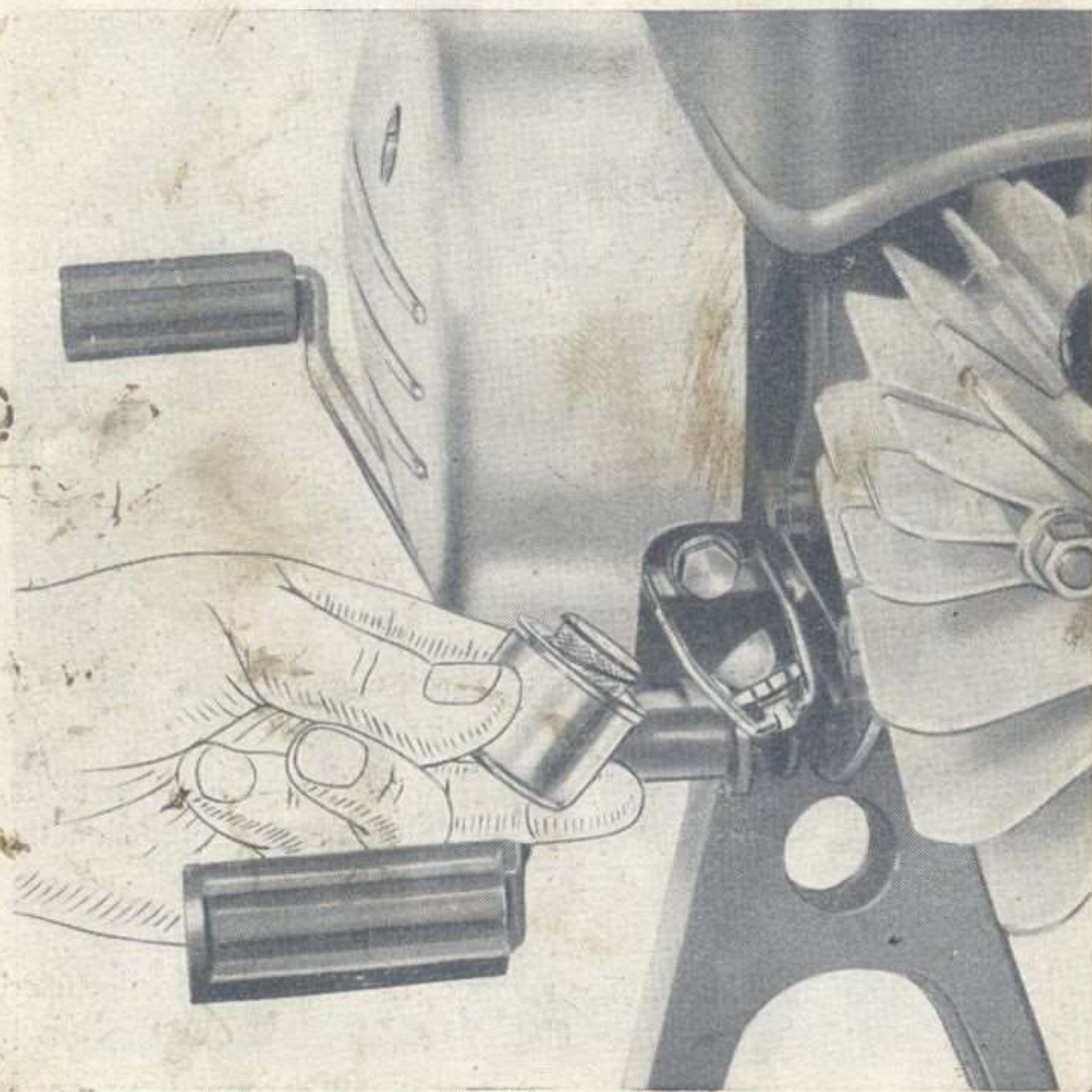


Fig. 9

holding the back plate shifting this just sufficiently to obtain the required timing.

Finally re-lock back plate, reassemble the flywheel, and check if the correct timing has been obtained. The exact opening point of the contacts can be checked by inserting a thin strip of paper in between the points and turning the flywheel clockwise until the paper is released.

Sparking plug

Examine the insulation and if cracked change the plug.

The gap between the points should be .025". To clean use petrol and a wire brush. In fitting the plug into the cylinder make sure to start it by hand for a few turns, so as not to strip the thread. The fitting may then be completed with the plug spanner, using it not too tightly as not to strain the thread.

Examine the condition of the high tension cable from magneto pick-up to plug.

Carburettor

This engine is fitted with a specially designed carburettor, incorporating a metallic element air filter and an inlet silencing box.

The float chamber incorporates a bowl-cum-filter element which is quite accessible. To remove this, undo the knurled screw under the carburettor (fig. 9) and withdraw the bowl.

Use petrol to clean away all sediment which may have accumulated in the glass bowl and filter (handle this latter with great care so as not to damage it).

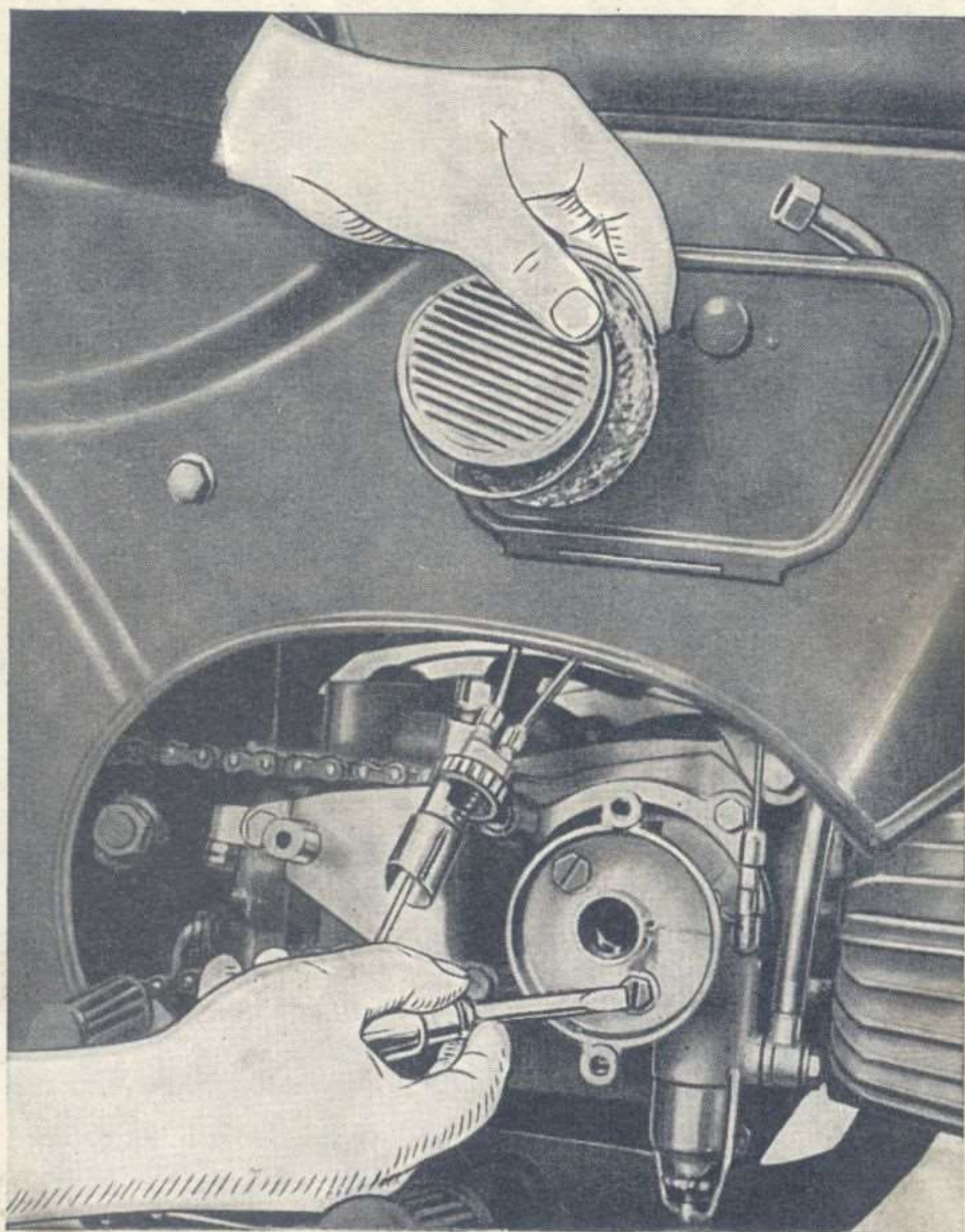


Fig. 10

Normal setting

Choke	mm. 18
Atomizer	260 B
Main jet	68/100
Pilot jet	40/100
Throttle slide	N. 55

Needle D 16, secondo position from top.

Setting for maximum speed and acceleration

The regulation of maximum power and speed is effected by changing the size of the main jet.

Acceleration is regulated by the position of the needle, lowering it weakens the mixture and viceversa.

It is well to remember that in cold weather the mixture should be richened and viceversa in the summer.

Setting for idling speed

Should be done on a hot engine. Two screws behind the choke control the slow running of the engine. One of these screws is lying horizontally and is a needle valve. Screwing it in richens the mixture and viceversa.

The other screw is inclined to an angle to the mixing chamber and can be adjusted to prevent the throttle valve from closing entirely. First adjust the inclined screw so that the engine will just keep running with the twist grip in the fully closed position. Then screw out the horizontal screw until the desired idling is obtained.

Removing carburettor from engine

Take off the right hand crankcase cover, close fuel tap and unscrew petrol pipe from the tap. Remove the silencing unit and the spring retaining the air filter, and free the carburettor from the control cables, unscrewing the two carburettor fixing screws shown in fig. 10.

In re-assembling make sure the gasket is in perfect condition and correctly fitted.

Be sure also the fixing bolts are tightened firmly to prevent any air leak which may have harmful effects on the carburation.

Dismantling the carburettor

(see fig. 11)

Every year it is advisable to strip the carburettor and to check and clean all its parts.

Remove:

- fuel line connection and bolt (10);
- bowl (1), spring and filter, and if necessary washer (1 bis);
- float chamber cover (2). This is done by unscrewing the two top screws and removing float (3) to inspect the chamber. The float is removed by withdrawing the needle (4) through the float;
- plug and washer (5) and jet holder (6);
- pilot jet (7);
- slow running set screw (8);
- throttle adjusting screw (9).

To clean the above parts it is preferable to use compressed

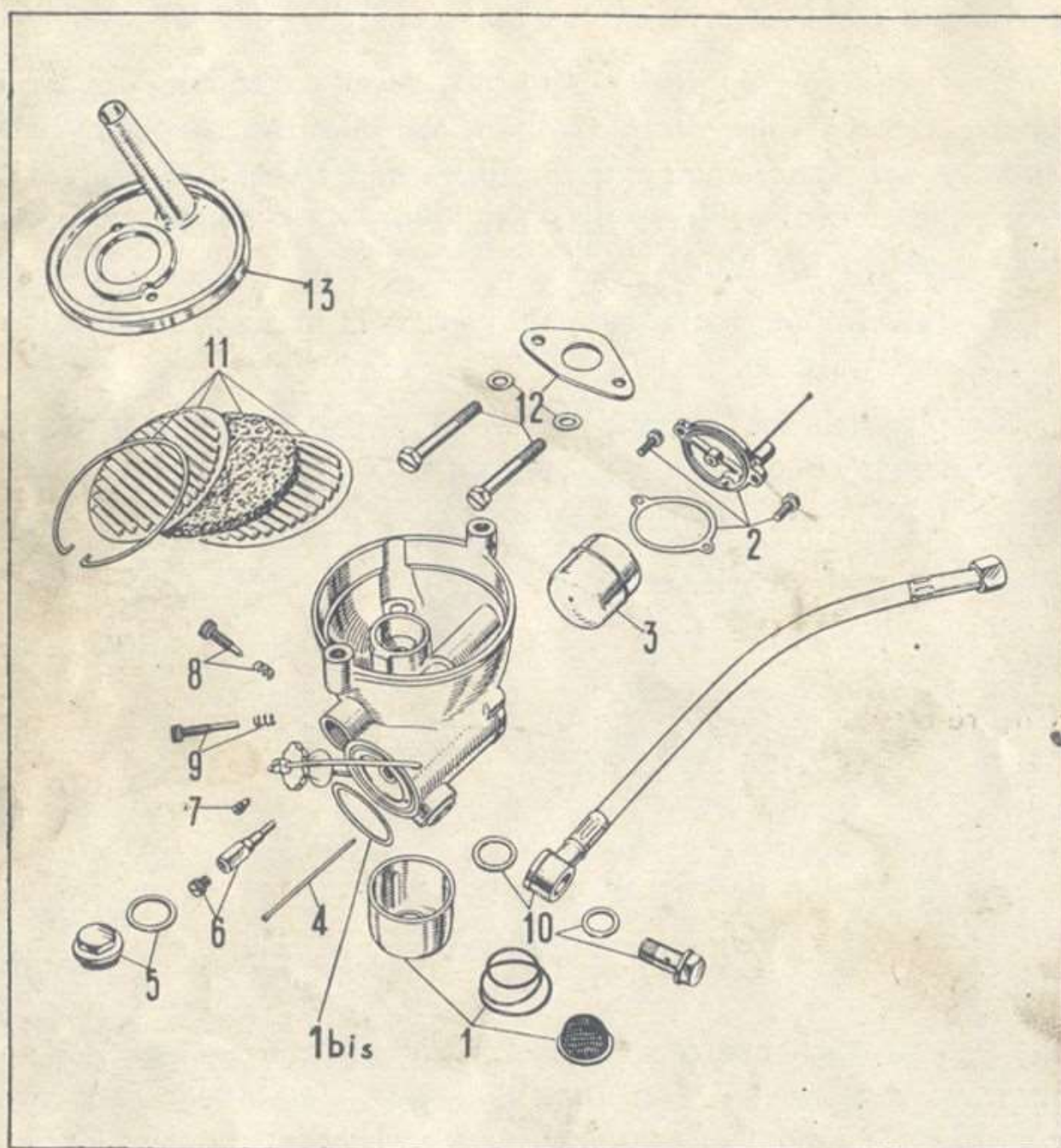


Fig. 11

air. Beware of using other cleaning agents (wires, needles, etc.) which may distort or alter the size of the jets and so upset the carburation.

In re-assembling make sure all gaskets are replaced in their original position.

The air filter (1), fixing screws (12), and silencer, are removed when detaching the carburettor from the engine.

Air filter

Should be cleaned every 1200 miles or even more frequently if the machine is used on very dry or dusty roads. Unscrew it from the carburettor, lever out the retaining spring, remove the disc and metallic filtering agent, and swill everything in petrol. Dry thoroughly each part and then soak them in very thin oil (Shell Donax A). Allow them to dry before re-fitting.

Do not forget the filter is your greatest protection against engine wear and that if allowed to get dirty, it restricts the supply of oil and increases also fuel consumption.

• In re-fitting be sure to assemble each cover correctly and to insert them in the appropriate notch.

Cleaning the fuel tank

Every year the tank should be cleaned out. Pour some petrol into it and shake well. Drain all deposits from the tap hole.

Cleaning the fuel filter

Every 3000 miles the fuel filter located just above the fuel tap in the tank should be cleaned.

Remove pipe and tap (see fig. 12) and swill the filter with petrol.

In re-assembling make sure the filter is still fully efficient, also the vent in the tank filler cap is not obstructed.

Decarbonising

As the engine begins to get a deposit of carbon on the cylinder head, piston, and exhaust port, its efficiency will gra-

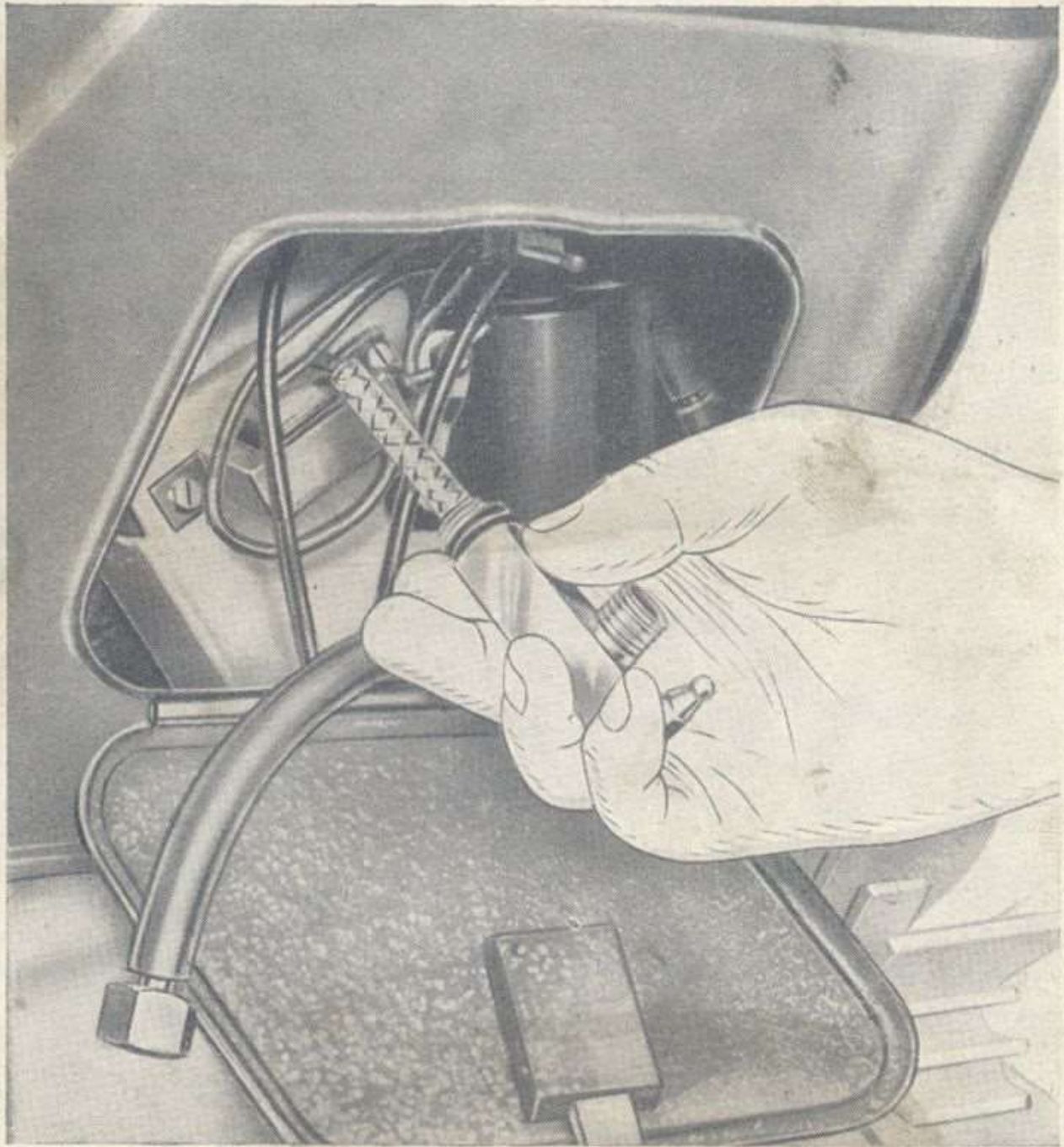


Fig. 12

dually diminish and in such cases it will be necessary to dismantle these parts. (fig. 13).

This is done by removing the four nuts on the retaining studs and detaching the exhaust pipe. When all parts have been thoroughly cleaned and scraped, re-assemble and ensure the head nuts are tightened evenly and not too fiercely so as to cause breakages of the studs.

Provided good quality oil is used, this operation does not need to be carried out oftener than every 3000 miles, but a good motto is « better too often than not often enough ».

Cleaning the exhaust pipe and silencer

If using good quality oil and fuel, this operation does not need to be done oftener than about every 3000 miles.

Disconnect the pipe from the cylinder and loosen the centre stand fixing bolt. The heaviest deposits generally occur in the exhaust pipe itself and in the thin terminal end of the silencer.

Clean by means of a metal brush or a length of wire drawn through the pipe and silencer.

Adjusting the clutch

This will be necessary when the play at the end of the handlebar lever is more or less than about $1/8$ of an inch.

If there is less than this amount, there is danger that the clutch will slip and the plates distort and wear.

If the play is more there may be incomplete disengagement of the clutch with consequent difficulty in changing gear.

For adjustment see section « Adjustment of handlebar controls ».

It is well to lubricate the plate thrust rod periodically.

Adjusting the chain

With the machine on the stand there should be a little slackness - about 1 and 3/4 inches up and down movement.

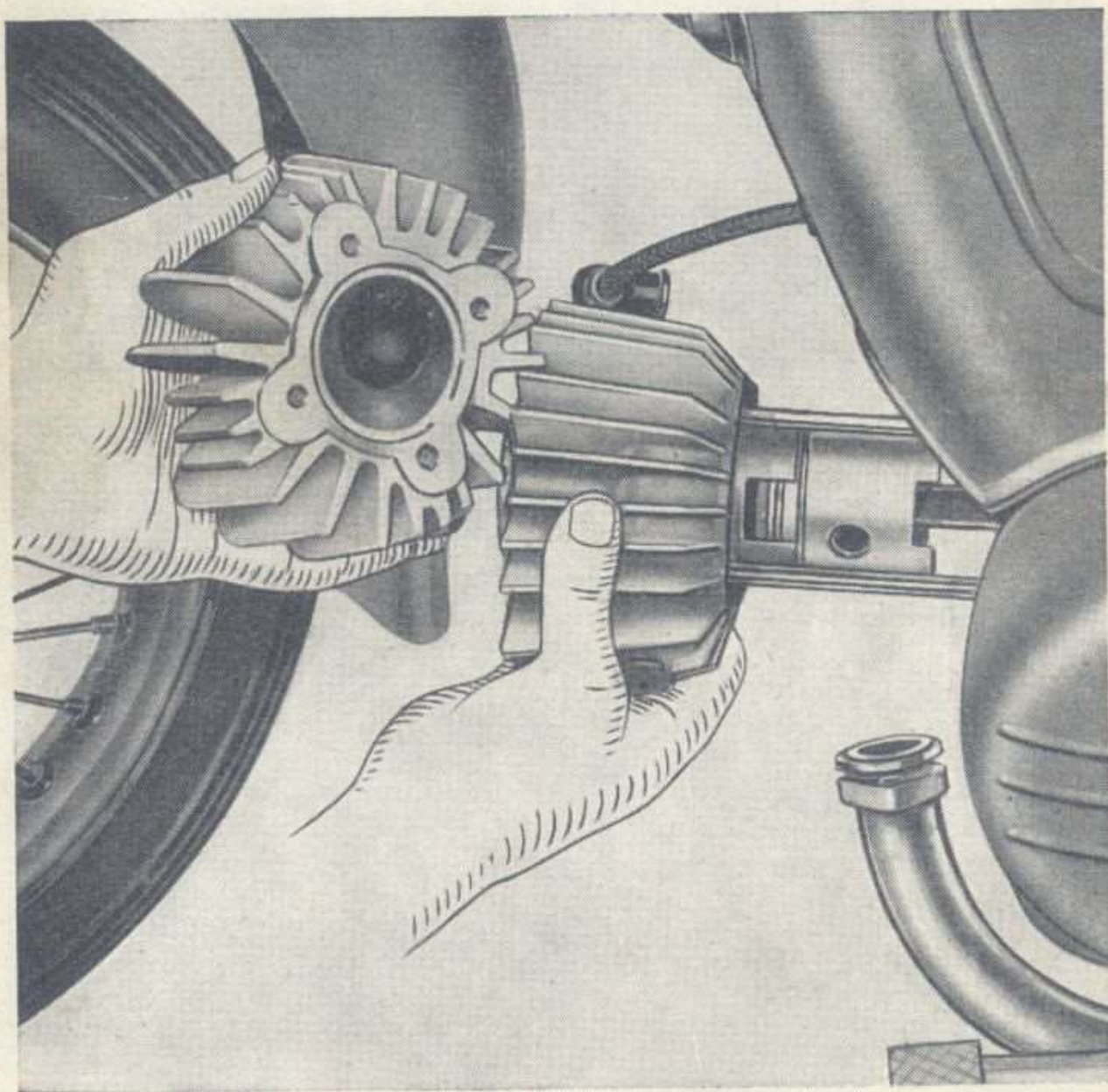


Fig. 13

This is necessary to ensure the chain is not too tight when the rear frame is in the middle position of its travel.

To adjust, slacken off the nuts of the rear wheel spindle and regulate by the same amount the two chain tensioners on the wheel spindle.

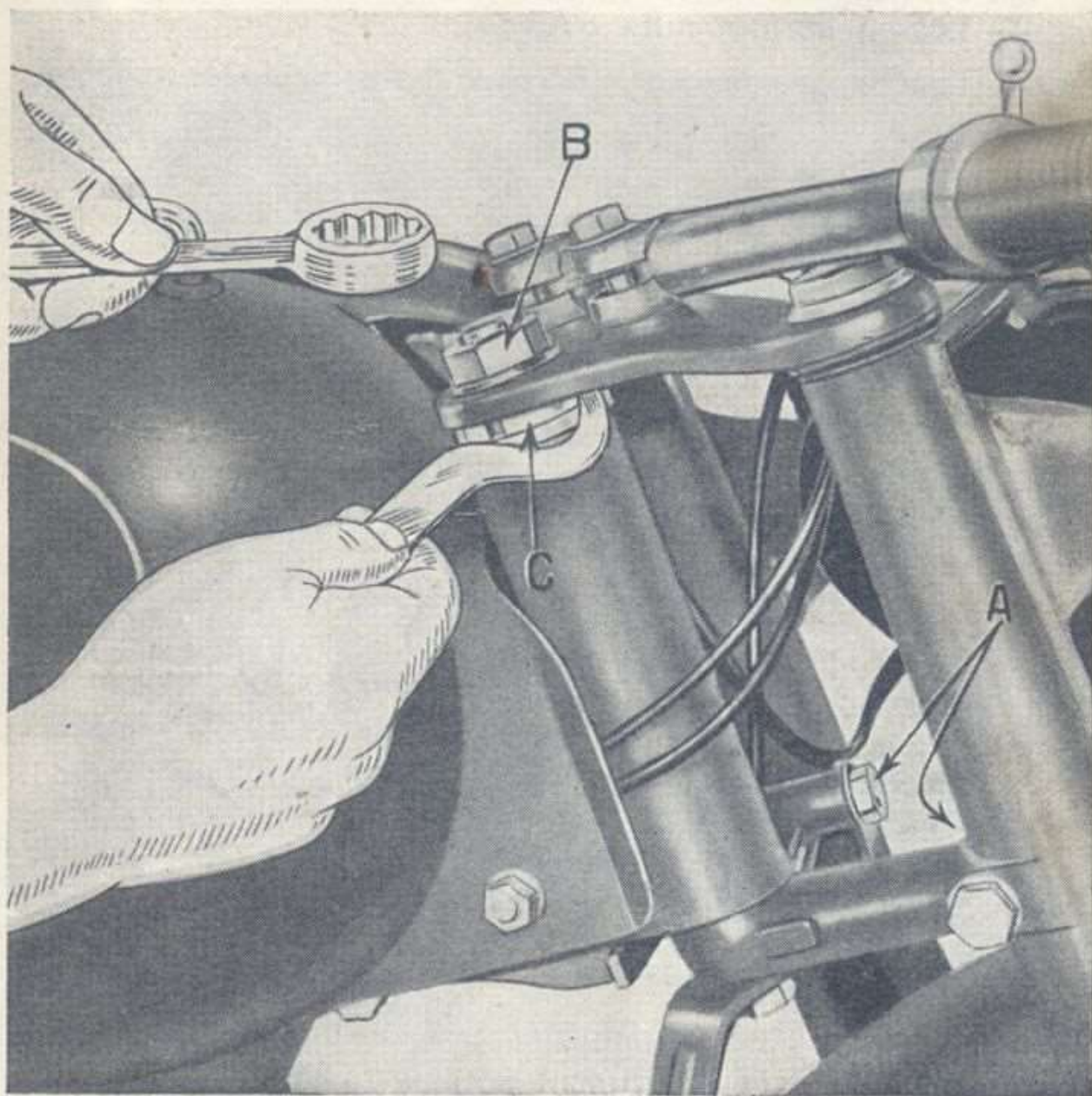


Fig. 14

Adjusting the steering head

(see fig. 14)

If the steering head is too loose there will be movements which are harmful to the balls and races.

To adjust:

- Loosen bottom nuts « A »;
- Loosen counter-nut « B » on the steering head pipe;
- Using a suitable spanner or a drift inserted in the notches of adjusting lock-ring « C » tighten up till excessive play is removed, but ensuring the fork still has some free movement.

After adjustment, re-lock counter-nut « B » keeping a hold on the cup, so as not to take away the clearance necessary for good fork operation.

Finally, re-lock nuts « A ».

Adjusting of the rear swinging fork

Remove right crankcase cover and slacken lock-nut, keeping a hold on the nut. Screw on this latter till all play is removed. Finally tighten lock-nut, holding tight the main nut (see fig. 15).

Adjustment of handlebar controls

For the adjustment of the front brake and clutch levers on the handlebars, a knurled adjuster and locking thimble is provided and this makes adjustment an easy matter.

Always remember to tighten locking thimbles after adjustment (see fig. 16).

Adjusting the brakes

Both brakes should be adjusted so that there is $3/8 - 5/8''$ play at the pedal and lever respectively, before the linings come into contact with the drums. For adjustment of the front brake see « Adjustment of handlebar controls ».

The rear brake is adjusted by means of the nut at the rear end of the brake rod.

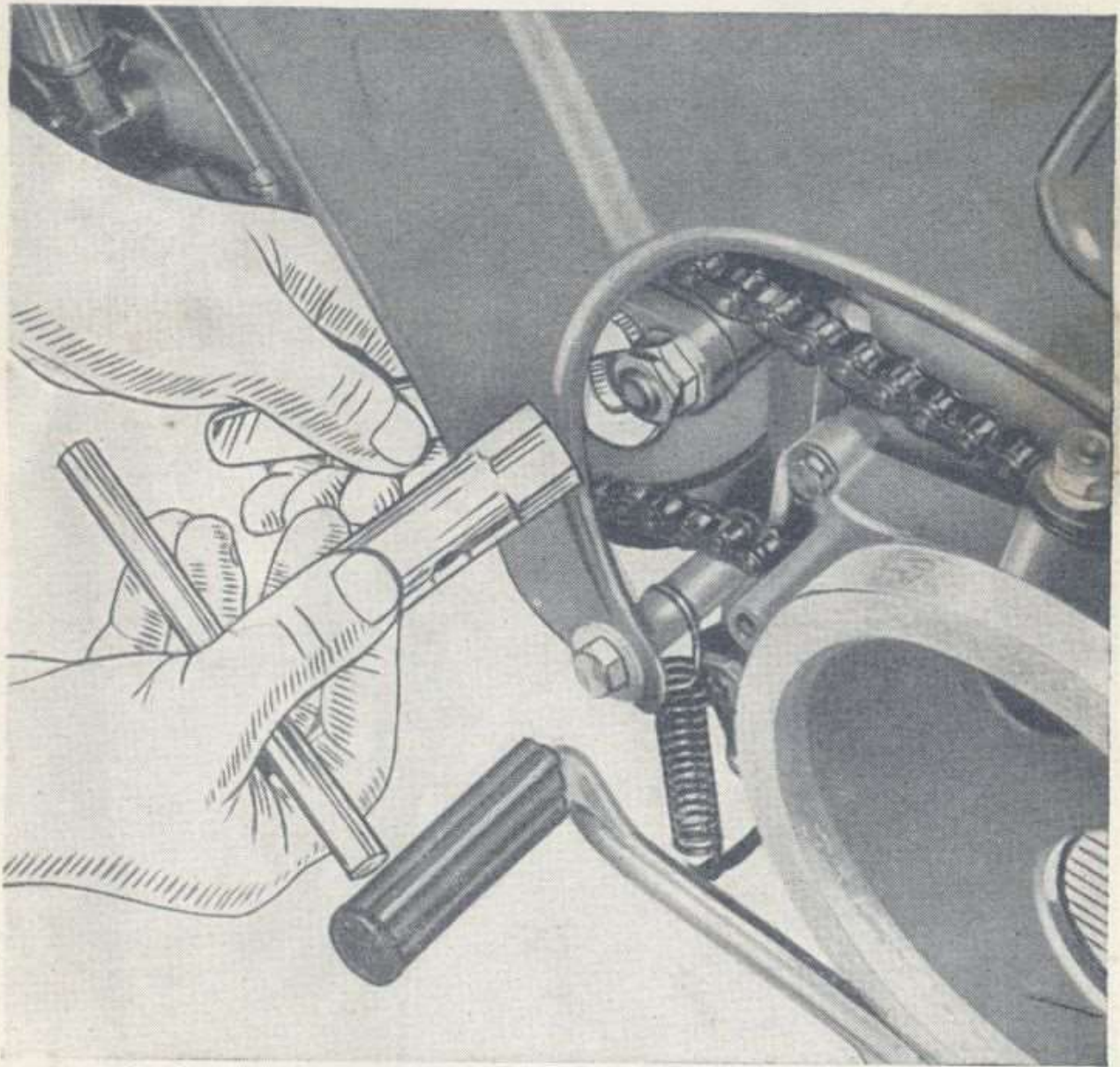


Fig. 15

Removal of front wheel (see fig. 17)

Proceed as follows:

- Disconnect the cable shackle from the cam lever on

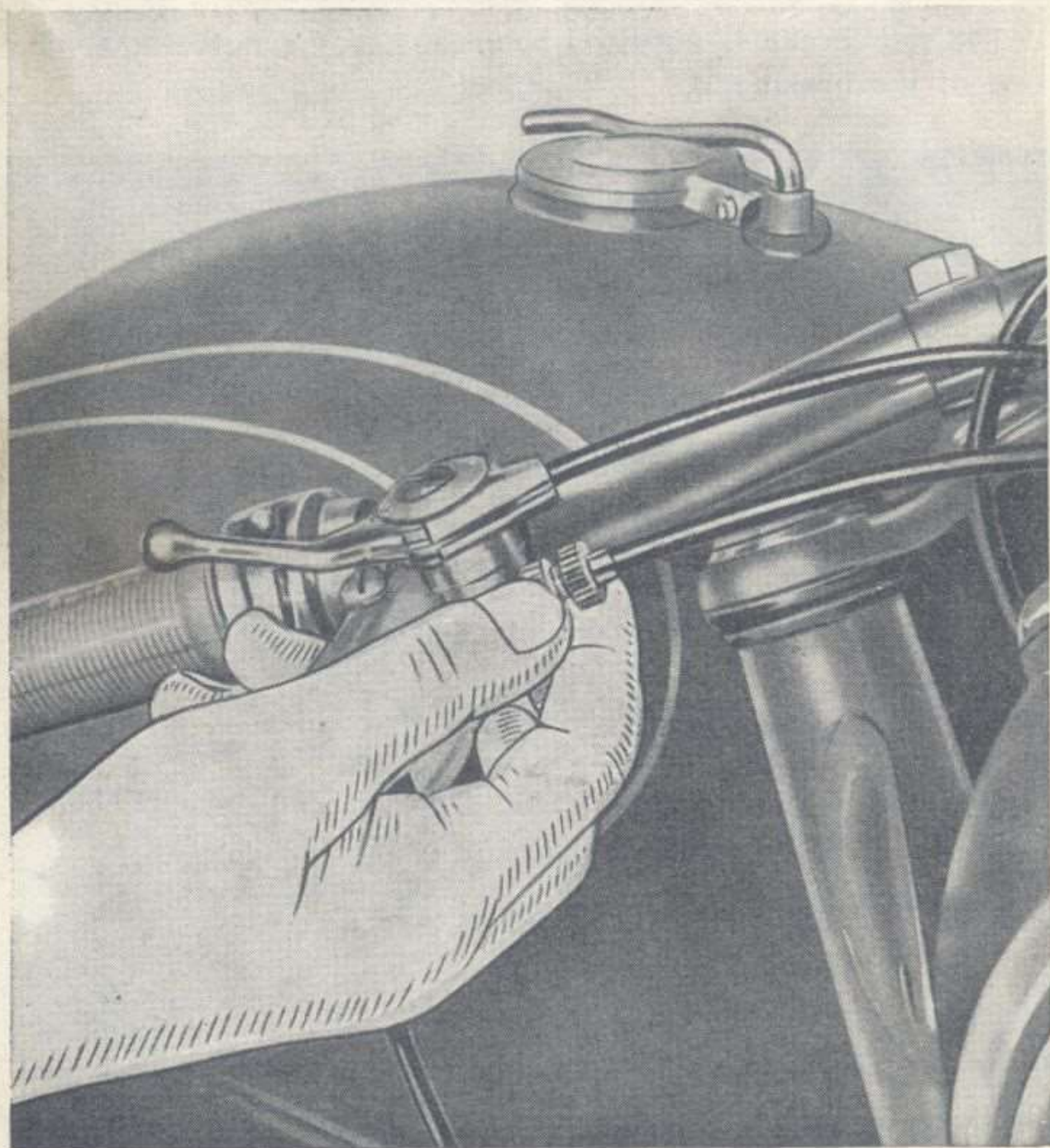


Fig. 16

the brake plate;

— Slacken the right hub nut « A »;

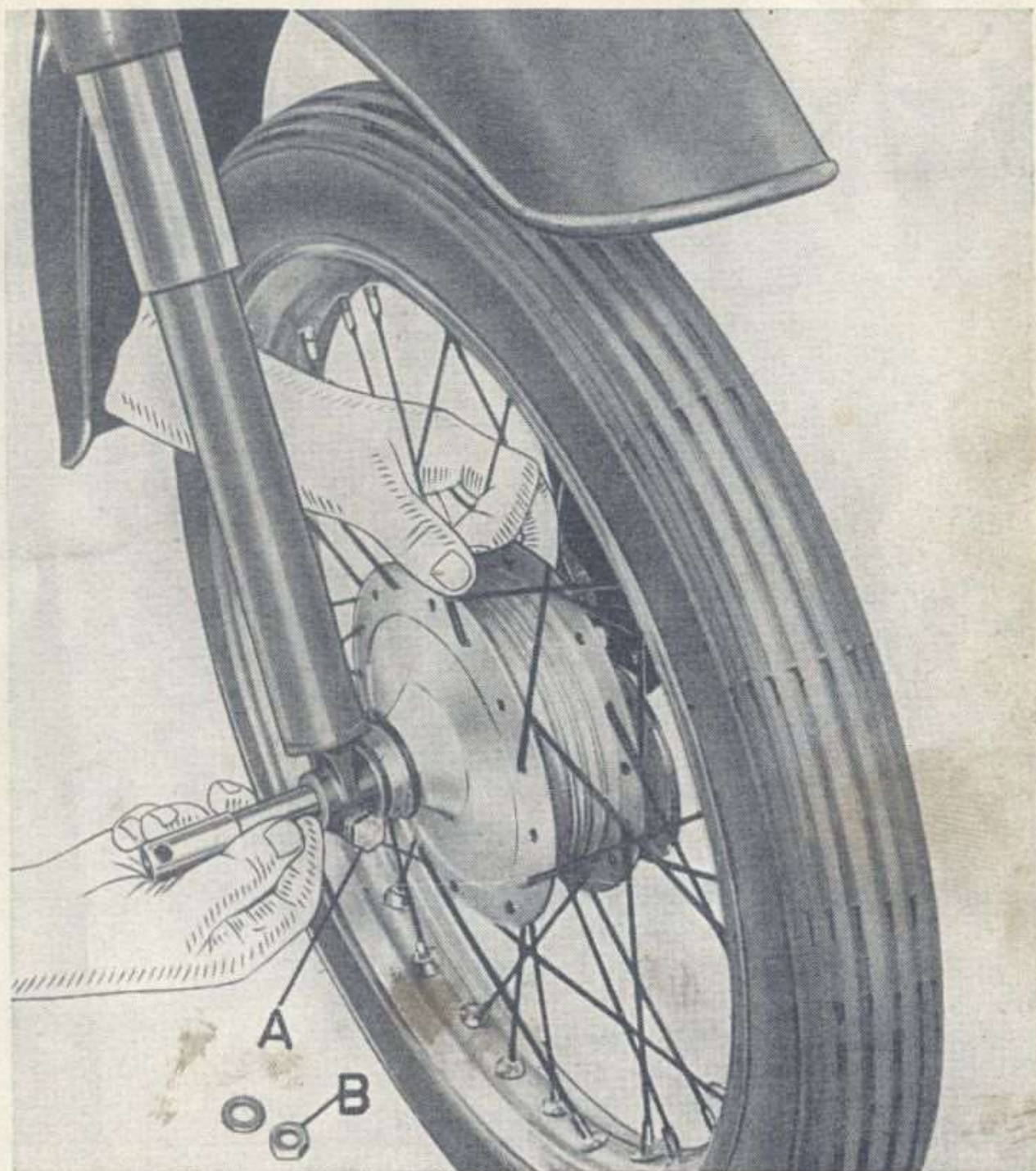


Fig. 17

— Unscrew spindle nut « B », withdraw the spindle out of the fork links, and take off the wheel.

In re-fitting do not forget to house the brake plate in its anchorage.

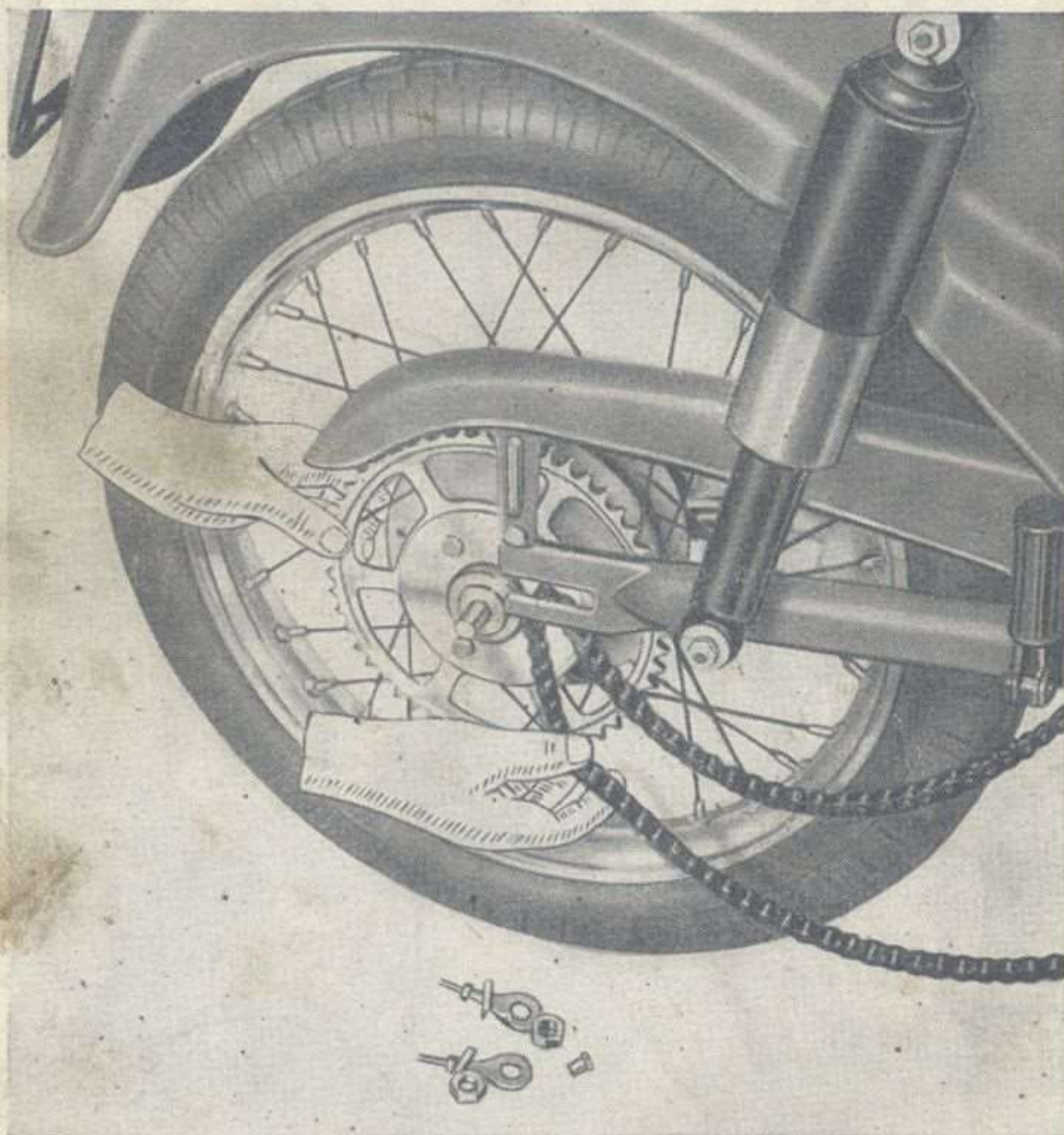


Fig. 18

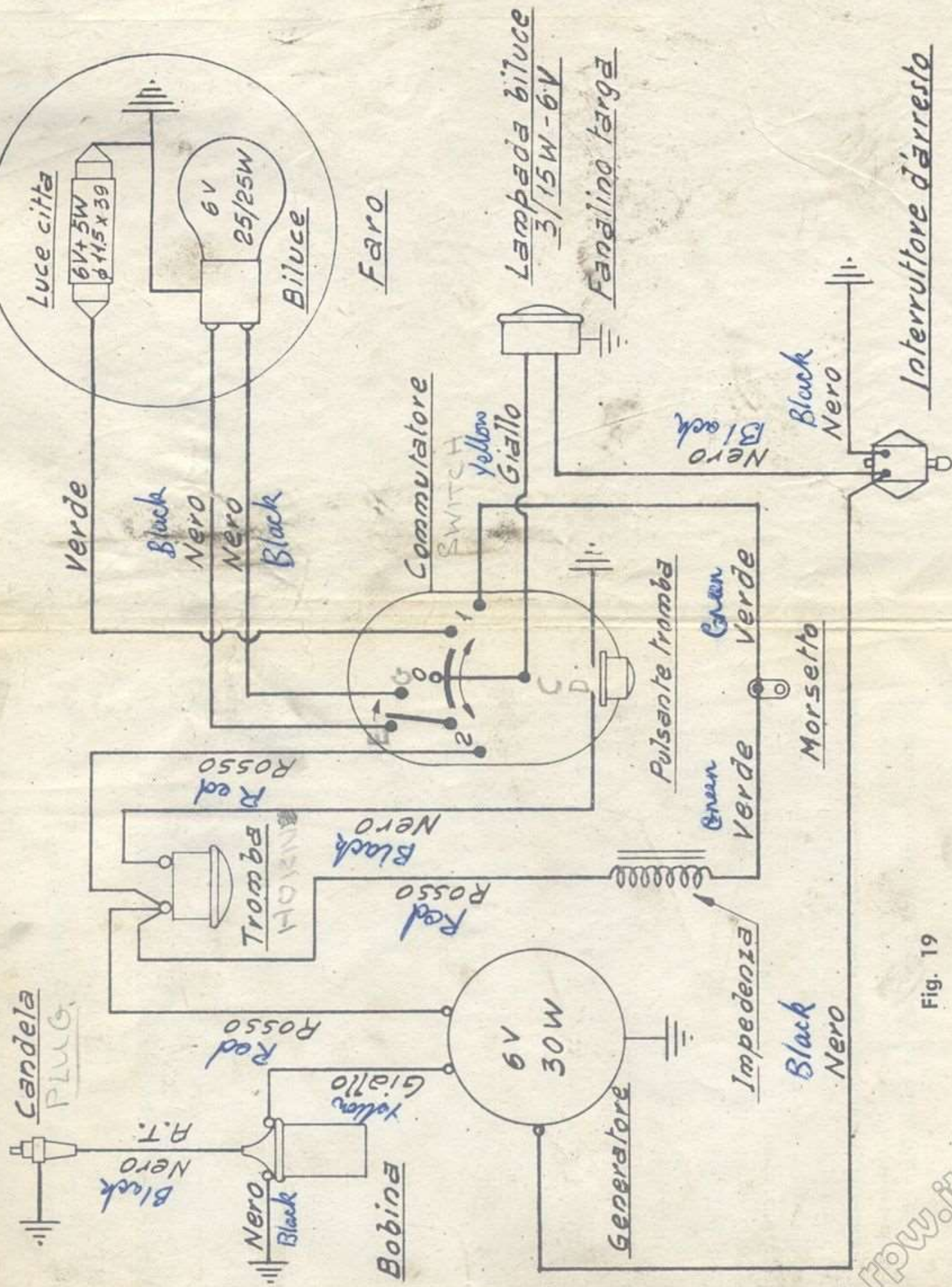


Fig. 19

CANDELA	=	PLUG
VERDE	=	GREEN
LUCE CITTA'	=	PILOT LIGHT
TROMBA	=	HORN
BOBINA	=	COIL
GENERATORE	=	GENERATOR
IMPENDENZA	=	IMPEDANCE
PULSANTE		
TROMBA	=	HORN BUTTON
COMMUTATORE	=	SWITCH
GIALLO	=	YELLOW
ROSSO	=	RED
FARO	=	HEADLAMP
FANALINO		
TARGA	=	TAIL LIGHT
INTERRUTTORE		
D'ARRESTO	=	STOP LIGHT BREAKER
NERO	=	BLACK

Removal of rear wheel

(see fig. 18)

Proceed as follows:

- Unscrew the adjusting nut on the rear brake end;
- Unscrew both spindle nuts, and remove chain tensioners;
- Push the wheel inwards to allow the chain to be removed, and slip out the rear wheel.

During this operation, care should be taken not to alter the position of the nuts on the chain tensioners.

In refitting be sure the brake plate is inserted in its anchorage, and finally adjust the rear brake by means of the nut on the brake lever.

Cure for possible ignition troubles

To detect and cure possible ignition troubles it is well to bear in mind the following.

1) Burning of the stop lamp. Should this happen, the engine will keep on running but on pressing the brake lever the engine will falter, thus indicating that the bulb is burnt out and needs replacing.

2) The lamp is continually lit when riding. This trouble will lead shortly to the burning out of the lamp. Check the return movement of the brake lever, also if the circuit breaker has free movement and its contacts are free from oxidation.

3) Lamp burning out and breaker switch not contacting. This is the only instance when the ignition will fail completely.

An emergency repair can be carried out by short circuiting the breaker contacts or grounding the cable from the flywheel

to the breaker switch. Any one of these emergency repairs will re-start the engine but it is obvious the stop lamp will be cut out.

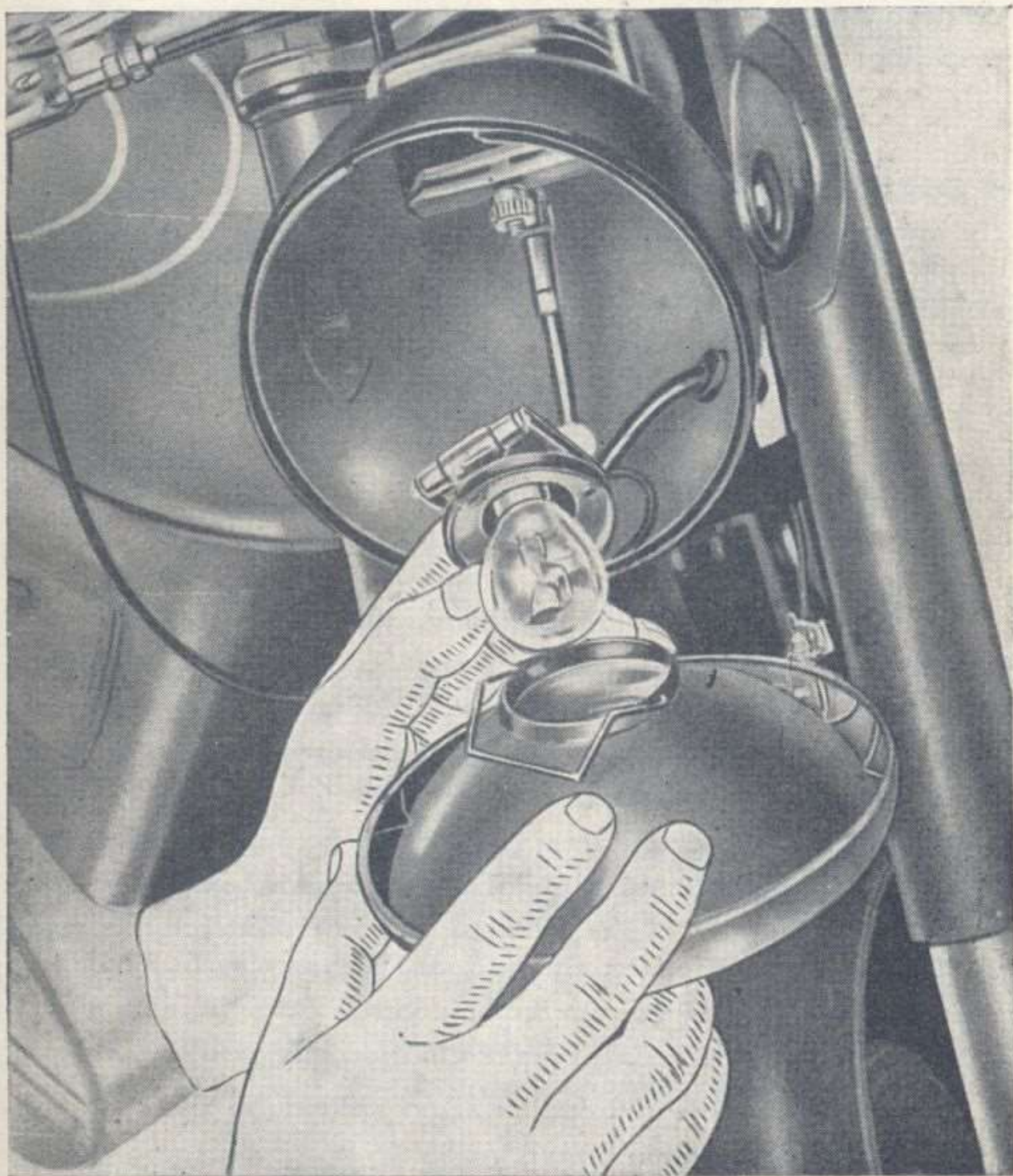


Fig. 20

Electrical equipment

The flywheel generator provides low tension current to the H. T. coil, the electric horn and the lighting system consisting of head lamp and tail lamp combining plate illumination and stop light. See electrical diagram fig. 19.

Cables

Occasionally check over all the electric wires, paying special attention to places where they may rub on to other parts and if there is danger of any shorts, either insulate or renew them.

Headlamp

It is absolutely water tight and internal inspection is therefore unnecessary. The surface of the reflector should be treated with great care: do not polish it or it might easily lose its lustre.

To change the bulb, loosen the small screw at the base of the lamp and the glass and reflector can be removed and the bulb taken out (see fig. 20).

The small parking light bulb is easily removed by releasing it from its spring retainers.

The glass is changed by removing the springs which retain it against the headlamp rim. The small plate on top of the headlamp can easily be removed to provide room for a speedometer, if it is desired to fit such an accessory.

Bulbs

Bulbs of the following specification should be used:

- headlamp: main bulb 6 V 25 x 25 W (main and dipper);
- pilot light: 6 V 5 W;
- rear lamp and stop light (combined): 3/5 W 6 V.

Horn and dipper switch

Does not normally require any adjustment, but if it is found that the lamps fail frequently, the switch should be examined making sure that all wires are making proper contact, and all screws are tight.

General maintenance

To keep the machine in good condition one should pay attention to the following points:

Cleaning: the engine is best cleaned with petrol and a brush and then dried off with clean rags. All enamelled parts should never be cleaned dry, but wetted with a sponge or washed off with a light water jet and a sponge, making sure no water enters into the brakes or engine.

Remove all traces of dust or mud before finally drying off with a chamois leather.

To keep the enamel in good condition, never use petrol alcohol or caustic soda solutions, as these may render it opaque and ultimately destroy the paint.

Never leave your machine for long periods in the scorching sun nor in the open on frosty nights.

Retouching pain work

The finish on the Zigolo is synthetic enamel dried off in an infra red oven. In the case of small parts it is best to re-enamel the part completely.

Transfers — The transfer with the eagle and wording « Moto Guzzi » is fixed on each side of the tank, also on the mud-guards. Moisten the transfer with flatting and after about 5 minutes set in position, soaking the paper back with a sponge and then peeling it off.

Any trace of varnish around the transfer can be removed with kerosene and it can then be polished off to give it a good lustre.

SUMMARY OF ENGINE TROUBLES
PROBABLE CAUSES AND CURES

TROUBLE	PROBABLE CAUSE	CURE
DIFFICULT STARTING DUE TO CARBURATION	Petrol not getting to carburettor (see A - B - C - D - E)	Depress tickler just enough to see if there is flooding of the carburettor.
	A - No fuel in tank	Re-fill.
	B - Petrol tap closed	Turn tap to « open ».
	C - Necessity to turn on reserve fuel	Turn tap to « reserve » position.
	D - Obstruction in fuel tank filter	Dismantle and clean.
	E - Broken or obstructed fuel line	Replace or blow through with air.
	Dirty carburettor filter or bowl	Dismantle and clean.
	Float needle blocked in its seat	Shift it, acting on the tickler.
	Obstructed jet	Dismantle and clean with air.
	Carburettor ducts obstructed	Dismantle and clean with petrol or air.
	Water in fuel or bad quality oil in mixture	Dismantle carburettor and clean it. Replace fuel with suitable mixture.

TROUBLE	PROBABLE CAUSE	CURE
	Excessive flooding (see F - G)	Close petrol tap and turn engine till excess petrol is absorbed.
	F - Deposits in needle seat	Remove needle and clean.
	G - Punctured float	Replace float.
	Air getting through manifold	Remove right crankcase cover and air filter. Check tightness of fixing screws, and replace gasket if necessary.
	Dirty air filter	Dismantle and clean.
	No spark (see H - I - L - M)	Remove plug and holding it against the cylinder check if these is any spark.
	H - Fouled plug	Clean it.
	I - Wet plug	Dry it.
	L - Cracked insulator	Replace plug.
	M - Incorrect points gap	Set to .6 mm. (.23").
	Broken or damaged lead	Replace.

IGNITION

TROUBLE	PROBABLE CAUSE	CURE
	Plug or coil connections damaged or not properly screwed in.	Replace or screw in.
	Fouled or incorrectly set contact points	Dress or clean them (See « Contact Breaker Adjustment »). Set to .15 - .17".
	Contact breaker arm:	
	— if worn	Replace.
	— if dry	Lubricate it lightly.
	Ignition too advanced or retarded	Check. See « Timing of flywheel alternator ».
KICKSTARTER		
ENGINE STARTS ONLY WITH THROTTLE FULLY OPEN	If not working properly due to slipping clutch	Adjust clutch.
	Dirty fuel pipe or jet obstructed	Clean.
ENGINE STOP ON OPENING THROTTLE	Engine too cold	Warm it up.
	Dirty jet	Clean it.
LOSS OF POWER	Mixture too rich	Reset carburettor. See « Carburettor ».

TROUBLE	PROBABLE CAUSE	CURE
FAULTY CLUTCH OPERATION	O - Fouled points	Clean with petrol and brush.
	P - Faulty ignition	Replace plug with a colder one (See plug recommended).
	Loose exhaust pipe jointing	Screw in pipe retaining bolts.
	Condensor:	
	— loose	Tighten.
	— defective	Replace.
	Slipping due to not enough clearance at the handlebar lever	Adjust to 3 mm. (.12").
	Incomplete disengagement due to excessive play at the handlebar lever	Adjust as above.
	Float needle stuck	Free needle.
	Punctured float	Replace float.
HIGH CONSUMPTION	Distorted float needle	Replace needle.
	Dirty air filter	Dismantle and clean.

TROUBLE	PROBABLE CAUSE	CURE
	Mixture too lean	Ditto as above.
	Clogged exhaust pipe and silencer	Scrape off all carbon deposits by scouring out.
	Carbon deposits on exhaust port, cylinder head and piston	Scrape off all carbon deposits.
	Defective head gasket	Replace.
	Loosely screwed in plug or plug without washer	Screw in plug and or fit washer.
	Pitted plug, points worn or incorrectly set	Clean, change plug, or adjust gap.
	Loose cylinder head nuts	Screw in tight on a cold engine, but not too fiercely as to break the studs.
	Worn, broken, or stuck piston rings	Replace rings and clean out piston grooves.
	Cylinder worn oval	Replace.
	Plug (See N - O - P)	
	N - Incorrectly set points	Adjust to .6 mm. (.23").

BACKFIRING

TROUBLE	PROBABLE CAUSE	CURE
	Main jet distorted or altered	Change jet.
	Retarded ignition	Check timing.
	Worn, broken, or stuck piston rings	Replace rings.
DEFECTIVE STEERING	If too hard or too loose	Loosen centre bolt and side nut, and adjust by means of the knurled cap.
WHEELS OUT OF ALIGNMENT	Wheel offset	True up and change any broken or damaged spokes.
	Loose hubs	Check wheel bearings.
FADING OF BRAKES	Pedal or hand lever with too much free movement	Adjust distance to about 10-15 mm. (.39-59") before linings contact drum.
	Worn or oily brake linings	Replace linings.
SUSPENSION	Improper working of telehydraulic fork	Overhaul fork and check oil level.
	Inefficient working of rear dampers	Replace dampers.

TROUBLE	PROBABLE CAUSE	CURE
ELECTRICAL EQUIPMENT	Loose, broken or damaged leads	Repair or replace.
	Terminals loose, broken or disconnected . ;	Tighten fixing screws.
	Horn	
	Terminals disconnected	Tighten fixing screws.
	Coil lead loose or broken	Tighten or replace.
	Faulty coil	Replace.
	Main or dipper light burnt out	Replace bulb.
	Reflector opaque	Replace.
	Faulty switch	Check contacts and tighten screws. If broken, replace.
	Pilot light burnt out	Replace with bulb of similar type.
	Rear lamp burnt out	Replace with bulb of similar voltage (3/15 W - 6 V).

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