

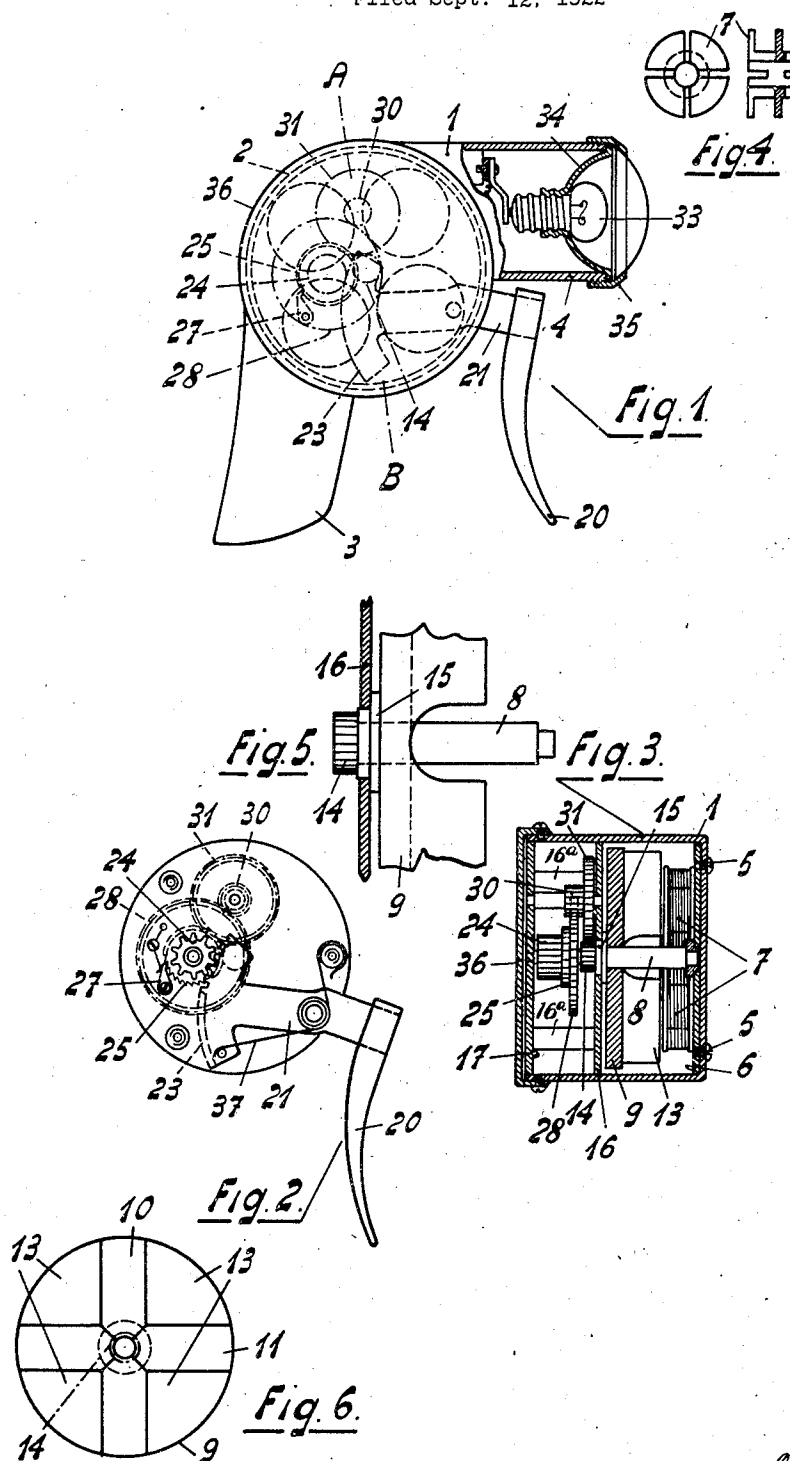
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ELECTRIC LAMP

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ELECTRIC LAMP.

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The present invention relates to a new and improved electric lamp which may be a hand lamp, a bicycle lamp, etc.

The invention relates more particularly to such lamps of said class in which the current for lighting the lamp is generated by a magneto or dynamo adapted to be operated by hand or by some other means.

The main object of the invention is to provide a lamp which shall be simple, very compact, and which gives a powerful light, to provide an improved construction of the current generating parts, of the poles and of the armature.

Other objects of the invention relate to the provision of minor parts co-operating with the elements above noted and to details of construction, all of which will be more clearly set forth in the following specification.

With the above objects in view the invention resides in the parts and combination of parts hereinafter described, and particularly set forth in the claims appended hereto.

In order that my invention may be clearly understood I have illustrated the same in the accompanying drawings, wherein:—

Fig. 1 shows in a diagrammatical side elevation of an electric hand lamp, parts being shown in section.

Fig. 2 shows the gear in a side view.

Fig. 3 is a section on line A—B of Fig. 1.

Fig. 4 shows a spool in side view and in section.

Fig. 5 illustrates the mounting of the armature.

Fig. 6 is a plan view of the armature.

The electric lamp shown in Figs. 1 to 6 comprises a casing 1 having a cylindrical barrel 2 on which a pistol grip handle 3 and a socket 4 is fastened. In the barrel 2 a plate 6 is fixed by means of screws 5. On the plate 6 four spools or sleeves 7 are fastened round the centre of plate 6. In the centre of plate 6 a bearing is arranged in which one end of a shaft 8 is rotatably mounted. On the shaft 8 a disk shaped magnet 9 is fixed. The magnet is provided on one of its faces with two notches 10, 11 crossing each other at the centre and standing at a right angle to each other. By these notches pole pieces 13 are formed. On the shaft 8 a pinion 14 is fixed and beside the pinion a bushing 15 is arranged in which the shaft 8 is rotatably mounted and which fits into a bore of a plate 16. The outer di-

ameter of the bushing 15 exceeds that of the pinion 14 in such a manner that the pinion 14 passes through the bore in plate 16. A third plate 17 is rigidly connected to said plate 16 in spaced relation by studs 16^a and in the plates 16, 17 are bearings for the shafts of which the gears drive the pinion 8. The gearing comprises a toothed segment 23 made in one with a double armed lever 21 one arm of which is mounted on a bolt and which is provided with a trigger shaped finger piece 20 and is arranged opposite the pistol grip 3. The segment 23 meshes with a spur wheel 24 rigidly connected with a larger toothed gear 25 and loosely mounted on a common shaft. A pawl 27 arranged on a spur wheel 28 engages said wheel 25. The spur wheel 28 drives by means of two intermediate gears 30 and 31 the pinion 14. By pressing the handle 20 against the action of spring 37 the pinion 14 is rotated, the gear 25 drives the gear 28 by means of the pawl 27. If the handle 20 is given free the spring 37 returns the lever 21 to its original position the pawl 27 rides now freely over the teeth of the gear 25.

The faces of the pole piece 13 are all in one plan and parallel to the faces of the armature, the gap between the pole pieces and the armature is made as small as possible. The bodies of the spools are slotted. They are made of soft iron or of lamellated iron. The windings on the spools are connected with the contacts of the glow lamp 33 in any well known manner. The lamp 33 is held by a fixture 34 which is fixed to the casing 1 by means of a screw threaded ring 35. The barrel is closed by a cover 36. The lamp and especially the parts used to generate the current may be easily taken apart and readjusted. All the gearing with the dynamo may be removed from the barrel as a whole by first removing the screws 5 and the cover 36, and the plates 16, 17, etc., have not to be disconnected from each other, but, together with the gears for driving the shaft 8, may be first removed from the casing, if the shaft 8 with the armature is to be taken off as will be apparent from the foregoing disclosure and by reference to Figure 1.

What I wish to secure by U. S. Letters Patent is:—

An electric lamp including a generator comprising a casing, a fixed plate therein detachably secured thereto and provided with

coils, a shaft arranged for rotation in the casing, a permanent magnet fixed on the shaft and having poles presented to said coils, a pair of spaced plates connected together and detachably mounted in the casing gears mounted between said spaced plates and removable from the casing there-

with, the said shaft having a pinion engaging one of said gears and actuating means for said gears including a finger piece pivotally mounted between and carried by said plates. 10

In witness whereof I affix my signature.
O. PLETSCHER.