gears of the ratchet type, and, in addition to this, any degree of speed can be applied to the auto-feed by manipulation of the variable resistance.

Further to this it will be noted that since the motor of the apparatus is dependent upon the arc circuit for its supply, any variation in the length of arc gap, which may be due to a faulty carbon, is automatically adjusted by the fluctuation of voltage, and consequent increase or decrease of the speed of the motor.

Under correct supply conditions an arc gap of $\frac{3}{8}''$ is recommended, and the speed of the auto-feed should accordingly be set to maintain this distance as near as possible.

The Spotlight is generally run at 50—60 amps. and Hilo carbons, special brand, 9 m.m. positive and 7.5 m.m. negative, both copper covered, will be found to produce excellent results.

FRONT FRAME. The Front Frame is of steel blacked and carries Iris diaphragm, holder for tinters and projection lens.

COLD AIR BLOWER. An additional refinement to the Ross Spotlight is the Duplex Cold Air Blower—fitted so that a cooling air current is directed upon the Iris by a nozzle, and another nozzle directs a cooling air current upon the tinters. The dual effect of this piece of apparatus is that it keeps the Iris and tinters constantly cool.

IRIS DIAPHRAGM. The Iris Diaphragm enables a spot of suitable size to be obtained at any distance.

TINTERS. A Set of six gelatine colour tinters in metal holders is supplied.

LENS. A special lens is provided mounted in carrier with focussing adjustment by rack and pinion and clamping device.

MOUNTING. The Spotlight is mounted upon a stand, which is a departure from the usual lines of support. A very large and deep tripod casting forms the foot upon which the rest of the mount carrying the arc lamp and apparatus is built up.

Next to this comes the extension piece of cast iron in varying sizes ranging from 4 inches to 16 inches in height by steps of 4 inches. These extension pieces are all interchangeable, and are made thus for the purpose of adjusting the height of the spotlight to correspond with any angle or height of projection aperture.

The Spotlight can be raised or lowered and rotated by a convenient lever handle at front of stand. The whole apparatus is balanced to suit any particular tilt and can be clamped in any position.

The height overall, with 8″ extension piece in stand, is 4′ $10\frac{1}{2}''$.

The length overall, 4′ 3″.

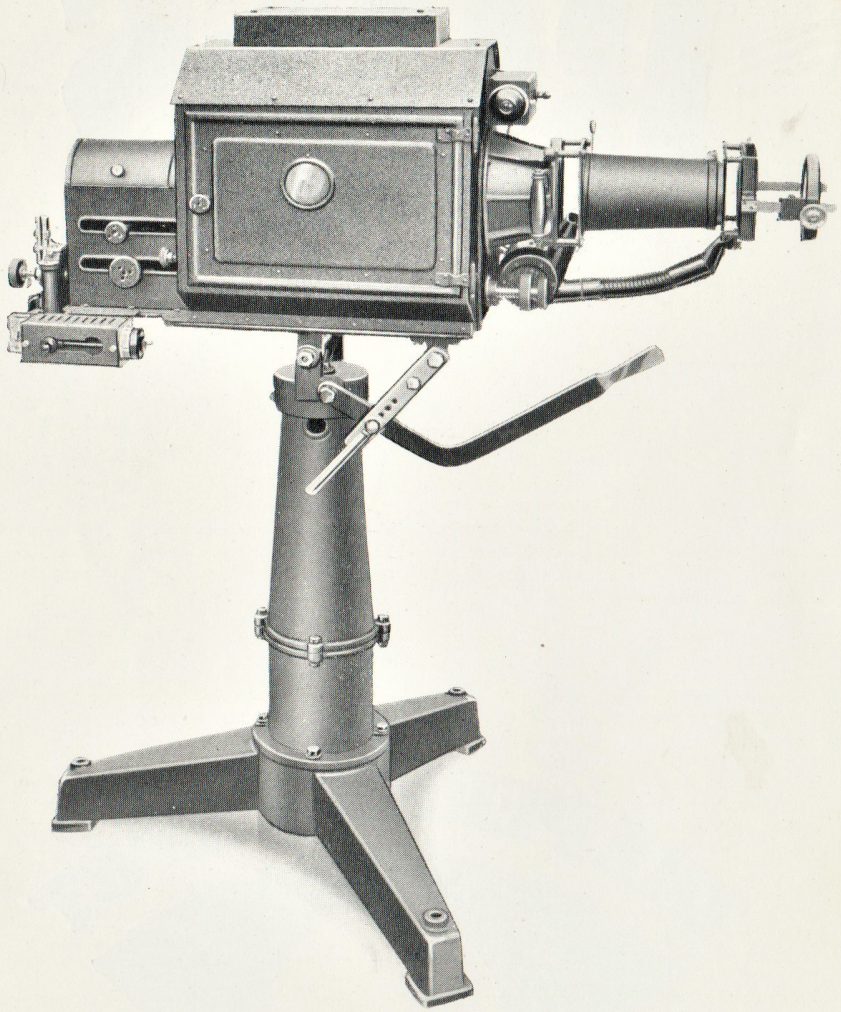
Spread of tripod base, 2′ 6″.

ROSS LIMITED

Optical Works, Clapham Common, London, S.W.4

Telegraphic Address: "Rossicaste, 'Phone, London." Telephones: Macaulay, 2472

The ROSS SPOTLIGHT



ROSS SPOTLIGHT for Front of House spotting, with Ross Patent Searchlight Arc Lamp in Sheet Steel Lamphouse with 8″ Ellipsoidal Mirror, Automatic Arc Control, Air Blower, Iris Diaphragm and Set of Tinters. Balanced on Pedestal Stand with swivel adjustment. - - **£75 0 0**

SPECIFICATION

LAMPHOUSE and ARC LAMP. The Lamphouse is constructed of sheet steel blacked, with double walls for the purpose of securing adequate and correct ventilation.

The doors, which are the full width of the lamphouse, allow of easy access for the purpose of carboning and cleaning, and are fitted with a round window of special glass through which a clean outline of the crater and negative carbon tip is seen while burning.

An 8″ ellipsoidal glass mirror specially backed, to prevent damage to the silvering, is held in a gimbal housing, enabling it to be swung in two directions at right angles to each other, by means of two knobs situated in rear of the lamphouse.

A scientifically devised cone, which effectively absorbs a great part of the heat from the rays directed upon the Iris diaphragm, is fitted to the front of the lamphouse.

A very substantial cut-off is located immediately behind the Iris diaphragm.

Special holders are supplied for the negative carbons, and these can be readjusted as the carbon burns down, in a manner which allows for the burning of the negative carbon to a very short length.

The carbon holder is attached by means of a clamp and milled nut to a supporting post in rear of the lamphouse, which is adjustable for moving the negative carbon up or down, or traversing it to either side so that it may be brought into perfect alignment with the positive carbon, and these movements are made by means of gears, which are actuated by two handles on the side of the rear compartment of the lamphouse.

Feed handles are provided, both on front and at the back of the lamphouse and this will be found to be a very convenient feature.

The complete arc mechanism is moved forward or backwards for the purpose of focussing the light upon the Iris diaphragm by a handle located at the front of the lamphouse.

In order to adjust the arc gap by hand feed while the automatic feed is running, two small ratchet type gears are thrown out of mesh by a lever attached to the same, and when the lever is again released the gears are thrown into mesh and held there by spring pressure.

Fibre terminal blocks are fitted to the arc lamp base in a position which allows the leads from the switchboard to be brought direct to the spotlight, and shorter asbestos covered flexible leads complete the run from the terminal block to the arc lamp terminals.

AUTOMATIC ARC CONTROL. The Automatic Arc Control is simple in design and most efficient.

It takes the form of a train of gears actuated by direct drive from a very small motor, which receives its current from the arc lamp terminals through a variable resistance.

The complete mechanism is fitted externally to the rear compartment of the lamphouse, and the arc driving gear is fitted direct to the spindle, which ordinarily carries the rear feed handle.

In order to hand feed the lamp for any particular purpose, the functioning of the automatic is easily stopped for a moment by throwing out of mesh two small