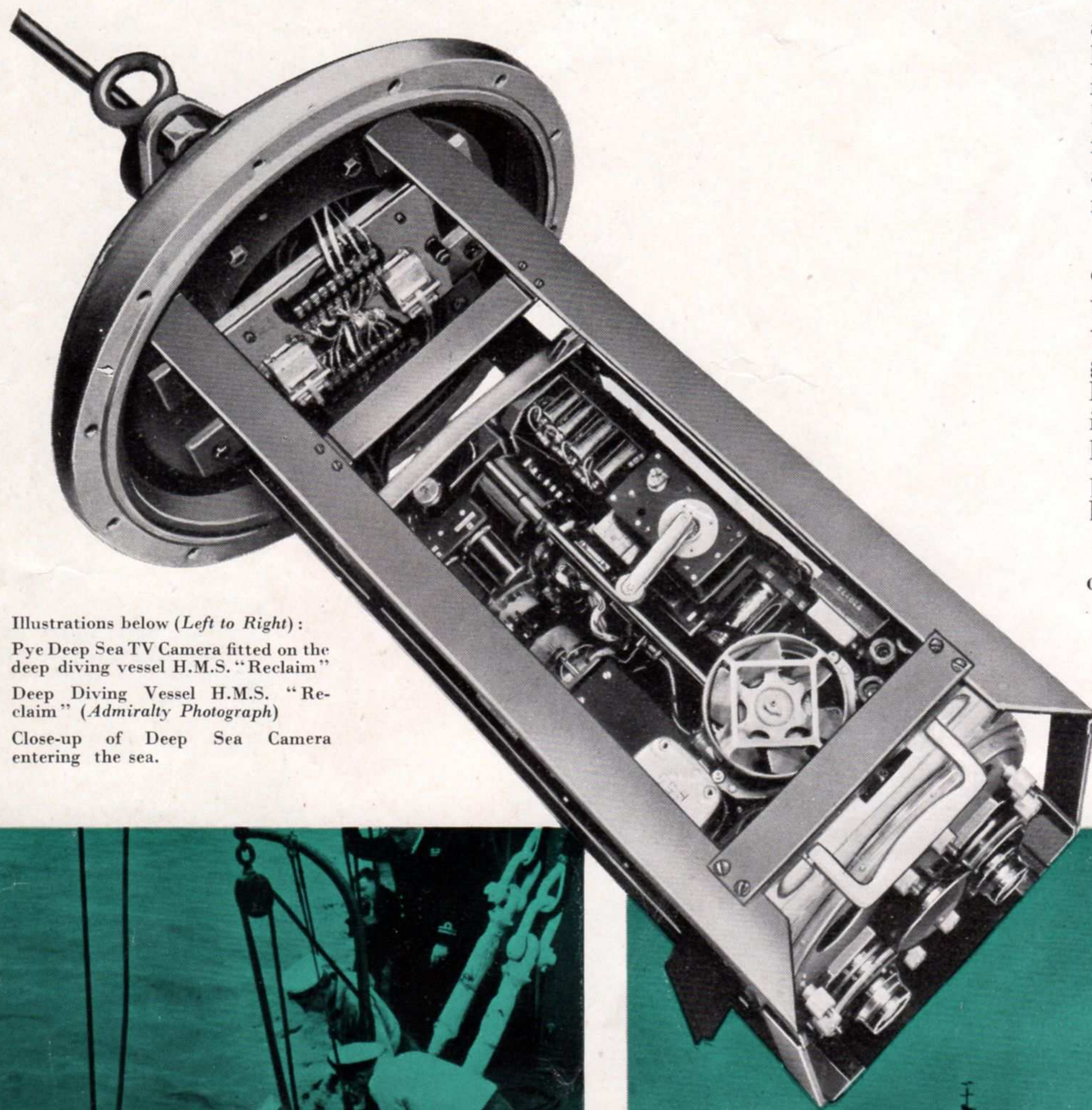


DEEP SEA TELEVISION EQUIPMENT



DEEP SEA TELEVISION

ADVANCED EQUIPMENT



Illustrations below (Left to Right):

Pye Deep Sea TV Camera fitted on the deep diving vessel H.M.S. "Reclaim"

Deep Diving Vessel H.M.S. "Reclaim" (Admiralty Photograph)

Close-up of Deep Sea Camera entering the sea.

Demonstrated at Cambridge recently was a new Deep Sea Television Camera which has been developed by Pye Limited working in close co-operation with the Admiralty. Incorporating many important developments, this Camera marks a most significant advance in the field of Deep Sea salvage and marine research.

The new equipment is capable of efficient operation at a depth of 1,200 feet, a depth which can be increased to 3,500 feet in the very near future. In addition, a much greater field coverage than had hitherto been possible has now been obtained by increasing to $5\frac{1}{2}$ inches the diameter of the lens window in the watertight casing. This permits the use of a $1\frac{3}{4}$ inch focal length lens with an angle of view of some 40 degrees.

The essential requirements of the actual camera itself are extreme light sensitivity together with good resolution of the televised image. Only the Image Orthicon Camera Tube has these required characteristics; it is capable of producing a television image at



TELEVISION EQUIPMENT

light levels as low as 0.5 foot-candle. This Tube forms the basis of the standard Pye Television Camera Type 2014, and it was therefore decided to employ a modified version of this camera for the new deep-sea equipment.

Certain other features inherent in the design of the Pye Type 2014 Camera make it particularly suitable for this application. The servo-operated optical focusing system is remotely controlled, as are the electrically operated four-lens turret and iris control mechanism, allowing all optical adjustments to be carried out with ease and precision from the Camera Control Unit aboard the surface vessel.

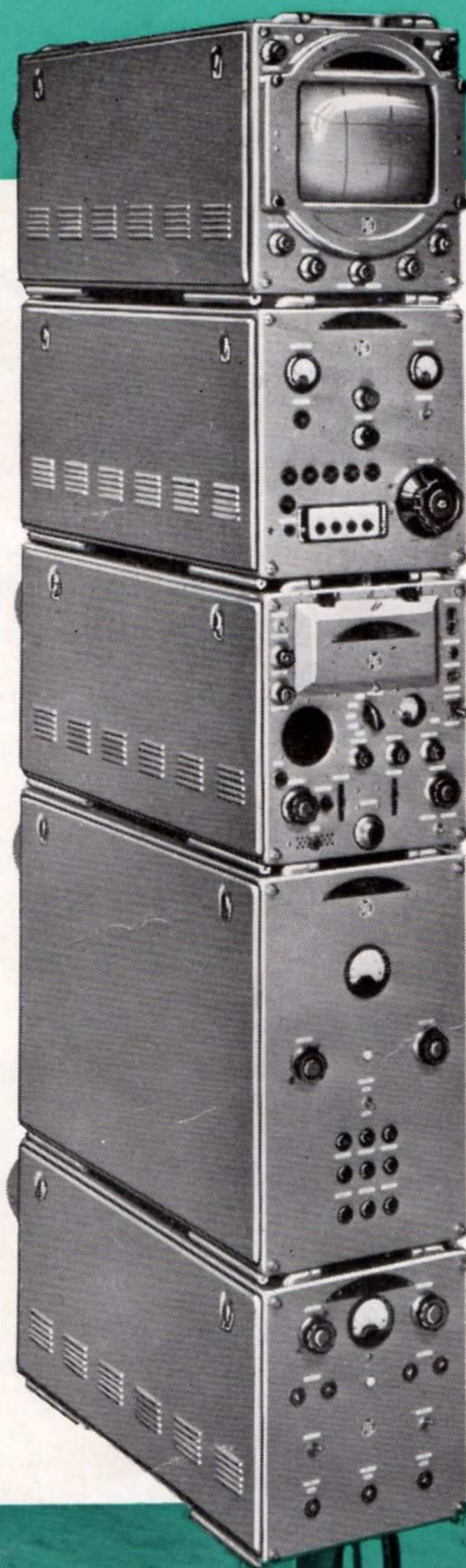
Complete mechanical control of the camera's direction can be effected from the surface. The camera's angle of elevation through an arc of approximately 115 degrees can also be controlled from the surface, or it may be preset before the camera is lowered under water. For purposes of static observation the entire camera unit may be mounted on the sea bed.

For illumination, either a standard Admiralty-pattern diver's lamp or a recently developed cold-cathode type of lamp is housed in the specially designed outer casing of the equipment. Further illumination may be supplied by individually controllable lamps mounted on a special framework attached to the camera casing.

A self-contained cathode ray tube picture-monitor gives the Control Unit operator a constant critical check on the camera's performance.

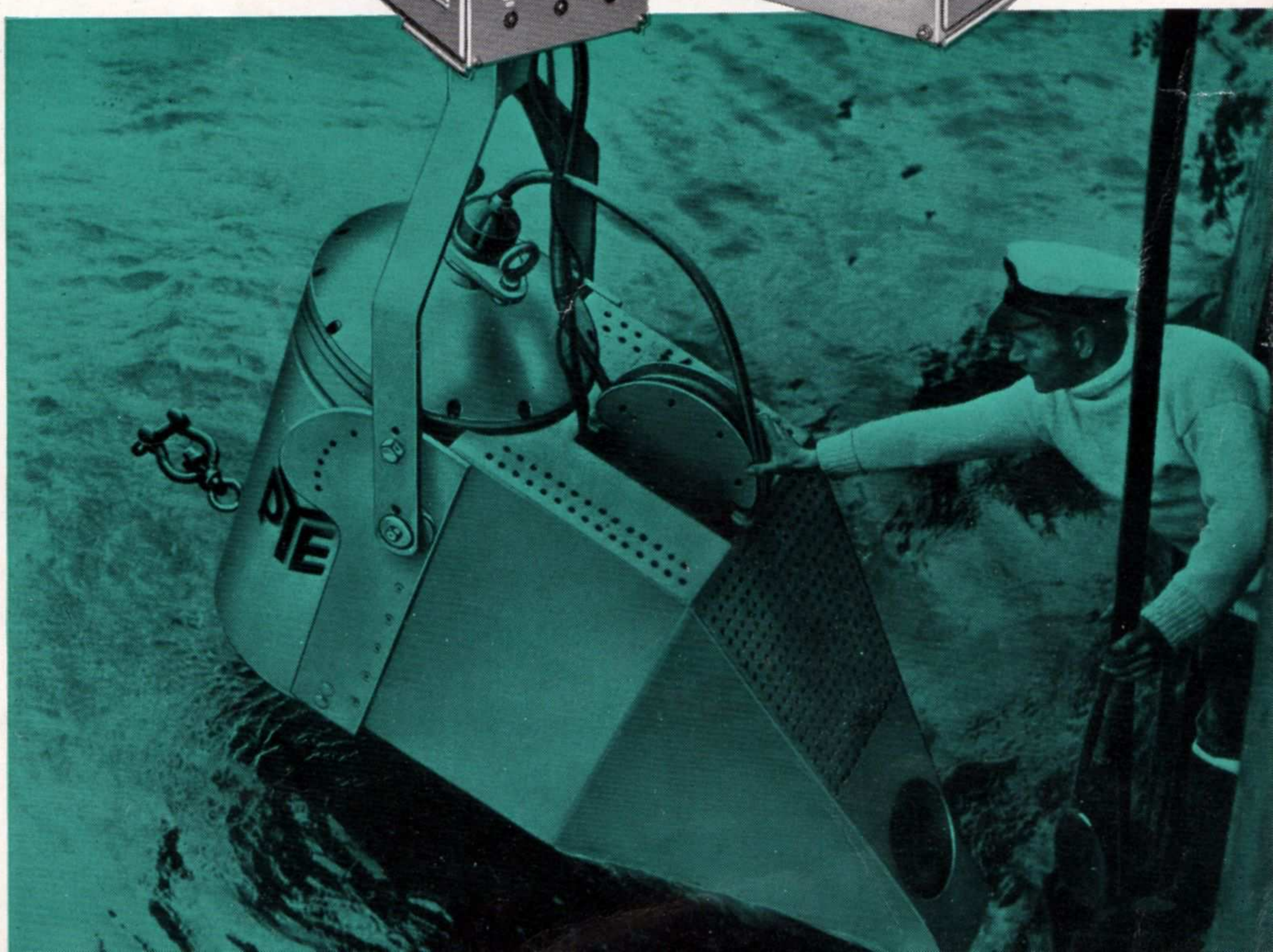
When the camera is in operation the televised under-water pictures are viewed by the control personnel on the Display Monitor. This, in essence, is a high quality television receiver connected directly to the camera. The brilliance and contrast of the picture appearing on the 14 inch screen permit direct photography for record purposes.

The complete Pye Deep Sea television chain has been installed in the deep diving vessel H.M.S. "Reclaim," and a similar camera has been supplied to the Admiralty Research Laboratories for experimental work.



CONTROL UNITS (Top to Bottom)

1. PICTURE MONITOR.
 2. REMOTE CONTROL UNIT.
 3. CAMERA CONTROL UNIT.
 4. SYNC PULSE GENERATOR.
 5. POWER UNIT.
 6. REMOTE CONTROL UNIT.
- (ENLARGED ILLUSTRATION
BELOW)

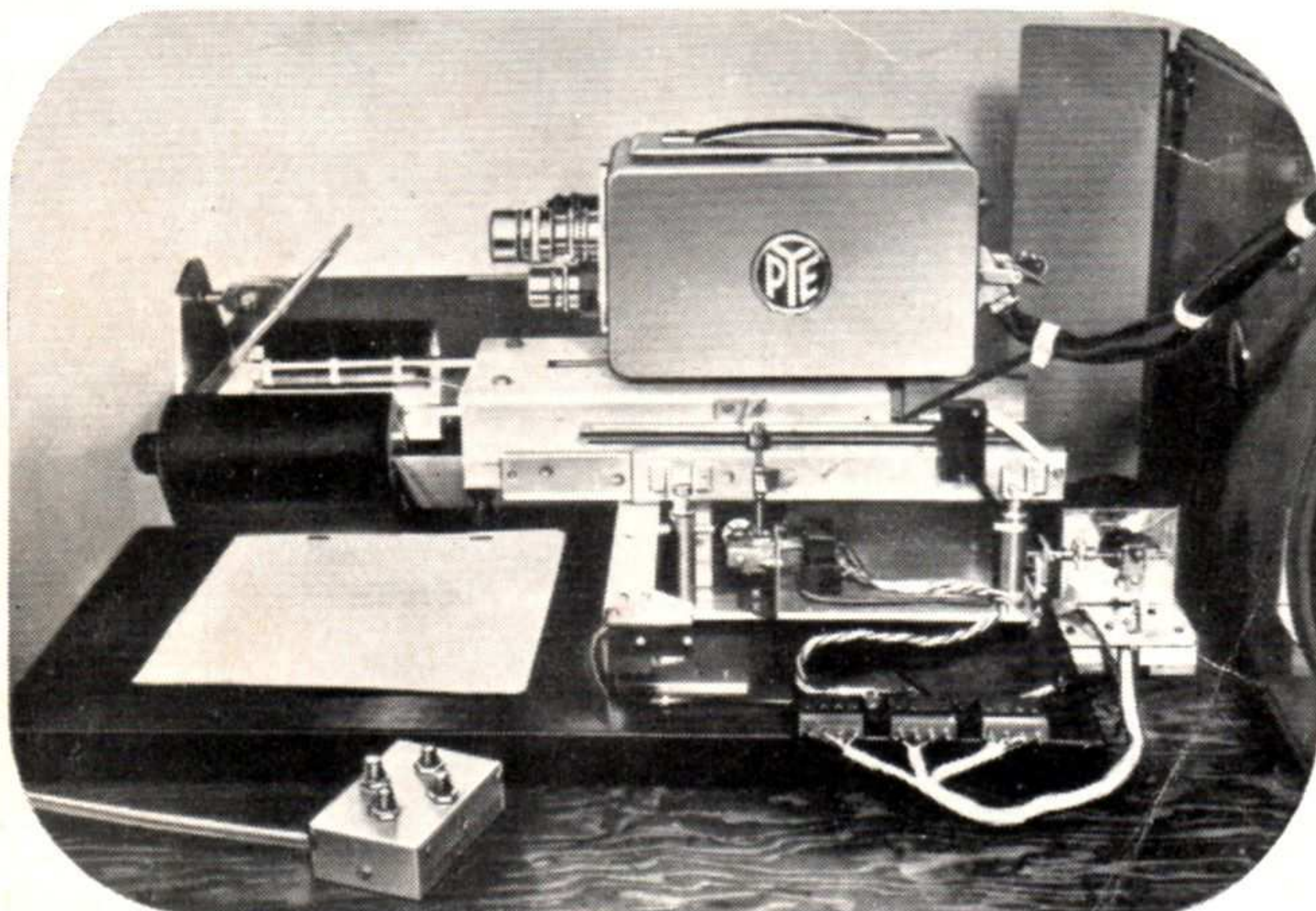




TELEVISION FOR INDUSTRY

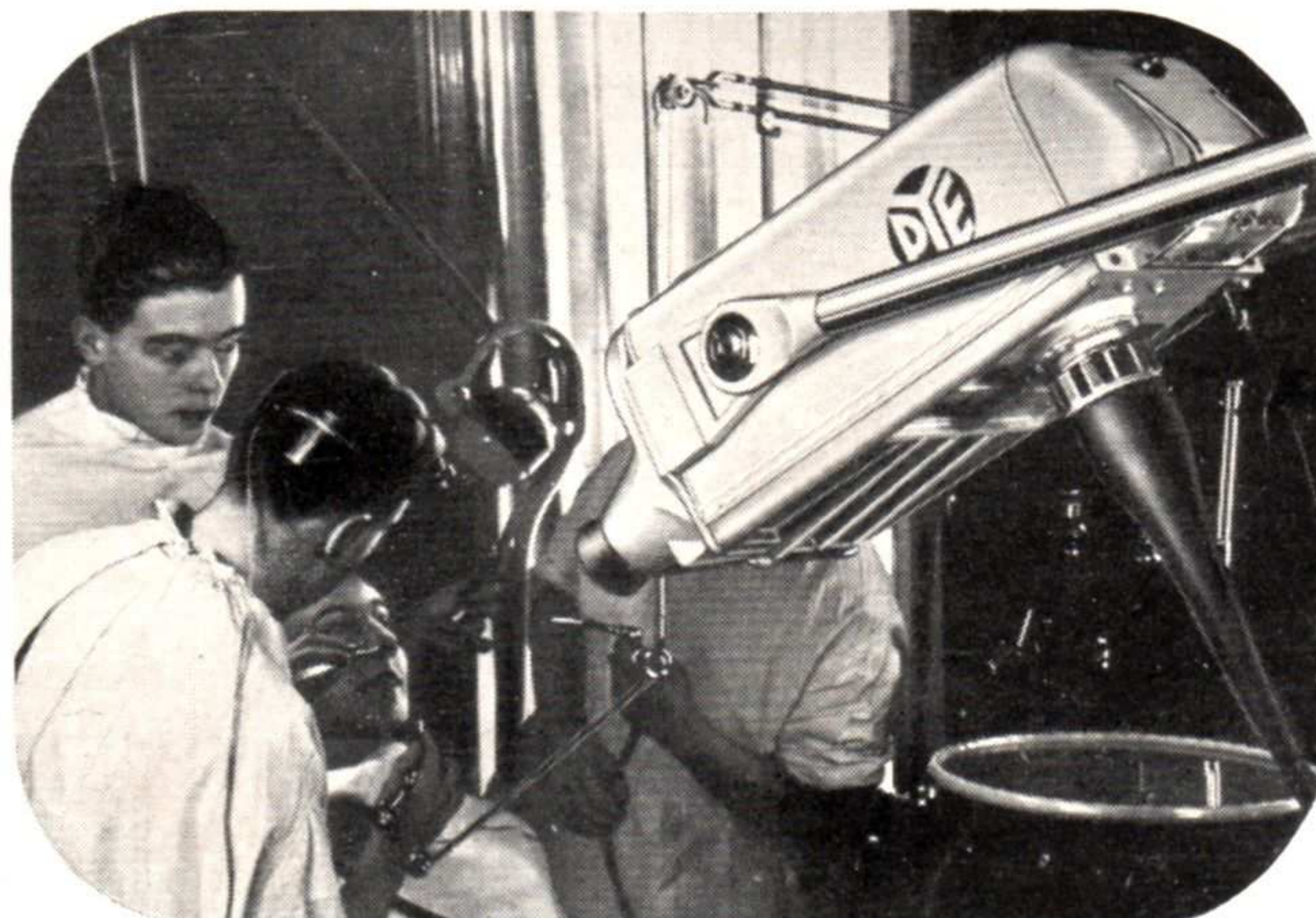
PYE PORTABLE TV EQUIPMENT

At a recent demonstration held at Glynn Mills, the London Bankers, it was shown how a bank manager in the centre of London could inspect a client's account kept ten miles away. The prospects of this new kind of Pye Television equipment are endless. New light-weight cameras and suitcase transmitters, which can be used for dangerous research work, certain types of industrial education, and for naval and military operation, have already been developed in Cambridge.



COLOUR TELEVISION

The Pye system of Colour TV has already proved itself in the fields of medical and dental teaching and has been used at Guy's Hospital and St. Thomas's Hospital in London. Where before only a limited number of students could be admitted into an operating theatre to attend an operation, it is now possible, by the use of Colour TV, for practically any number of students to see details of an operation in an adjoining lecture room. In the field of industrial research Colour TV could also be used to great advantage.



PYE TELEVISION IN U.S.A.

The American Broadcasting Company chose Pye TV equipment for their two new studios in New York. The high speed production required for smooth running programmes calls for equipment which is both adaptable and efficient—features which American Broadcasting Engineers agree are characteristic of Pye products.

This installation is one of many using Pye equipment which have now been completed in the United States. Indeed, the demand is so great that each week a consignment of television equipment leaves the Pye Cambridge factory on its way to New York by air.

PYE LIMITED

CAMBRIDGE

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www.tvcameramuseum.org