

WESTINGHOUSE TECHNICAL PRESS SERVICE  
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LAMPS FEATURED AT A CENTURY OF PROGRESS

In the display ---oo0oo--- of a 100,000 watt lamp with a glass bulb so large that a medium sized girl could stand inside it, and with filament wire the diameter of a lead pencil. The "Yardstick" lamp which, in a word, stretches light in electric lighting. It was at the World's Fair of 1893 that George Westinghouse used his famous "stopper" lamp to illuminate the fair grounds with electricity. Since that time the one lamp has grown into a family of many thousand. One of the unique displays in the Westinghouse Exhibit this year will contain some 400 of these lamps as though to pay homage at what may be called the "shrine" of electric lamps - A Century of Progress of 1934.

Like a single cell organism, the one "stopper" lamp of forty years ago has since grown into a family of some 10,000 different designs, shapes, and wattage. Medicine, living convenience, industry, transportation, and practically every walk of life, find these lamps of inestimable value.

TINY SURGICAL LAMPS ..... "YARDSTICK" LAMPS

The lamps on display in the Westinghouse Exhibit form a veritable sideshow of peculiar shapes. There is the "Grain of Wheat" lamp which produces the merest speck of light for guiding the delicate probing of surgical instruments. It is the smallest commercial lamp in use today.

At the other extreme is the huge 10,000 watt lamp with the bulb larger than a man's head. It is used in moving picture studios, for airport floodlighting, and for various spectacular effects outdoors.

In the display is a replica of a 100,000 watt lamp with a glass bulb so large that a medium sized girl could stand inside it, and with filament wire the diameter of a lead pencil.

The "Yardstick" lamp which, in a word, stretches light along a fine tungsten wire, is 34 inches long. It is the longest single incandescent lamp used commercially today and serves as a source of light for modern built-in lighting units such as those seen on columns, in ceilings, and in walls. Clusters of these lamps incidentally, make up the lighting standards along the Avenue of Flags at the Century of Progress.

#### BASELESS LAMPS.....DIVING LAMPS

Other lamps on display at the Westinghouse Exhibit include some of the newer designs which have come into use only in the past year. Among these is the Bi-post lamp which has no base. Two copper prongs project from the glass bulb to make the electrical contact. (Strangely enough, almost the same principle of design was used by George Westinghouse in his "stopper" lamp of forty-one years ago.) The Bi-post lamp is made in high wattages - 1,000 watts and up - and is used for airway beacon lamps and spotlight projection lamps.

Also included in the group of high wattage lamps is the 5,000 watt diving lamp which has a special rubber waterproof



mounting. Lamps of this nature were used by Sir Hubert Wilkins on his famous North Pole expedition in a submarine, and by Simon Lake on the Lake-Railley Lusitania expedition. Today they are being used by Captain Bowdoin in his salvage work on the S.S. Meridia down off the coast of Cape Charles, Virginia. Captain Bowdoin is also using a special 1,000 watt undersea lamp which can be seen on display.

#### SELF-DETECTING LAMP

Among the unusual small lamps to be seen in the Westinghouse Exhibit is the "Detector" Christmas tree lamp. It contains neon gas and continues to glow after it burns out, permitting easy discovery for replacement.

A tiny six watt lamp, used in small lighting ornaments, house numbers, and indicator switches, has a tungsten filament that is several times finer than a human hair. The filament must be drawn through diamond dies and when finished is invisible to the naked eye.

The "Glass Bead" lamp has a bulb of solid glass and produces a light beam for small flashlights not equipped with a reflector.

#### "INVISIBLE LIGHT" LAMPS

The field of photography is represented by three unusual lamps. There is the new "Blue Bulb" photoflash lamp which permits flashlight photographs without the usual brilliant light.

Here also, may be seen a new member of the photoflash lamp family - the amateur lamp. It is smaller than the regular lamp and is designed particularly for home photography. The third member of this group is the photoflood lamp which burns for only two hours but gives unusually bright light for home movies. Undoubtedly, however, we may expect to see at "Black Bulb" ultraviolet lamps which produce practically "invisible" light are demonstrated for their value in taking photographs in the dark and producing fluorescent effects.

A Bi-plane lamp is also of interest to the photographically inclined. It is a projection lamp such as those used in motion picture projectors and has two filaments bent into two planes instead of one, the coils in one plane covering the gaps between those of the other plane. This feature gives a much more concentrated spot and increases the screen illumination so much that home movies may be shown in broad daylight without drawing the blinds, providing direct sunlight does not fall on the screen.

#### FLOATING FILAMENT LAMP

Miscellaneous lamps on display include a mechanical base lamp now used principally for street series lighting; a new airplane headlight lamp; a "floating bridge" railway headlight lamp in which the filament is suspended on a mobile support so as to withstand the vibration of locomotive operation; and a small neon lamp used for indicating service, such as theatre exit lights and hospital signal systems, or any service where long burning with low brightness is desired.



Like a cocoon, the Columbian Exposition of 1893 has burst forth again into the Century of Progress with its butterfly colors and lights. The vast growth of artificial light sources during the forty-one year interval is largely responsible for this transformation. Undoubtedly, however, we may expect to see at that time many new light sources which will appear as strange to our children as these of today appear to us.

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