

with the cost of the present heads and train cocks, and with a royalty of two shillings would give a return of £250,000. Its adoption on these terms by the Railways in Australia and New Zealand would mean a return of about £10,000. The invention has a most promising future financially and should be warmly welcomed by the public, whose safety it is designed to ensure. A company has been formed by Mr. E. W. B. Hornabrook, sharebroker, for exploiting the invention.

It is explained that the new Russian battle-ships are to cost three million sterling instead of £2,100,000, as estimated, because they are to be built in Russia. Their principal armament is to consist of 12in. guns.

## A New Departure in Street Lighting.

### Los Angeles, California.

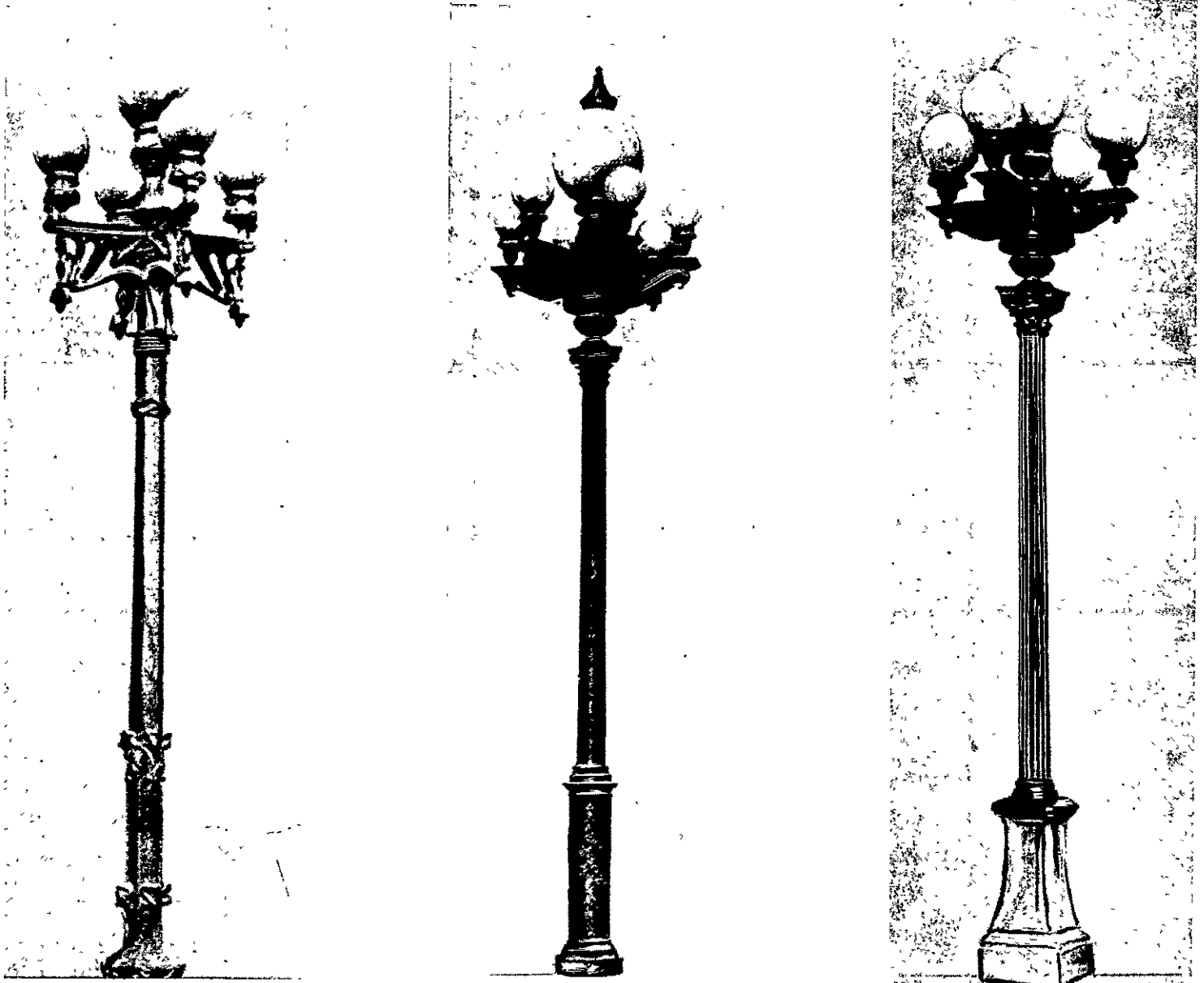
Los Angeles, the home of millionaires, as it is now generally recognised, claims to be without rival in the artistic beauty and brilliance of its street lighting. This city is certainly one of the beauty spots of the country, and is famous for its progressive and enterprising city fathers, who, backed by patriotic citizens, have succeeded in establishing a lighting system having six miles of brilliantly lighted thoroughfares, that will compare with any city in the world.

The installing of this system of lighting in Los Angeles was inaugurated in 1905, by a committee of citizens convened by F. W. Blanchard, prominent in civic enter-

mit, one centre ground glass globe, in which are installed 6-32 candle power lights; every post has also six arms, each with a 6in. ground glass globe containing 1-32 candle power light. The Broadway boulevard, therefore, has 1,620 of these new lights.

These lamps are lighted every night in the year from sundown until 12 p.m., the result being a boulevard of rare brilliancy, and having a most pleasing effect to the many thousands of people, both tourists and residents, who promenade the boulevard nightly, and their pride in their cost can be well understood.

The lights being arranged in ground glass, do not in any way cause a glare, a feature of this lighting is that while the lamps do not to any great extent light up



LAMPS OF THE SYSTEM INSTALLED AT LOS ANGELES BY THE BROADWAY LIGHTING ASSOCIATION.

It is stated that the work of converting the Inter-oceanic Railway from its present gauge of 3ft. to standard gauge was to have started in January, 1909, and the first section undertaken that between Mexico City and Vera Cruz. Ninety-pound rails will be used. Most of the existing bridges are wide and strong enough to accommodate standard-gauge stock. Some 310 miles are to be converted, and some £6,000,000 will, it is estimated, be expended before the line is brought up to a first-class standard gauge system.

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It is gratifying to learn that the rapid rate of construction of the Panama Canal continues. The grand total of excavation during the month of September was 3,158,886 cubic yards, all of which, except 69,035 cubic yards, was excavated from the canal prism. Of the grand total, 1,374,856 cubic yards was taken out by dredgers, and the remainder was dry excavation.

prises, and who was elected president of the Broadway Lighting Association.

Broadway boulevard, one mile long, was selected as suitable for the new method, and was done, and the cost paid for entirely by public subscription. Great care was given to the selection of lamps that would give a truly artistic effect as well as a radiant light. A committee of twelve citizens were told off to inspect a number of ornamental posts of various designs, which were erected, wired and fixtured, for different schemes and styles of lighting, and they unanimously adopted those now installed.

These posts are erected at a distance of every one hundred feet, on each side of the street, and placed opposite each other. Each and every post contains on its sum-

the store fronts, they amply light the entire boulevard.

The results were so satisfactory that a demand was made by property owners in other streets for a similar lighting, which eventuated in an application to the State Legislature for a bill permitting the assessment of abutting properties similar to bills on the Statute books providing for the grading and paving of streets. The bill being passed, it was found a comparatively easy matter to complete the lighting improvement, as all the property owners involved readily foresaw the great advantage in having well lighted streets. The enhancement of the property values for the entire lighted district more than paid for the whole cost entailed. The cost of the lamps installed and fitted ready for lighting was approximately £25 each post.