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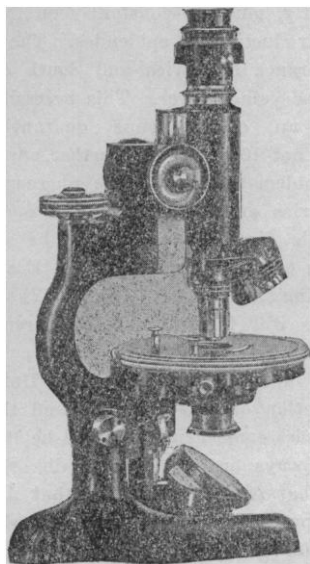
A GREAT TELESCOPE AND ITS POSSIBILITIES¹

VERY rarely has a project of scientific interest made a greater appeal to the imagination of those interested in the advance of knowledge than has the recent announcement of the action of the International Education Board in making provision for the construction of a 200-inch telescope and an astrophysical observatory for the California Institute of Technology. The plan for this great undertaking is unique in many respects. Involved in it are not only the design, construction and operation of a telescope nearly seventeen feet in diameter, but most essential of all, the active cooperation in all these questions of the group of scientific men in the laboratories of the California Institute, and of the astronomers and physicists of the Mount Wilson Observatory of the Carnegie Institution of Washington. The gift was made in the belief that the combined experience of the investigators at these two institutions in the design and use of large telescopes and accessory instruments, and their intimate knowledge of the important astronomical and physical problems to which such an instrument should be applied, provide an unusual opportunity for notable additions to our knowledge of the organization of the stars and universes of space, and the behavior of matter in the great celestial laboratories afforded by the stars and nebulae.

It seems especially appropriate at a meeting of the American Association for the Advancement of Science, which brings together men interested in all branches of research, to consider some of the questions involved in the design of a great telescope, the selection of its site, the character of its accessory instruments and the results which may be expected from its use. Some of the problems are those of the mechanical engineer, others are of an optical nature, while the meteorologist, the chemist, the physicist and the astronomer each finds abundant opportunity to apply the results of his own training and experience. The necessity for technical advice of the most diversified character has been recognized from the very beginning in connection with this undertaking, and the active and cordial support promised by eminent men of a wide variety of interests is one of the best assurances of its successful accomplishment.

¹ Address of the vice-president, and chairman of Section D—astronomy, American Association for the Advancement of Science, New York City, December 28, 1928.

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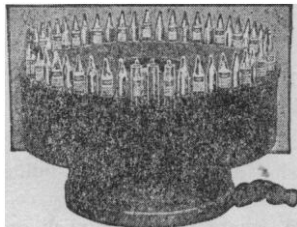
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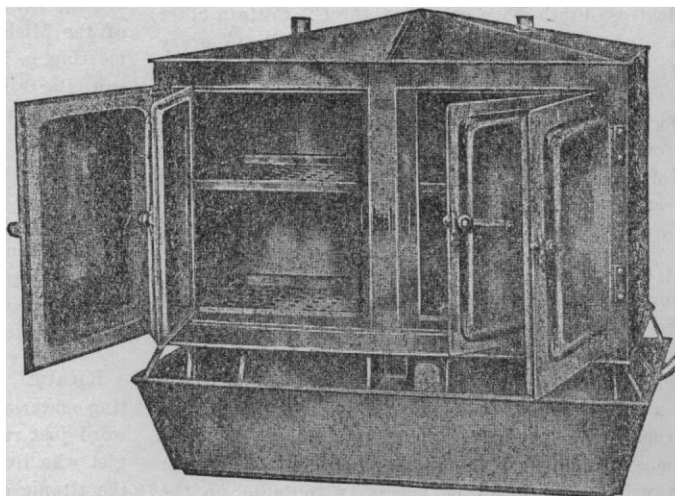
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