

which rests upon the sun, and the other upon the earth. As this framework is to cover the cities only, it might be well to erect a supporting wall on the north side of all towns north of the Tropic of Cancer. This wall should be of the height of the clouds and should extend in a semicircle about the city, to take into account the fact that the sun travels across the horizon and is in the East in the morning and in the West in the afternoon. To avoid unnecessary expense, it is suggested that a semicircular railway track be built about the city, and that a wall of sufficient width to support beams covering the metropolis, be mounted upon it. This structure would then be moved from West to East as the sun moves from East to West, in order to support the beams covering the city.

As to the structure of the wall itself, the author is somewhat in doubt. A wall one mile high, made of concrete, might be of too great weight to be supported by ordinary steel rails. A steel structure on the order of the Eiffel Tower might serve the purpose better. The top of the wall must, however, present enough friction surface to prevent the sunbeams from sliding off. To aid in the prevention of such an accident, it is suggested that the sunbeams be fastened to the wall by means of thunderbolts. As the number of these in captivity is comparatively small, the alternative of electric sparks, such as are used in wireless, is possible. The difference in shearing strength between the spark and the thunderbolt is not enough to cause serious difficulty, if enough sparks are used. The spacing should not be less than .0001 inch, as the sunbeams are rarely wider than that.

The above method should work excellently in the daytime, but as we all know, sunbeams are conspicuous by their absence at night, and the tensile strength of moonbeams is not sufficient for the purpose in view. As the nights are always colder than the days, the danger of the calamity described in the first paragraph is increased fourfold. The author has, however, a scheme which will circumvent this difficulty. He suggests that gigantic searchlights be mounted upon the wall, and that between sunset and sunrise, their beams be cast beneath the clouds. The effect produced will be that of a cantilever, which will of necessity increase the strain upon the wall. Care must be taken to secure the searchlight firmly in the wall, and to encase the incandescent filament in material strong enough to prevent it being torn out by the terrific strain imposed. The current used for the lights would have to be generated by special dynamos, as they would be in service at the time when the city lights would also be in use. It might be possible to store up enough current during the daytime in storage batteries for use in the night. This would save much of the installation cost, as such large dynamos would not be necessary.

Such is the theory of the use of sunbeams as outlined by the author. He does not intend it to be at all comprehensive, but merely as an outline for future scientific development. He believes that his basic principles are sound, and sincerely hopes that his idea will be taken up and developed to its full extent.

*Note:* Any mathematical or scientific errors in the above article will kindly be excused, as the library at Dunning contains no books on those subjects.—Editor.