light it receives to the point directly opposite, and this parasitic light takes away the intensity of the projected image. This is shown perfectly if half of the circular film is covered so that no light can pass, when all the illuminated part will at once be seen to gain in intensity. The inventors have tried to remedy this defect by varying the form of the screen, by coating it with different substances, and by various other methods; but up to the present without any great degree of success.

This reflection of the light is not, however, a serious disadvantage, as even with it the image is quite brilliant. We spoke of it merely to show how many unforeseen difficulties were encountered in realizing an idea that is simple only in appearance and that has haunted different inventors for years. — For the above description and the illustrations we are indebted to La Nature.

THE VENICE OF LONG ISLAND.

The intense humidity and generally debilitating effect of the summer months in New York and vicinity render a vacation at the seaside or in the mountains a veritable necessity for those who can afford, and, indeed, for many who can ill afford, the time and expense of making such a change. Those people who are not fortunate enough to own a summer cottage may resort to the less expensive shanty or camping tent; and the sheltered bays and estuaries around New York swarm with people who spend from a couple of weeks to the whole season under canvas, or within the shelter of the cheapest kind of a shanty or hut. One of the most curious and picturesque summer settlements of the kind is a nondescript collection of dwellings, all home-made and pile-supported, which fringes the shore line of a shallow estuary which extends for a mile or more inland from Grassy Bay, a subdivision of Jamaica Bay, Long Island. The estuary is one of several which spread in serpentine fashion through the stretch of tide flats which surrounds the bay. Ordinarily there is in the creek about 4 feet of water, although in the spring tides it is not uncommon to have a variation of 8 or 10 feet in the tide.

Ramblersville, as the place has come to be called, has been built chiefly by Germans of the artisan class from East New York, and the materials and style of construction are of the very cheapest. The houses are mainly of one story, and contain usually one, two or three rooms apiece. Each is built on its own little "dock," and has its own landing stage and steps leading down to the water. The outfit consists probably of a bed or two, a table, chairs, and, above all, a flat-bottomed rowboat or sailboat. In the foreground of our illustration is seen a tall pile with slats nailed against it and a diving platform at the top, while in the middle distance is a practical illustration, in the shape of a drawbridge, of the ingenuity which is always the mother of invention; the center span of the bridge is swung by means of ropes extending to a tall mast at one end of the draw.

The inhabitants of Ramblersville are enabled to spend the season at this Newport of Long Island at a minimum of cost in the way of board and lodging. Many of the shacks have been put up for $50 or $75 cost, and the present owners of the land charge only a few dollars for the squatter's right, under which the erection of the shanties is permitted. For food the Ramblersvilleite has only to jump into his flat-bottom boat and spear for eels on the mud flats, or pull out with hook and line the abundant flounders and flukes from the deeper waters; while he can have a clambake at any time for the mere trouble of digging in the mud.

Howard's Dock, of which we present an illustration, represents a more ambitious development of the same style of summer resort, the houses in this case being built on very solid and well-braced pile foundations, and the homes being commodious two-storied cottages, measuring about 18 by 25 feet, and containing four well-finished rooms. The pier extends into Grassy Bay for fully three-quarters of a mile. It has a well-planked surface and is protected by a stout handrail along either edge, so that on the darkest night there is no danger in passing from the houses to the shore. At the outer end of the pier is a large, thoroughly up-to-date hotel, and inshore from the hotel are a dozen or more of the comfortable homes shown in the illustration. The owner and builder of the dock rents the houses for from $150 to $250 for the season, and in front of each is a wide porch, a float, and a hinged gangway. In almost every case the occupants of these homes have their yacht or sailboat moored within convenient reach of the float, and have one or more rowboats tied up, so that at any time, when the breeze is favorable, they can pull off and hoist sail for a cruise to the outside fishing ground. It is claimed by those who make a point, summer by summer, of going down for the season to this unique spot, that for a complete realization of the benefits of seaside life it cannot be beaten, as everything in the way of sea breezes, salt water, bathing, boating, yachting, and fishing is more completely at hand than it could be at any seaside resort of the ordinary type.

"RAMBLERSVILLE" ON JAMAICA BAY.

HOWARD'S DOCK.

At a meeting recently held in Boston for the purpose of taking action upon the restoration of the "Constitution" to the condition in which she was before the war of 1812, it was unanimously decided that the State of Massachusetts should take up the matter and bear all the expense. The cost of rebuilding the old ship is estimated at $300,000.

An Interesting Sensitive-Flame Experiment.

BY L. DE FOREST.

While conducting experiments with Hertzian waves at the Armour Institute, Chicago, some time since, a rather new and striking sensitive-flame effect was accidentally brought to my notice. At the time I was carrying on the work at night, by the light of a Welsbach gas burner. An ordinary induction coil was used, giving at the time a 1-16 inch spark, and located twenty feet from the gas burner.

The operation of this coil was frequently accompanied by a decided increase in the light in the room; and by altering the adjustment of the air-intake of the Welsbach burner, this increase of light produced by the spark could amount to several candle-power.

For this condition of maximum sensitiveness the mantle was put at considerably less than its maximum brilliancy, portions of it being at but red heat. The flame within, as in the case of the ordinary sensitive-flame, appeared to fan outwardly, at the sound of the spark, extend downward, and play upon the red portions of the mantle, causing these to incandesce. Hence the increase of light. There was a slight lag in the return to normal brilliancy after cessation of the sound.

When the coil was closeted, or placed behind a projecting wall, the effect on the light was naturally diminished; and when the door of the closet was almost but not quite closed, the effect was completely cut off, although the source was in plain view from the lamp.

At first sight this decided light effect from a coil spark might be readily mistaken for a new response to electric oscillations; but as a simple acoustic phenomenon the Welsbach mantle properly illuminated seems to afford an unusually sensitive sound-responsive device. The relative effect of different qualities of sound is very marked; it being, as is the case with the ordinary sensitive-flame for such weak sounds, practically unresponsive to ordinary sound or musical notes, but influenced chiefmost by the sharp crack peculiar to the electric spark. That from a small electric bell held not too far away also showed its effect. As with the ordinary flame this is a pressure phenomenon. The relative proportions of gas and air have all to do with it. An excess of gas is necessary for the effect described, but by increasing the amount of air the reverse effect may be obtained, a diminution of the light by the sound. Between these two effects is a point of neutral regulation, near that of maximum illumination, at which the flame appears entirely deaf to any such sound. I have been able to obtain a falling off in the light of the mantle to one-half or one-third its normal brilliancy (which latter required to be made very low for this extreme sensitiveness, with a small pressure). In this condition the light responded even to the exceedingly weak sound of the primary spark of coil, at the distance named.

When the gas is led to the lamp through a long rubber tube, offering considerable friction to its passage the response is accompanied by a distinct jingling sound in the burner; and sometimes, as a secondary effect of the flame's motion, the whole mantle is seen to rock to one side or the other when the spark is operated.