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THE AMBASSADOR BRIDGE

By Murray A. Young, '32

What a majestic sweep—its two thousand feet of woven steel cable, curving downward and then up again over that wide expanse of green water. For the Detroit River is being spanned for the first time by the advancing construction of the Ambassador Bridge: construction that has summoned the engineering genius of two nation. Somehow, in the survey of that distant scene, we find ourselves remembering other great bridges. A challenging picture is presented of the old Brooklyn Suspension Bridge spanning East River; and the neighboring Williamsburg of even greater dimensions, connecting Manhattan and Brooklyn. The Lower Arch of the Niagara is also recalled; the noted Quebec Cantilever, and the recent Philadelphia-Camden Suspension Bridge with its record span.

But a certain sense of satisfaction is present in the knowledge that the Detroit-Windsor bridge reaches beyond them all. With a length of eight-hundred and fifty feet, the main span will carry an unobstructed roadway of nearly half a hundred feet, wide enough to accommodate five lanes of traffic. Eight-foot sidewalks on either side will beckon to multitudes of pedestrians who find the greater thrill of crossing the river on foot.

Massive lake steamers plying the waters of the strait will find the clearance of the arched roadway amply sufficient for their highest mast. At times of high water the towering stacks of the largest inland ships will belch their soot and smoke a full twenty-five feet below the clanging traffic of the suspended highway.

When the far-removed scene is focused with a greater effort to distinguish the steel men busily at work, the suspension cables, although nineteen inches in diameter, appear to be glistening wires hanging motionless in the noon-day sun. The catwalks for construction purposes are barely discernible in the vaporous atmosphere, and the bridgemen working on them resemble insects crawling to and fro on gossamer threads.

It is not easy to believe that the bridge structure itself is almost a mile and a half long, and that the terminal towers adjoining each end rise three hundred and sixty-five feet above the ground. Equal to a city block in area, the towers rear solmenly, and reaching forth, unite the two lands with gleaming bonds of steel.

It is interesting to learn that the main piers of the bridge, upon which the tower columns rest, each support a weight of twenty thousand tons, and are composed of two massive concrete cylinders, buried deeply to a bed of solid rock.

Sloping from the towers on each side of the river are the gradually declining approaches to the bridge. The nave of our view is now the colossal cable anchorages—gigantic superstructures of solid concrete—whose visible bulks rise to a height of one hundred feet. The function of these two structures is to resist the pull of the main cables; and the achievement of this Gargantuan task will create two of the most prominent structures in both cities. In our awe of such visible

mass, with its mountain-like solidity, it is difficult to believe that the greater portions of these anchorages are buried forever from our view. In the direction of the major bridge axis, the concrete base of each structure, formed of two rectangular blocks twenty-two and a half feet wide, is hidden to a depth of one hundred feet below the ground.

In a moment of reflection the question arises as to the construction of the main cables, that they may be able to withstand such an enormous strain. And at a later time this curiosity is satisfied through the knowledge that the nineteen-inch cables are in reality seventy-six hundred and twenty-two parallel and closely compacted steel wires, each about the diameter of a lead pencil in thickness. Due to the peculiar characteristics of these stranded steel cables under tension, undulations of the bridge would result when subjected to heavy separated loads, if no preventive measures were taken. But to counteract these undulations, common to less modern structures, special stiffening trusses are being used.

Although we have been told that more than a year will be required for the completion of the bridge—and that its cost including real estate will aggregate many millions—we can almost see the endless interchange of traffic between the two cities, silent-speeding motor cars high above the water, heavy rumbling trucks utilizing their new lanes of commerce, people walking and hurrying, sightseers leisurely strolling. We can almost hear sounds, clanging, reverberating, subdued, a veritable symphony going back and forth, across and back.

Surely the gigantic feat of civil engineering will ever stand forth as a lasting memorial to the potentates of international commerce, for out of it all will be added millions of dollars annually to the proceeds of industry. But to an even greater extent we can never lose sight of our immense debt to the engineers of the land. To them alone do we owe its conception, and its dominating reality. They are the builders.

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The Viking Press recently published a little book entitled *To the Pure*. It is a study of censorship of books. We gather that, although fun is poked at the absurd methods in use, a hopeful remedy is offered.

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Rudyard Kipling, the gentleman who will not have a telephone in his house, has published another book. This time, it is a collection of his sneeches, some which were uttered before the war. They may be Kipling, but they are in a different form. Our guess is that they will not be very popular.

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Of all the sweet-sounding gruesomeness we have ever run across *The Unpleasantness at the Bellona Club* runs off with high honors. To title a murder yarn like that is indeed a dainty gesture. Who says that book censors aren't doing things?