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Workmen Shot From Tunnel Through the Bed of a River

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BROOKLYN BRIDGE was jammed with mid-afternoon traffic. On the East River, far underneath the lofty structure, tugs and barges were busy with their endless tasks. Suddenly passengers on the bridge and crews of boats heard a muffled roar, and a geyser shot from the river twenty feet into the air. Dark forms mingled with the water, and a moment later, when the rush of the geyser had died down, three men were seen floating on the surface of the river.

One of these men quickly disappeared from sight. His dead body was later recovered. The other two swam for shore and were rescued. One of them died before he could be taken to the hospital. The other lived. All three men (sand hogs, who had been digging in an atmosphere of compressed air under the river) had been blown from their posts in front of the great steel shield which is boring through the East River bed to the open air. They were shot through twenty-seven feet of river mud, twenty-five feet of water and an additional twenty into the air on top of a geyser of mud and foam.

The first knowledge that the officials at the Brooklyn end of the new subway tube had of the accident was when a number of terrified workmen rushed into the compressed air caisson, clamoring to be let out. Among these was one man who had been a witness of the accident, and from him a coherent story was obtained.

The tunnel in which this strange accident occurred had been pushed out under the river for about three hundred feet, by what is known as the shield method. When engineers commence their underground tunneling, a heavy steel shield is built at the end of the shaft where the men are at work. This shield is pushed forward into the mud or dirt for a distance of two feet by a number of hydraulic rams which are capable of exerting a pressure of five thousand pounds to the square inch. In the shield are a number of doors which allow the workmen, or "sand hogs," to dig away the dirt, stones and mud in front so that the shield may be moved another two feet.

The question naturally arises: What keeps the mud and water from coming into the shield and overwhelming the workmen? A short distance behind the shield is a bulkhead wall, containing air locks. The entire space forward from the airlock is kept filled with compressed air. This air, when maintained at the proper pressure, balances that of the water and keeps it from flowing into the tunnel. If sufficient pressure is exerted by the air-pumps, the water is driven still farther away, and the workmen may work on dry ground, instead of on mud of a molasses-like consistency.

As they excavate in front of the shield, the workmen plank up the opening they have made and remove the planks just before the shield is to be pushed forward. The shoring serves merely to keep loose earth and stones from falling upon the men as they work.

Four men, who were outside the shield,