

DR. SCHEELE, CHEMICAL SPY

so fervent that it would ignite any ordinary substance, such as coal or wood. No timing mechanism was necessary. The thickness of the tin partition determined the time at which the bomb would act. By careful experiment, Dr. Scheele was able to manufacture bombs that would become effective in two days, four days, six days, eight days—at will. For example, if the tin partition was made one sixtieth of an inch in thickness, the bomb would operate in forty-eight hours. The thickness necessary for the longer periods was established by actual test.

As soon as the bomb was perfected, its manufacture was undertaken on a big scale. Soon the workroom aboard the *Friedrich der Grosse* was turning out thirty-five of these "cigars," as the Germans called them, every day. Altogether, before the game became too dangerous and Dr. Scheele was forced to flee, nearly five hundred bombs were manufactured.

Next came the necessity for an organization to place these bombs upon the ships. First, the ships themselves must be known—their sailing dates, their names, their berths and cargoes. Through German sources of information, the data about merchant ships were gathered and by Dr. Carl Schimmel, another German agent in New York City, were listed and