THE STEEL HAMMER
The year is 1936...

CHAPTER 1
THE SMOKE OF DEATH

Tobias Wetzel was no stranger to death.

Born in the hills of West Virginia, he'd seen four of his brothers and sisters die of various diseases before he was twelve. His mother died in child-birth bringing a final sister into the world. His father and an older brother perished in a coal mine cave-in. As a miner himself, Tobias knew what it was like to face death daily.

Or at least he thought he did.

But it took the Great War to show Tobias Wetzel what it was like to have death as a constant companion. As a U. S. marine in France, he saw the ravages of shot, shell, and poison gas. The death potential of the battlefield made the coal mines seem tame by comparison.

After the war, Tobias could see no reason to return to the mines of West Virginia. Like so many other hill people, he ended up in Pittsburgh. His background as a marine secured him employment as a police officer.

In the line of duty, Tobias continued to see death. He saw murder by gun, knife, and bare hands. He was on the scene of suicides, traffic accidents, and drowning. His current patrol route took him along the Allegheny River.

The Allegheny and Monongahela Rivers meet in Pittsburgh to form the Ohio River. The meeting place of the rivers, known as "The Point", is the center of downtown Pittsburgh. The rivers are the lifeblood of the city, bringing in the barges of raw materials for the steel mills, and carrying out the numerous manufactured products for which the city is well known.

Three large rivers in the downtown section of a city make for many bridges. Pittsburgh has well over 100 automobile and locomotive bridges. Beneath these bridges the city's population of winos passed their days and nights.

Patrolman Tobias Wetzel had the downtown "wino patrol". The unofficial department policy was not to spend much time with this section of the population. Their addiction to alcohol left most of them incapable of providing any serious threat to the general population. As long as they kept out of the main downtown business and shopping areas, did not cause disturbances or pass out in public, and committed no serious crimes, they were left alone.

Most river-front patrol officers tended to be "bulls", ruling with a quick jab and smack of the nightstick. Wetzel was the exception. Perhaps from his early years, he understood the troubles that can affect a man's life. Perhaps it was because he so often came across fellow veterans of the Great War. Less fortunate than he, many had been unable to adapt to civilian life again, and fallen into the bottle. Or perhaps he had an ulterior motive.

The river front winos were Patrolman Wetzel's snitches. In return for his selective "blind eye", they provided him with what information they could about criminal activity in the area. Tobias Wetzel had an impressive string of commendations for crimes that had been solved based on tips he'd received from his informants.

The worst part of the job, though, was the constant presence of death.

Hardly a day went by that Tobias Wetzel did not have to deal with a dead body. The life expectancy for a wino is not very long. They starve to death. They die in convulsions from drinking any manner of alcoholic concoctions (or non-alcoholic -- paint thinner was inevitably fatal). Living

outdoors with no medical treatment, they were liable to die of exposure in any month of the year, not just during the winter. They fell (or jumped) into the river and drowned. They cut each other with knives, razors, and broken bottles for a single swallow of booze.

But none of this -- not a lifetime of hardship, not a world war, not the daily exposure of his police beat -- prepared Tobias Wetzel for the terror of the Steel Hammer.

ON THE day the Hammer struck Pittsburgh, Patrolman Wetzel was on the east bank of the Allegheny River between the Sixth and Seventh Street Bridges. He was looking for an old wino named Dakota Pete, and hoping he wouldn't find him.

Dakota Pete was old for life under the bridges. He claimed to have been with "Colonel" Roosevelt during the Spanish-American War, and certainly he was old enough. For the past month, whenever Wetzel had seen the old man, he'd noticed his condition had worsened. Pete was loosing weight and had a cough that was awful even by the tough standards of Pittsburgh -- America's Smokiest City.

Pete usually hung out around in this area. Wetzel hadn't seen him in three days. Now he was walking the river bank, peering into old packing crates and warehouse entryways, trying to see if one of them had become the old man's final resting place.

Tobias Wetzel was just straightening up from shining his flashlight into the a lean-to made from wooden milk crates when the Hammer struck.

First came the crackling noise. Like the fat from a 500 pound strip of bacon exploding fat into the fire. The sound of loud snapping and crackling filled the air.

It was coming from the river. Wetzel turned and looked to see where it was coming from.

And he couldn't see the river!

Instead there was a gigantic cloud of yellow-green fog boiling up out of the river! It rose up into the gray Pittsburgh sky in thick, billowing clouds. Within seconds it completely masked the water. The Seventh Street Bridge was less than 100 yards away, but the rolling clouds of yellow-green fog blocked it from view.

The sizzling, crackling noise coming from the river assaulted patrolman Wetzel's ears. He found himself surrounded by the thick, putrid-looking yellow-green clouds,

That was when the screaming started!

Wetzel covered his ears. Unbelievably loud and high-pitched, it blended with the crackling noise in a ear-shattering cacophony.

Instinctively, Patrolman Wetzel drew his service revolver, driven by a primitive urge to protect himself. This can't be happening, he thought. I'm in downtown Pittsburgh, right between two of the busiest streets in town.

But from what Wetzel could actually see, he could have been on the dark side of the moon. The vast clouds of yellowish-green limited his vision to no more than arm's length. The crackling and the screaming sounds came from the river in a fury.

Then, out of the mists, a hand grabbed his shoulder!

"God, help me! I'm dying!" came a hoarse, choked voice.

THE PITTSBURGH Athletic Association is one of the most exclusive private clubs in town. It promotes athletics in the city, and has a modern gymnasium for its members. But it's real reason for existing is otherwise. It's where the movers and the shakers of the Steel City sit and make million dollar deals over lunch and cocktails.. The annual membership fee is about the cost of a new Chevrolet.

The big man striding through its entrance did not look like a typical member.

Standing six feet, four inches tall, the man must have weighed 250 pounds. Big as he was, the

most startling thing about the man was his hands. Curled into fists, they were the size of quart milk pails.

On the man's face was a look of utter gloom. Whatever hopes of riches and prosperity the wealthy members of the Pittsburgh Athletic Association had were not apparent in this member.

And Colonel John Renwick was a member. Not because he was an up-and-coming Pittsburgh businessman, but because the big engineer spent so much time in the city that he needed a regular place to stay while there.

"Renny" Renwick was one of the most outstanding engineers in the world. In the past several years, he had been a consultant in the area for construction projects involving steel mills, hydro-electric plants, flood control dams, airports, the new turnpike -- the list went on and on. When a company had a building problem, and they could afford the best, the sent for Renny.

He didn't always take the job offered.

For Renny Renwick was an associate of Doc Savage, the Man of Bronze. His love of adventure far outstripped his interest in engineering challenges or any desire for money. If Doc Savage needed assistance, Renny would drop everything to rush to his side. Every consulting contract Renny signed contained a clause allowing him to cancel it on the spot if the Man of Bronze needed him.

Renny was in Pittsburgh this time to consult on the location of a new airport. One group of advisors to the mayor was determined to locate the new skyway as close a possible to downtown. Renny was convinced they were wrong. The size of new aircraft would require much more space for landing fields than ever before. Renny had spent the morning out beyond the city limits surveying prospective sites.

"Colonel Renwick," said the club's dining room manager.

"What?" said Renny, in a low deep voice.

The dining room manager decided this was not the time to mention the big man's mud-caked engineer's boots. "Right this way for your table, sir."

"O.K. I want two of the biggest steaks you got, bloody in the middle, some fried potatoes, and a telephone," Renny said.

Renny had been in Pittsburgh for nearly a week. That was about all the time he could stand without any excitement. He was going to put through a long-distance call to Doc Savage's headquarters in New York City. Doc maintained his headquarters on the eighty-sixth floor of the city's tallest skyscraper

The Pittsburgh Athletic Association spared no amenity to its members. The telephone was at Renny's table in less than a minute, the steaks not long afterwards.

"Gimme Doc Savage in New York," he told the long distance operator.

No telephone number was necessary. Such was the fame of the Man of Bronze.

The call went through quickly. Renny gave the code-words to the operators of the private detective agency that screened the hundreds of calls Doc received every day. The code-words allowed Renny to be connected directly to the eighty-sixth floor.

"Yeah," came a child-like squeak over the phone.

"Monk, this is Renny. What's going on?"

"Got me a hot date with a chorus-girl from the Roxy," chortled Monk.

Renny was unimpressed. "Any action going on?" he asked

"Nah. Doc's in the lab with Long Tom every day working on that televisor thing," Monk said. Doc Savage had five associates. Each was renowned in the own field of expertise, as well as a lover of adventure. "Monk" was Lieutenant Colonel Andrew Blodgett Mayfair, one of the world's leading industrial chemists. The "Long Tom" he referred to was Major Thomas J. Roberts, the electrical

wizard.

"Well, I'm still here in Pittsburgh," Renny said with more gloom than ever, if such a thing was possible. "Let me know if anything comes up."

"Yeah, all right." There was a short pause, and then a squawk. "Dang it all, Ham! I going to --"

"Colonel Renwick?" came an excited voice from behind Renny.

"Yes," Renny replied. He turned, phone still to his ear, and recognized one of his fellow club-members. It was Pittsburgh's police commissioner.

"Colonel Renwick, I just got word of an emergency downtown! We are under a poison gas attack!"

"Holy Cow!" exploded Renny. "Let's go!"

Standing, he barked into the telephone, "Monk I just got word of a poison gas attack here in Pittsburgh! Let Doc know!"

Renny dropped the receiver an ran out of the club. He jumped on the running board of the police commissioner's official black-and-white police car. and they took off with a scream of tires and the smell of burning rubber.

The telephone receiver lay forgotten on the floor of the Pittsburgh Athletic Association dining room.

The tiny, squeaking voice of Monk issued from it. "Renny! Hey, Renny! What's happening?"

Chapter 2

Clouds of Death

"Everybody down on the floor!"

The main downtown office of the Pittsburgh National Bank was on Seventh Street, just three blocks from the river. Passers-by had already crowded into the bank to escape from the billowing clouds of yellow-green fog that were rolling in from the direction of the river.

Out of that fog burst the seven masked men.

Each of the men wore a yellow-green hood of the same shade as the peculiar fog. Three of the men carried tommy-guns, three carried burlap sacks, and the final man carried two large cowboy-style six-shooters.

These he fired into the ceiling.

"I mean it! Everybody down on the floor!"

The bank's customers and employees obeyed him immediately.

The man with the six-shooters waved the right one in the air. "Get with the plan, boys!"

One of the Tommy-gunners kept watch by the door. The second moved with his back to the wall, covering the terrified crowd. The third disappeared into the bank's offices, reappearing a moment later with a florid, portly man in a three piece suit. "Here's the manager, boss!"

The leader of the crooks pointed one of his six-shooters in the man's face. "Open the vault, or die!"

"Please, please! The vault is open! I swear it is! It's almost always open this time of day!" the bank manager quaked.

"He's right, boss!" came a shout. The three crooks with burlap sacks had vaulted the counter and emptied the tills at the teller's windows. From there, they had found the bank's vault to truly be open, and were filling their sacks with bricks of U. S. currency.

The boss was looking at his wristwatch. "Fifteen seconds!" he hollered.

"Already got it!" The three crooks came back over the counter with their sacks. "Everything twenty or higher!"

"Let's go!" As the crooks crowded out the door, their leader reached into his pocket. "Almost forgot my calling card," he said, dropping an object to the floor.

For over a minute the terrified people in the bank continued to keep their heads down. Finally the bank manager gingerly stood up, as did one of the security guards.

"Why didn't you do anything?" the manager asked the guard.

"Mr. Riley, you don't pay me enough to draw a pistol against gangsters with machine guns," the guard retorted. "Besides, all I saw you do was blubber about the vault being open."

Riley shook his head, as if to rid himself of the shameful memory. "That doesn't matter. I'd already tripped the silent alarm before they got to me. The police probably have them already."

The guard looked out into the street, which was still blanketed with yellow-green fog. "If they can see to find them."

He walked over to where the crook had dropped his "calling card".

Lying there on the floor of the bank was a small hammer, about four inches long, made entirely of steel.

"Mighty strange," he murmured. He opened the door to look out in the street.

And almost instantly shot right back inside.

"Gas! Poison gas! Those crazy clouds is poison!"

"Renny? Hey, Renny? What's happening?" The speaker was only a few inches over five feet, and almost as broad as he was tall. Virtually every inch of exposed skin, other than his face, was covered with bristly, red hair. The eyes were small, and deep-seated. The brow was low. It was obvious to the world how "Monk" Mayfair had received his nickname.

"Yell louder. Maybe he can actually here you in Pittsburgh then," came a snide, cutting voice. The man who spoke was slender and elegant, dressed in the height of fashion. It was said that tailors would follow Brigadier General Theodore Marley Brooks down Fifth Avenue in New York to see how men's clothing should be worn. But he was better known as one of the finest legal minds in America. And in addition to being a top notch lawyer, "Ham" Brooks was also an associate of Doc Savage.

The nickname was courtesy of Monk. During the war in France, Brooks had provided Monk with some choice French phrases with which to greet a visiting French general. They were decidedly not, "Hello. How are you? Nice weather we're having."

Monk wound up in the guard house, and vowed revenge. Shortly thereafter, the American Expeditionary Force was witness to the sorry spectacle of having the second-ranking member of the Judge Advocate's office court-martialled for being in possession of stolen hams. That Monk had planted the evidence, and framed him, Brooks had no doubt, but his legal skills were unable to prove it, and he had been known as "Ham" ever since.

"Dang it, Ham, I'm going to have at you!" Monk cried.

"Have at it, monkey-boy," Ham replied. He twisted the top of the sleek black cane he was carrying, and it came away reveal a sword's blade inside. Ham Brooks was rarely without his trusty sword-cane. In fact, moments before, when he had walked into the room and seen Monk bent over the table talking on the telephone, he had applied it in the style of Jimmy Foxx to the burly chemist's backside, thus causing the entire ruckus.

"Put down the cane, shyster," Monk growled.

"You'd like that wouldn't you, missing link?" Ham retorted. The tip of the sword's blade was coated with a chemical which caused unconsciousness when it pricked the skin. "I think an afternoon nap would improve your disposition."

"I'll improve your face by rearranging it!" Monk bellowed, but as he stepped forward he was suddenly stopped by a voice behind him.

"What did Renny want?"

* * *

The voice was quiet, but confident. It had a very unusual tone, making it instantly memorable.

The highly unusual voice seemed to go with the man who spoke. With a skin bronzed by a thousand tropic suns, matching the close-cropped hair, the man filled the doorway. At first he did not seem as large as he was -- no part of his body was large out of proportion -- but on second look, the man was obvious a giant.

This was Clark Savage, Jr., the Man of Bronze. Trained from birth by his father's team of scientists, supported by the gold of a secret Central American Indian tribe, he had become the world's foremost adventurer, protector of the weak and enemy of evil.

The nickname "Doc" came from his medical practice -- he was one of the world's foremost surgeons. He was also one of the world's ranking experts in chemistry, physics, engineering, law, and many other professions.

Well known throughout the world, Doc shunned publicity. He regarded it as a nuisance, something which could only distract him from his true work of helping others. That was the reason for the elaborate telephone screening system he had set up for his headquarters. There were too many people who wanted to take up Doc's time with petty complaints, wild goose chases, and outlandish promotional schemes. The screening system ensured Doc was able to pay attention to the most truly urgent calls.

"Don't know, Doc." Monk's voice was instantly serious. "I got distracted."

"My fault entirely," said Ham.

"Ah, I shoulda been paying more attention," Monk mumbled.

"I said it was my fault, and I meant it, you reject from the freak show," Ham glowered.

"Brothers, let's check the box," Doc said, quieting them instantly. Monk sheepishly click a switch on a small black box connected to the telephone. Inside was a new device of Doc's own design, which made sound-recording on a loop of magnetized wire. The recording loop could be instantly broadcast into the room.

"Yeah."

"Monk, this is Renny. What's going on?"

"Got me a hot date with a chorus-girl from the Roxy."

"Any action going on?"

"Nah. Doc's in the lab with Long Tom every day working on that televisor thing." "Well, I'm still here in Pittsburgh. Let me know if anything comes up."

"Yeah, all right." There was a short pause, and then a squawk. "Dang it all, Ham! I going to --"

Very faintly, they could then here a voice say, "Colonel Renwick?"

There were some garbled words, and then they heard Renny explode with, "Holy Cow!" And then, "Monk I just got word of a poison gas attack here in Pittsburgh! Let Doc know!"

"Howling calamities!" Monk cried. "Doc, are we a-going to --"

But Doc had already disappeared back into the lab. He was back a moment later, carrying one of his 200 pound bronze metal equipment cases as a farm boy might carry a hay bale.

"We'll go right now in one of the racing planes," he announced as Ham and Monk followed him out of the door. "Long Tom will follow along with the big tri-motor so that we will have full laboratory facilities if we need them."

The Bronze Man's eighty-sixth floor headquarters were served by a variety of special elevators. The one the three companions headed for was a super-speed job; a direct drop to the of over ninety stories to the fifth-level subbasement of the skyscraper.

From there they would board the pneumatic trolley, the "flea run", which would rocket them through a tunnel beneath the streets of New York to the riverside warehouse of the Hidalgo Trading Company, where Doc's amazing array of vehicles were stored.

Little more than ten minutes after getting the news, Doc and his two aides were taxiing an amphibian plane out onto the river. Inside of fifteen minutes, the sleek bronze aircraft was winging west at over 300 miles per hour!

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Pittsburgh streets and traffic being what they are, the yellow-green gas cloud had dissipated by the time Renny and the police commissioner at the riverfront. The street were full of police cars, fire engine, and ambulances.

"The poison gas just came up out of the river!" shouted one eye-witness, as they pressed through the crowd.

"How do you know it was poison gas?" Renny asked the commissioner.

"We've had numerous report, right from the start," the commissioner said. "Ah, here's Patrolman Wetzel, one of our local beat officers who reported in. What's happening, Wetzel?'

"What's happening, sir?" Tobias Wetzel replied dryly. "Nothing much. The river rose up in a huge, crackling, screaming sound and turned into a cloud of yellow-green poison gas."

"How do you know it was poison gas," Renny rumbled.

"Take a look right here," Wetzel said, pointing a bundle of rags on the riverbank.

Only it wasn't a bundle of rags. It was the corpse of Dakota Pete, his features and body horribly constricted.

"I reckon I saw enough of this in France." Wetzel said evenly. "I reckon I know what poison gas will do to a body."

Renny had seen a same thing in the Great War, and knew instantly that the patrolman was correct. This man had been killed by poison gas. Not on a battlefield in a far-off place overseas, but in the heart of a major American city in broad daylight!

Chapter 3

Poison in Pittsburgh

In only two hours, Doc, Monk, and Ham were approaching Pittsburgh.

"Where are we gonna land, Doc?" Monk asked.

"The radio reports we've been listening to en route locate the disturbance in the downtown area along the Allegheny River," said Doc. "We'll land right there."

All of Doc's airplanes were equipped with retractable "triphibian" capability. They were equipped with landing gear which could be lowered for land, water, or snow. The Man of Bronze was prepared for any eventuality.

Only an ace pilot would attempt a water landing on one of Pittsburgh's three rivers. Smoke from the city's heavy industry blankets the area most days, providing for very limited visibility. The

cities numerous bridges provide a most forbidding obstacle. To land on the water, the pilot must make a low-level approach, then dart down under a bridge, being extraordinarily careful not to "nose in" -- the cause of most fatal water landings.

But this kind of landing was old hat to Doc and his men. Doc dropped the speedy bronze job down under a bridge near as you please. Skimming the river, he eased the plane down so gently that even Monk and Ham, experienced as they were, couldn't tell when the float plane's pontoons touched the water.

As Doc taxied up towards a large crowd standing by the Seventh Street bridge, a small motorboat bearing a red-faced police sergeant chugged out from the shore to meet them.

"Clear off from here!" the sergeant yelled. "We don't need anymore newspaper scribblers or Hollywood newsreel photographers coming to act like vultures about this thing. Now get that airplane out of here!"

Doc stuck his head out of the cockpit window.

"Doc Savage!" The veteran cop recognized him instantly. "Thank God you've come! This is a horrible, horrible thing that's happened here, sir, and I know we're going to need your help. Let me take you right to the commissioner."

Doc got up out of the pilot's seat. Monk and Ham had finished securing the plane's anchors. "Monk, began taking residue samples that the poison gas may have left behind. We'll be able to analyze them when Long Tom arrives with the tri-motor and our equipment."

"Gotcha, Doc."

"Ham, see what eye-witnesses to this thing you can find."

"I'm on it, Doc."

Doc shouldered the equipment case he had carried from the eighty-sixth floor laboratory and stepped down lightly into the waiting motorboat. The red-faced sergeant sped him quickly to shore, and then led him through the crowd. "Outta the way, outta the way! We got Doc Savage coming through here!" For Doc, who shunned publicity, it was an embarrassing display of attention, but he suffered it as the quickest way to get to the authorities he needed to see.

"Mr. Savage, I am prepared to have you take complete charge of the case," the Pittsburgh police commissioner announced upon Doc's arrival. He knew that Doc held the honorary rank of "Senior Inspector" with the Pennsylvania State Police.

"Commissioner, I'm sure you and your men are capable of handling this," Doc said. The commissioner beamed at the implied compliment. "My associates and I would just like to offer our assistance."

"We certainly won't turn that down," the commissioner replied.

"My associates would like to help gather evidence and interview witnesses. I would like to go to the hospital where the victims have been taken. I've developed a new treatment therapy for poison gas." He indicated the bronze equipment case resting lightly on his shoulder.

"We had them taken to the Veteran's Hospital. We figured those doctors would have the most experience in dealing with poison gas attacks."

"Excellent, commissioner. But time is important now. Can you give me a squad car to take me there quickly?'

"Of course. Sergeant Rayburne, get Doctor Savage out to the Veteran's Hospital right away!"

"Ten-four, commissioner!" the sergeant barked, and headed for the street. Doc followed him, head and shoulders above the crowd, the 200-pound equipment case still easily balanced on his shoulder..

MONK was engaged in the business of taking air and surface samples. His stubby fingers skillfully and quickly opened small glass collection vials. In each he took either a sample of air, or a sample

of liquid. Each vial he then labeled with the exact location where it had been taken, as well as the

Monk followed a grid pattern, taking regular samples. Later, when he ran chemical analysis tests on the sample, he would be able to develop a picture of the intensity of the poison gas attack, as well as identify the gas involved. He would be able to do this once Long Tom arrived with Doc Savage's large tri-motor aircraft, which had on-board an ultra-modern portable laboratory.

Ham Brooks went through the witness's statements. They all agreed about the attack starting with a loud, crackling sound. Then came the yellow-green cloud, and then the screaming.

Beyond that, the witness's did not agree about anything. Some said the cloud came right down out of the sky. Others said the normal gray smog the city of Pittsburgh is noted for had turned yellow-green. One witness swore the gas had come from grenades thrown by crooks to cover a bank robbery.

Ham began cross-checking the statements. The witness who denied that the sound was actually loud turned out to be almost entirely deaf. Several of them witness who swore the yellow-green cloud descended from the sky were actually in office buildings at the time of the attack, and really were only guessing. The witness who "swore" the poison gas came from gas grenades thrown by bank robbers turned out to be only "guessing" about the grenades.

The bank robbery turned up a number of wild stories.

"There were four of them!"

"There were at least a dozen!"

"There were ten of them!"

"They had handkerchiefs over there faces!"

"They had hoods over there heads!"

"They were dressed in yellow-green suits, like men from outer space!"

"They had pistols!"

"They had tommy guns!"

"They had ray guns!"

Having gone through all of the statements, Ham wasn't even sure that the bank robbery had anything to do with the poison gas attack. Perhaps it was nothing more than a coincidence, though an amazing one at that. He looked through his list of statements. There was one more person he needed to talk to. A patrolman named Wetzel had been on patrol in the area where the attack had first been reported.

As a police officer he would be a trained observer, and a reliable witness. Having been where the poison gas attack started, he should be able to give plenty of details. Ham asked to have Wetzel brought to the police command post.

Tobias Wetzel had had a long day. He was tired, wet, muddy, and more than a little angry. The utter terror of the attack had in turn given way to the rush to try and save any survivors, followed by the never-ending routtine police paperwork.

He was not happy having someone want to go over his statement again. "I put everything in there," he said roughly. "Believe it or not, but the river stated crackling and turned into the screaming poison gas cloud. That is what I saw happened."

"Your statement is fine, Officer Wetzel," Ham said in the same tone he had used to calm a thousand witnesses on the stand. "But what I'm trying to nail down is how you were able so quickly to determine that this was poison gas."

"I quess I saw enough of it during the war to know it when I see it."

"And your statement said you saw the man named ..."

"Dakota Pete. He came running up behind me and grabbed me. I turned around, and suddenly it was like I was back in France again. His eyes..." Wetzel shuddered.

"Just one more thing. What direction did Dakota Pete come from?"

"From Seventh Street. Had to be. I'd already checked the Sixth Street bridge, and he wasn't there, so he had to have come from Seventh Street. How many times do I have to tell you Doc Savage guys this?" Wetzel complained.

"Lots of times, 'cause lawyer bill by the hour, and they're real slow learners!" It was Monk's squeaking voice as he arrived at the police command post.

"Shut up, you hairy mistake!" Ham shot to Monk. And then to Patrolman Wetzel he asked, "What do you mean when you say you've told this to Doc Savage guys?"

Speaking slowly, as if he were talking to a small, rather stupid child, Wetzel said, "I already told his to the big guy. Renwick. Told him the entire story. Nearly three hours ago. Don't you fellows ever talk to each other?"

"Say," Ham said to Monk, "have you seen Renny since we landed?"

"Nope. Hey, where do you suppose he's got to?"

"I don't know. In fact, this man," Ham indicated Wetzel, "is the first person who's even mentioned him."

"That's because he was hardly even here," Wetzel said.

"But you did see him?" ham asked.

"Oh sure. Talked to him right when he got here. He got here before they even carried old Dakota Pete off in the meat wagon. Then I took him and showed him exactly where I was when it happened."

"Looks like Renny's way ahead of this on this one," said Ham.

"Wonder what he found ?" wondered Monk.

"He found that blonde girl," answered Wetzel.

"What!" exploded Monk and Ham together.

"Good-looking little thing. Came up and said she was looking for her brother. They started arguing, and she went all crazy, started trying to hit him. He finally grabbed her and hauled her off. Said he was going to keep her in custody until Doc Savage arrived."

Monk and Ham checked with police officials. There were no blonde girls in being held in custody, good-looking or otherwise. And Renny could not be found. Since he and the blonde had left Wetzel, it was as if he had vanished from the face of the earth!

Chapter 4

Three Strikes and Renny's Out

Renny felt like an utter idiot.

Getting bopped on the head by a pretty girl was a foolish stunt that Monk might fall for, or even maybe Ham, but never Renny.

But it had. And now he was bound, gagged, and very uncomfortably stuck in the trunk of a car that was heading down a very bad road. There was the pain to random parts of his body as the car kept hitting bumps. There was the pain from having his six feet, four inch frame folded more than in half. But worse than either of these was pain of having fallen for one of the oldest tricks in the book.

He'd been trying to get information from the patrolman, Wetzel, about the poison gas attack. As a Colonel of Engineers, Renny had plenty of action during the Great War, and a single glance at the pitiful remains of Dakota Pete was enough to convince him that the man was in fact a victim of poison gas. He'd followed Wetzel to the place where the police officer had been when the gas attack.

"... And then, with this big crackling noise, the whole river turned into a big cloud of gas," Wetzel had said.

Renny was only half-listening to the man. He had only a basic engineer's knowledge of chemistry, and was still trying to figure out by what process common river water could be transformed into a deadly poison. He didn't see the girl come up behind him.

"Are you Doc Savage's man?" came the feminine voice.

Renny turned and saw her, then -- young, blonde, pretty, carrying a monstrous purse at her side. "Who wants to know?" he rumbled.

"My name is Sally Morgan, and I want to know where my brother is!" the girl snapped.

"Holy Cow, lady, try the missing persons department," Renny said, annoyed.

"My brother is working for Doc Savage, and I want to see him!" the girl demanded. "Those other policemen said you were Doc Savage's assistant. Now I need to see my brother."

"Listen, little Miss Sally Morgan," Renny said, "I've got no idea about you brother, Mister..."

"Hank Morgan," the girl supplied.

"... Mister Hank Morgan, and neither does Doc." Renny knew this would be true. Although Doc's good works were far-flung, he always worked anonymously so as to avoid publicity or endangerment of innocent lives.

"Now I'm really busy here, sister," Renny continued, "so you need to go peddle your papers somewhere else."

"He does so work for Doc Savage!" Sally Morgan said angrily. "We got a letter. He said Doc Savage had given him a job, the first he'd had in two years. That Doc was hiring lots of veterans and giving them jobs on one of his secret projects."

"Which he then blabbed to you right away," Renny said under his breath.

"Did not! the girl retorted. "The only reason I knew he was here was because the postmark on the letter read 'Pittsburgh', so I knew it was mailed from here. He said it was a big secret, but that it would probably be all over the news this week."

"Eh?" Renny grunted. The only news out of Pittsburgh this week would be about a bizarre poison gas attack. And if Hank Morgan, allegedly working for Doc Savage, had some kind of advanced notice of the attack.... Renny suddenly looked at the girl sharply. Her eyes got wide, and she took a half step back.

"Just what's the big hurry for you to get hold of your brother?" Renny asked, as he edged toward her.

"Oh, uh, Pa's done taken sick real bad, and we need Hank at home on the farm."

"Nuts to that news, sister. You're no farm girl. Those duds of yours are big city, through and through." The girl turned to run, but Renny caught here arm.

"Let me go, you big lug!" Sally yelled.

"No, I think I'll have the cops hang onto you until Doc shows up. Then you and he can have a little talk about this brother of yours and the poison gas attack." Renny began frog-marching the girl back towards the police command post.

Sally Morgan fought like a wildcat. She clawed, scratched, and kicked any part of Renny that she

could reach.

"Holy Cow, you little heathen!" Renny exclaimed with exasperation. "Your coming with me. Conscious or unconscious, it doesn't matter."

Sally Morgan collapsed. "I'm sorry," she cried. "I don't know what... I mean... I just..." and then she burst into tears.

Renny loosened his grip. "OK, come on now," he said vaguely. Teary-eyed females were a mystery to him

The girl sniffled, and then nodded her head. "Whatever you say," she said dejectedly.

They took two more steps towards the command post, and then Sally said, " I dropped my purse back there." Renny saw the big black bag laying on the ground, and retrieved it for her.

"Thank you," she said. "I must look a sight! Give me a minute to fix myself up." She fumbled opening the purse.

Women, thought Renny. One minute crying and fighting to beat the band, and the next worrying about their make-up. He had his head turned, and he never saw Sally Morgan take the foot-long length of lead pipe out of her purse, and bring it down on his skull.

The blow would have felled any ordinary man, but Renny managed to catch his balance and turn, so that he did see the lead pipe as Sally brought it down the second time. Then he saw no more.

Now, hours later, tied up in the trunk of a car heading who knew where, he counted three bumps on his head. So the girl had given him one more for good measure.

"IT WAS an education being in the operating room with you, Doctor Savage." The speaker generally acknowledged to be the finest surgeon in Western Pennsylvania. He himself had been called to the Veteran's Hospital to consult with the doctors there about the poison gas cases. But once there, he quickly deferred to the expertise of Doc Savage.

Doc's innovation in treating a person afflicted with poison gas involved treating the lungs with his own healing gas. This gas was administered to the patient through a breathing tube. Doc had brought a small supply his special gas with him, and he had set the hospital's pharmacy staff to work preparing additional doses.

The quickness with which the healing gas was delivered was the key to restoration of lung tissue. In this case, with Doc's quick arrival, he expected most of the three dozen patients to make a full recovery. Of the four most seriously injured, he had already dictated recovery treatment plans while he was doing surgery.

"Is there anything we can provide, Doctor Savage?" asked the hospital's chief administrator.

"There were three gas victims brought here who were dead on arrival," Doc said. quietly. "Please have your senior pathologist conduct the autopsies, and have him look for traces of these chemicals." Doc quickly jotted down several complex chemical formulas on a sheet of paper.

"We'll do that. What about the Coroner's Office? The other bodies were taken directly there."

"Yes, please give them that information as well." Doc paused, "Do you know how many bodies were taken to the Coroner?" Doc asked.

"Six," the man replied.

A strange look came over Doc's face. A low trilling sound filled the room. It was a noise Doc made unconsciously whenever he came across something that truly amazed him.

"Thank you for allowing me operating privileges here," Doc told the hospital officials.

"We were able to learn so much just from watching your procedures," the chief administrator replied.

But Doc was already gone. Tearing off his surgeon's operating gown, he strode down the hallway looking for Sergeant Rayburne and the squad car too take him back to the river bank.

WHEN Doc arrived at back at the police command post, Monk and Ham were arguing.

"Every witness says the cloud came from the river, you hammerhead," Ham stated coolly. "Are you incapable of seeing the logic of the situation?"

"I'll situation you one," squealed Monk.

"What's going on?" asked Doc.

Both men immediately reported.

"All the witnesses say the cloud of gas came from the river," said Ham. "It was accompanied by a crackling noise at first, and then by a screaming noise. There was a big cloud of yellow-green gas that reached about five blocks into the downtown area before it dissipated."

"But it ain't the river, Doc," Monk chimed in. "Even with the small analysis kit from the plane, I can tell you that there's nothing in the river water but good old aitch-two-oh and the usual industrial pollutants. Absolutely nothing out of the ordinary."

"But every witness said the gas came out of the river," reminded Ham.

"Witnesses? Hell, you got a witness that says men from outer space robbed a bank!" Monk exploded.

"And besides that, we ain't even told Doc that most important thing." he stopped, and then continued in a rare, serious voice. "Doc, Renny's disappeared!"

Chapter 5

The Steel Hammer Demands

THE LOW, trilling noise that Doc had made at the hospital returned. It continued while Monk and Ham filled Doc on their investigations, including the story of Renny and the blonde girl. "It's dang strange, Doc," said Monk. "It ain't like the big galoot to get his head turned by a pretty face.

"You're right," said Ham. "That's like something you'd do."

"Why you --" Monk responded.

"Anything else?" Doc interrupted.

"Nothing, Doc," Ham replied dejectedly. "The patrolman gave us a name, Sally Morgan, and a pretty fair description. He seemed to think that Renny thought she was somehow connected to the attacked. Something about her brother working for you and being involved in something big happening this week. But after they left him, nobody here's seen them."

"Nothing from me either, Doc," added Monk. "Once Long Tom arrives with the tri-motor and we've got a lab, I'll be able to analyze the air and liquid residue samples."

"Long Tom should be here within the hour," the Man of Bronze said. "Monk, I'll want you to began chemical analysis as soon as he gets here."

"Gotcha, Doc," the burly chemist replied.

"There are very few known types of poison gas in the world," the bronze man continued. "We must see if we are dealing with a stolen U. S. military gas, or if perhaps some foreign power is involved. Ham..."

"Yeah, Doc?"

"Get with police. Try to identify the exact locations where every poison gas fatality occurred. And see if they have any clues about the bank robbery. I can hardly think it was a coincidence. "Will do, Doc."

"I'm going to take the speed plane and try to find Renny." With that, Doc Savage was gone.

THE CAR finally came to a stop. Renny could hear the girl get out, walk to the rear, and open the trunk. Suddenly a flashlight was blinding him full in the face.

"My turn to ask the questions now, big fella," the girl said good-naturedly. "Don't bother acting foolish when I take the gag out, because we're miles from nowhere."

The gag came out, and Renny whooshed in a big breath of air. The girl sat down on the car's bumper. "Question number one," she asked. "Where's my brother Hank?"

"Go to blazes," Renny snorted.

"Now that shows a very disrespectful attitude to a lady," Sally Morgan replied. "I'd have thought my friend Mr. Lead Pipe had already taught you that lesson, but perhaps you are a slow learner and need to be reminded." She began rummaging around in her purse.

"Whomp on me all you want," snarled Renny. "But it won't do you any good, Sally Morgan, if that is your real name."

"It is!"

"Sure, just like you and old Pa were down on the farm waiting for brother Hank to come home. Tell me a better story, sister."

"OK, how about this," the girl said, her voice changing slightly. "There isn't any farm. Dad lost it four years ago when the bank foreclosed. He died a year later. My bother Hank is the only relative I've got left.

"Hank's -- well, he's had a hard time since the war. He was with the Rainbow Division in France, and saw a lot of things in combat I don't think he's ever told anyone about."

"Happened to a lot of good men," Renny said instinctively.

"I guess so," the girl said sadly. "Anyhow, since the war he hasn't been able to keep hold of a job, even when there were jobs to keep hold of. And then suddenly I get a letter from him. He's working for Doc Savage on some hush-hush project. He doesn't say where he is, but the envelope is postmarked from Pittsburgh. There a twenty dollar bill in the envelope -- he writes that it's my birthday present."

"So you came to Pittsburgh to deliver your thanks in person?" Renny asked sarcastically.

"Huh?" the girl gulped.

"Let me get this straight, you dropped everything and rushed to your brother's side in Pittsburgh. Why? What was urgent? Why did you come Pittsburgh to see the big, hush-hush thing your brother was supposedly working on with Doc Savage? Why are you so interested in Doc Savage? How are you involved in this?"

"Listen, buster, I ask the questions here, see?" the girl responded.

"Then do a better job of it," Renny replied. "Cause I'll give you the answers. Answer One: Doc Savage has never heard of your brother. Answer Two: Doc Savage didn't hire your brother for a hush-hush project. Answer Three: Doc Savage is going to get to the bottom of this poison gas attack"

"How can you be so certain?" Sally Morgan asked.

"Doc doesn't work that way," Renny stated flatly. "Oh, he hires people all right. There are thousands of people in this country who have jobs working for Doc. But they don't know it. Doc works behind the scenes. That way he avoids publicity and protects people."

"Protects people?"

"Right. If crooks knew a business was run by Doc Savage, they could use it as a target, or as a way to try to get at him."

"So if my brother wrote me that he'd been hired by Doc Savage?" the girl asked.

"Then it was just a lot of hot air," Renny said.

"Take that back," Sally demanded jumping to her feet.

"Sorry," Renny said. "Face the facts. Doc doesn't hire people like your brother said he was hired. So maybe he was making something up to impress his sister." A thought suddenly struck Renny.

"Unless..."

"Unless what?" asked the girl.

"Unless he was hired by someone pretending to be me," said Doc Savage, coming out of the darkness.

"HOLY COW, Doc!" blasted Renny. "I thought you'd never get here."

"You seem to have survived all right," Doc said, taking a knife from his pocket and cutting through Renny's bonds. The big engineer eased himself out of the car trunk and began stretching.

"You --- you're Doc Savage," Sally Morgan blurted. "You're so big!" Most people were over-awed meeting the Man of Bronze for the first time.

"And you would be Miss Sally Morgan," said Doc.

"Yes," said Sally.

"Sally Morgan from Chicago," Doc added.

"How did you know that?" Sally and Renny asked in unison.

Doc ignored the question. Instead, he answered, "Miss Morgan, I do not employ people directly. Your brother may have fallen in with a vicious criminal scheme. It would help if you could give us any and all details from his letter. He may be in grave danger."

"There really weren't many," the girl said. "He said that your organization had hired him and other veterans, men who could be trusted, to work on one of your secret projects. I realize now that he wrote he was working for you, but he never came out and stated that he had actually met you."

"Did he give any details about this project?" queried Doc.

"No, only that he expected something big to happen this week."

"Anything else? Any names?"

"Nothing else. Oh, at the end of the letter he did mention a name." Sally paused and then quoted,

"Got to go now, Sis. Old Swabbie Phil is trying to get up a card game."

"Swabbie. A sailor of some sort," said Renny.

"So it would seem," said Doc.

"But I still have a question, missy," said Renny, turning to the girl. "What was the big deal running to Pittsburgh once you got the letter?"

"And what makes you so sure I'm from Chicago?" Sally demanded of Doc.

"The Chicago 'Inquirer' newspaper publishes the column of a crime reporter named Sally Morgan," explained Doc. "She employs unconventional methods of obtaining information. She is not above the 'kidnapping' of an occasional subject for interrogation, and is said to be much stronger than she looks. Her interest in this case would thus seem to be professional as well as sisterly."

"I really am an old farm girl," Sally said to Renny, flexing a bicep. To Doc she said, "I figured

I could break a big scoop if I was already in Pittsburgh when the big, hush-hush event happened."

"Yah," sneered Renny.

"Tough enough to stuff you in a car trunk, big boy," Sally Morgan said with a flourish. "Now, where did you come from?" she asked Doc Savage.

"There's nothing more for us to learn here," Doc said to Renny.

He turned and vanished into the darkness. Renny followed him.

"Wait a minute!" pleaded Sally. "Where did you come from, Doc Savage? How did you find me here? What kind of weird magic was this?"

But no answer came from the Pennsylvania night. Doc Savage was gone.

IT WAS not magic, of course, but rather Doc's superior scientific skill that had brought about the rescue of Renny.

Built into the heel of Renny's engineer boot was a tiny battery-powered radio transmitter of Doc's own design. It sent out a Morse Code signal "R" on a special frequency every five seconds. Renny had activated the transmitter as soon as he woke up in the car trunk. From then on, he knew it was just a matter of time until rescue came.

Doc had taken off from the Allegheny River, and flown a loop around the city, with the radio receiver in his plane tuned to the frequency of Renny's boot heel rescue radio. The signal was coming from somewhere southwest of Pittsburgh.

Fifteen minutes later he was circling over the signal's source. The ultra-quiet modern aircraft motor made so little noise that Sally Morgan never heard it. Doc had slipped on his infra-red goggles, which turned night into day, in order to pick out a suitable landing site. He had put the speed ship down in a farmer's hay field about half a mile away from the roadside spot where Renny was being interrogated, and slipped silently though the woods.

"That was dang dumb of me, Doc," Renny muttered as he and the Man of Bronze went through the before take-off checks on the airplane. "No way I should have let that little news-hen put one over on me like that."

"Let's try the radio," Doc suggested. "I left Monk and Ham investigating this thing in Pittsburgh, and Long Tom was to join them there with the tri-motor."

"Roger that, Doc." As they took off -- as neat of a short take-off over rough ground at night as you'd ever see -- Renny activated the plane's radio.

"Doc, is that you?" came Monk's squeaky voice in reply.

"It's me," Renny said. "We're on our way back to Pittsburgh right now."

"You got that cute little blonde with you?" Monk cackled.

Renny winced. He had not known that Doc's other assistants knew the circumstances of his "kidnapping". "We're on our way," he repeated dully. "Any news?"

"So what happened to the blonde?" asked Monk.

There was a scuffling noise, and then Doc and Renny could hear Ham's voice in the background, "Knock off the stuff about the blonde, and give Doc the news, you second cousin to a chimpanzee!"

There was the sound of more scuffling, and then the acerbic voice of Long Tom came over the radio, "Doc, Renny, we got a ransom demand."

"What details do we have?" Doc asked.

"An envelope was left on the steps on the Fifteenth Police Precinct Station, addressed to the

Mayor. He just provided us a copy of it."

"Please read it," said Doc.

Back in Pittsburgh, Long Tom stared down at the note in his hand, It was still to incredible to believe. The note read:

DEAR AMERICA,

I LEFT MY CALLING CARD AT THE BANK IN PITTSBURGH. YOU HAVE SEEN WHAT I CAN DO. PITTSBURGH WAS THE FIRST. OTHER CITIES WILL ALSO BE ATTACKED UNTIL I HAVE BEEN DELIVERED A RANSOM OF \$100,000,000 IN GOLD. IGNORE THIS WARNING AT YOUR PERIL!

THE STEEL HAMMER

At the bottom of the note was a tiny drawing of a hammer.

Chapter 6

The Hammer Falls Again

The morning papers had hit the streets in Pittsburgh by the time Doc and Renny landed. Long Tom had put down the big tri-motor plane on the Ohio River, about three miles from downtown Pittsburgh, where there was a long stretch of water without a bridge to block and amphibian landing.

The headlines blared:

POISON GAS ATTACK!!!
DEATH IN THE STREETS!!!

There was more:

DOWNTOWN BANK ROBBED DURING GAS ATTACK; CROOKS GRAB \$50,000

None of the newspapers mentioned the ransom note to America for a hundred million dollars.

"We decided not to release that information," said the Pittsburgh police commissioner. Doc and Ham were meeting with a group of local civic leaders in his office. "For one thing, such news would cause a tremendous panic among our citizens."

"Are you sure the note is genuine?" Doc asked.

"What do you mean?" the commissioner responded, puzzled.

"We have a series of events," Doc explained. "We have the gas attack, the source of which is still unknown. We have the robbery in the bank. And we have the ransom note. What we need to find out is if all of these events are in fact connected."

"We're determined not to head up a blind alley chasing a false lead," Ham added. "Right now, all we have is circumstantial evidence."

There was a low murmuring among the men sitting in the commissioner's office.

"A steel hammer was left at the scene of the bank robbery," the commissioner said sternly. "That's hardly circumstantial."

"The hammer is a piece of evidence," Ham said, in his best talking-to-the-jury voice. Ham received two-hundred-dollars-an-hour during his courtroom appearances, when he made them. But they were rare; he preferred adventure with the Man of Bronze. "But did the note come from the gang that pulled the robbery?"

There was a louder murmuring now.

"What the..."

"Huh..."

"Well. who else..."

"Who else?" Ham finished. "Someone who wanted to try and cash in on this thing. Someone who trying to create confusion, and have us looking in the wrong place..."

The murmuring quieted.

"You see, gentlemen." Ham said, and he commanded there attention, "there is an obvious discrepancy in this affair. On the one hand we have what seems to be a well organized band of bank robbers making off with \$50,000. And on the other hand, we have a cryptic note demanding \$100,000,000 in gold.

"What is going on here? If the gang is intent on getting a hundred-million in gold as a ransom, why take the risks in robbing banks for a mere fifty grand? And why was ransom note addressed to "America" delivered to the mayor of Pittsburgh? A responsible official, to be sure, but hardly one able to pay off in gold."

A quiet came over the room. Ham's analysis of the problem had dashed their hopes for an easy solution.

The mayor of Pittsburgh spoke to his police commissioner, "Clearly this is beyond our capabilities. We will need to concentrate our efforts on protecting our population, and searching for these diabolical fiends here in the city. But the investigation will require more than your department can provide."

The mayor turned to the Assistant Director of the Federal Bureau of Investigation, who had flown in overnight from Washington, D. C. to head the investigation. "What is the FBI doing?" he asked the G-man.

The FBI man detailed what his office had done with the physical evidence. It wasn't much help. The ransom note had been typed by an inexperienced typist on ordinary, bond paper, on a Royal typewriter manufactured sometime between four and ten years ago. The steel hammer from the bank was of a cheap type, made in Japan, usually sold in a cocktail set with an ice pick. The cocktail sets were imported by at least four different companies, and sold in stores all across America.

From there, the discussion went to the mayor's request for the Pennsylvania National Guard to provide the city with gas masks. Doc said quietly to Ham, "There's nothing more to be learned here. Let's get back to the tri-motor and see if the others have turned up any clues."

Despite his great size, Doc had the ability to move quietly. He and Ham had been gone from the meeting for five minutes before their absence was noticed.

* * *

Doc and Ham took a cab to the Point Bridge. This edifice crossed the Allegheny River at the point where in merged with the Monongahela River to form the mighty Ohio River. Waiting there, at its base were two men with a motorboat.

One man looked like he was in the final stages of some terminal disease. His coloring was distinctly unhealthy, and he might have weighed 130 pounds soaking wet. An insurance agent might have looked at him in horror; an undertaker seeing him would have rubbed his hands together in anticipation.

But "Long Tom" Roberts had never been sick a day of his life, and could whip nine out of ten men. Having landed the huge tri-motor downriver, he had rented the motorboat to allow the crew to reach the downtown area conveniently. When the speed plane had landed, Long Tom had brought Doc and Ham back to the city, while Monk and Renny worked in the tri-motor's laboratory. He had waited with the boat during the meeting.

Long Tom introduced his companion, "This is Harvey Grace, an old friend of mine. He's the chief engineer for a big radio station here."

"The biggest," said Harvey Grace. "Pleased to meet you, Doc." Doc Savage shook the man's hand.

"Harvey thinks he's got a clue for us," Long Tom said.

"What is it?" Doc asked.

"Our station is right downtown on Liberty Avenue," the radio man explained. "We were working out in front of the station, doing our 'Man in the Street' radio program when the attack came. Well, let me tell you, we were scared. As soon as we heard that noise and gas that gas, we were all inside, hiding in the..."

"It's a recording show, Doc," Long Tom broke in. "They ask the questions, and record the answers right out on the street. Then they broadcast the record later."

"And we recorded the whole thing," said Harvey Grace. "When I ran inside I left the machine on. When I came back out, it was still running. So we've got a recording of the entire attack."

"I figure I can separate the sounds out, and see what exactly the crackling noise and screaming noises were," said Long Tom.

"You won't be able to do that with equipment in the tri-motor lab," Doc said.

"I know," Long Tom replied, "but Harvey here will lend me a studio at the biggest radio station in Pittsburgh, right?"

Harvey Grace nodded, and Long Tom continued, "And I can borrow some stuff from another buddy I have over at Westinghouse Labs. I ought to be able to put it together by this afternoon.

"The sound is one of the most puzzling aspects of this whole thing," Doc said. "I have my suspicions, but I don't want them to influence your analysis. Go ahead and start on this right now, Long Tom."

The electrical wizard and his friend hurried off for the radio station. "Hopefully we have some more good news back at the tri-motor," Doc said to Ham. They cast off and headed downriver in the motorboat.

* * *

The city of Cleveland, Ohio sits on the southern shore of Lake Erie. The city grew up around the Cuyahoga River, which flows into Lake Erie here. The river now separates the eastern and western halves of the city.

The river runs through the industrial portion of the city. The river is very wide here, artificially widened so that it is capable of handling the giant six hundred foot long freighters which ply the Great Lakes.

The Tecumseh was no giant freighter. Rather, she was a old, hundred foot rust bucket. Very few of her year and class were still active in the Great Lakes trade. The Tecumseh stayed in business because of the experience, savvy, and business contacts of her owner, who was also her captain.

Captain Aaron Andrews had sailed the Great Lakes for nearly six decades. He knew the ins and the outs, the indicators of weather, the dangers the waters held. He also knew the cargo managers and dispatchers. Even these days, there were always small cargo loads to be had by a man who was on the spot and knew the business.

Right now, Captain Andrews was off-loading a load of iron ore pellets at the Cleveland dock of the Washington Steel Company. If he could finish in the next two hours, he had the chance to move a mile down the river and pick up a cargo of steel bridge girders bound for Green Bay, Wisconsin. The girder cargo wasn't large enough to require a large ship, but the speed of delivery was important to the company, and the Tecumseh was the only freighter in port ready to head west right away.

The captain was on deck supervising the unloading. That was more properly the job of the deck officer, but the Tecumseh did not carry the normal freighter's complement of officers and hands. In fact, the only other ship's officer, as such, was Captain Andrew's twenty year old grandson, Jimmy, who was asleep in his berth, having piloted the Tecumseh into port that morning.

Captain Andrews was looking towards the shore, watching the cargo boom maneuver over a rail

gondola car, when he suddenly became aware of the crackling noise. Years of working in the proximity of loud machinery had left Andrews partly deaf, so he knew that the noise had to be pretty loud before he had heard it.

He turned, and saw the yellow-green fog come up off the river and roll over the Tecumseh. The fog bank grew and grew, and the crackling continued.

"What's this!" came a shout right into his ear. It was Jimmy Andrews, up on deck.

"Weirdest thing I ever seen!" Captain Andrews shouted back. "Yellerish and greenish! Never seen the like!"

"Lord, this was on the radio news!" shouted Jimmy in reply. He grabbed the old man's shoulder to push him down below deck. "It's the death cloud!"

That's when the screaming noise started.

Chapter 7

Questions Without Answers

The state of Michigan is divided into two parts. The lower peninsula, with Lake Michigan on the west, and Lakes Huron and Erie on the east, is the familiar "mitten"-shape from school geography books. It is the industrial heart of the state, home of Detroit and the automobile industry.

The upper peninsula of Michigan borders Lakes Michigan and Huron to the south, and has the freezing depths of Lake Superior to the North. It is a wild, uninhabited place, not even fully explored in some places, and there are secrets there that men do not yet know.

At an isolated cove along the Lake Superior shoreline of the upper peninsula, a small, modern float plane was at anchor. Paddling a metal canoe out to the plane from the shore was a very tall, gaunt man with a monocle in his left eye.

The man reached the plane, and loaded into it the tools and sample bags of a geologist. Then, reaching down and flipping three small switches, he collapsed the canoe into a rectangle the size of a dictionary.

The canoe was of Doc Savage's own design. The man was William Harper Littlejohn, better known as "Johnny". He was one of the world's foremost experts in geology and archaeology -- and the fifth of Doc Savage's associates.

For the past 72 hours he had been traveling by foot and by canoe across the wilds of the upper peninsula, and had uncovered three previously undiscovered mineral sites for iron ore, and one for copper. The preliminary prospecting had been done from the plane in the air, using sophisticated magnetic detection equipment.

This would have been sufficient for some geologists to use for their reports. But Johnny was of the old school, and always desired to make a personal examination of a site on the ground -- to actually get his hands on the rocks. To him, the gathering of the samples was the vital part of an expedition.

Though he looked like a beanpole, Johnny was easily tough enough to handle the challenge. He had covered over a hundred miles cross-country in the previous three days.

As he stowed the gear and samples aboard the float plane, Johnny flipped on the plane's radio. The iron ore deposits in the region played havoc with radio signals, warping the electro-magnetic spectrum. Johnny had not been able to reach Doc's headquarters in New York since he had first arrived in the area a week ago.

At the same time, other radio signal came skipping into the region from far away. Johnny was able to pick up a regular commercial radio station in St. Louis as clearly as if it had been in direct line of site.

"...and officials are releasing few details on the case," came the announcer's voice. "It is known, however, that Doc Savage is helping in the investigation."

"An occurrence of some awesome importance," uttered Johnny, who never used a small word if he

could think of a larger one.

"News flash!" barked the announcer. "This just in! Cleveland, Ohio is now under poison gas attack! I repeat, we have a report that Cleveland, Ohio is now under a poison gas attack!"

"I'll be superamalgamated!" Johnny burst out. He hurriedly began preparing the float plane to take off.

"GREETINGS FROM the Steel Hammer!"

The Fourth United States Federal Reserve Bank is located on East Sixth Street in downtown Cleveland.

It is an impressive, eight-story stone structure. Its vaults are of the strongest steel. Its alarm system is the most modern available. Security procedures have been designed by agents of the Treasury Department.

None of this mattered at all when the Steel Hammer struck.

As the yellow-green clouds filled the city streets, seven men in yellow-green hoods burst into the bank. Three had tommy-guns, three had burlap sacks, and one, who had shouted the evil greeting, had two cowboy-style six-shooters. A quick burst of tommy-gun fire into the ceiling sent the bank's customers and employees to the floor, cringing. Many of them were trying to cover their mouths with handkerchiefs, in a feeble attempt to ward off poison gas.

With disciplined precision, three of the hooded crooks leapt the counter and headed toward the vault. Two gunners covered the hostages, while the third searched for the bank manager. Their leader, waving his twin six-shooters wildly, shouted directions.

"Got that guy yet?" he called to the back of the bank.

"Right here, Seven," replied the tommy-gunner, prodding the bank manager out of his office at qunpoint.

That vault right there," the leader said, poking a gun in the manager's face.

The bank manager stared back without expression, and allowed himself to be led to the vault, which he then opened.

As the crooks began filling their bags with money, their leader reached into his coat pocket and pulled out a small object. He held it high in the air, and then dropped it. It made a high, ringing sound as it rebounded off the marble floor of the bank.

"Tell the newspapers, folks!" the crook's leader roared. "The robbery is courtesy of the Steel Hammer, and he means business!"

DOC AND Monk were in the Man of Bronze's tri-motor airplane, headed for Cleveland.

Upon hearing the news of the second poison gas attack, Doc had quickly issued orders for departure. Long Tom had been left behind in Pittsburgh to continue his analysis of the recording of the Steel Hammer's attack. Doc and Monk were headed for Cleveland in the tri-motor. Doc had ordered Renny and Ham into the speed ship. Renny was to deliver Ham to Buffalo, New York, and then continue on to Detroit, Michigan.

"What's the deal, Doc?" Monk asked. "What are the shyster and the big galoot going to do while we're handling the action?"

"I doubt we have any action," the bronze man replied.

"What do you mean, Doc?"

"This Steel Hammer gang is very professional. Unless the Cleveland police are able to stop them, which I think unlikely, they will be gone by the time we arrive. We will be mainly looking for clues

which can tell us more about them."

"So what will Renny and Ham be doing?"

"We need to try and anticipate what the Steel Hammer's next move will be," Doc replied. "Both of his attacks have been from the water. Cleveland is on the shore of Lake Erie. Buffalo is at the eastern end of the lake, and Detroit is on the western end, where it connects to Lake Huron."

"So you figure the hammer guy will move along the lake, one way or another."

"That is my theory, yes. Renny and Ham will work with local officials in Detroit and Buffalo to try and prepare a trap to catch the gang."

"Yeah, but one thing, Doc," Monk said. "If this is some kind of weird water menace, and it's moving along the lake, how did it get there from Pittsburgh? None of the rivers in Pittsburgh connect to Lake Erie."

"That I do not have an answer for yet," said Doc. Changing the subject, he added, "What can you tell me from your chemical analysis of the poison gas?

"I couldn't get a handle on it, Doc," Monk admitted. "It's some kind of choking agent that works on the lungs."

"The autopsies confirmed that," Doc said. ""Have you made an identification?"

Monk shook his head. "Nope. I've been able to rule out that it is American military issue, and it doesn't look like a variation of anything I've seen, either during the war, or after it, when we went through all the captured German stuff. But I'll tell you one thing."

"Which is?"

"It ain't made out of river water."

"How do you know?"

"The only samples of poison gas residue I found were in the area right around the Seventh Street Bridge," Monk explained.

"Which the police reports stated was the exact location of the poison gas fatalities," Doc said quietly.

"Exactly," said Monk excitedly. "But the yellow-green cloud went several blocks into downtown. And I found yellow-green residue everywhere. But all it turned out to be was Phenol Yellow Four."

"The industrial compound?" asked Doc.

"Right," replied Monk.

Doc's low trilling sound filled the aircraft. Phenol Yellow Four was a common industrial die, used for adding color to a wide variety of manufactured articles. Even in large quantities, it was not harmful. But somehow it was associated with the poison gas cloud -- a cloud that, oddly enough, was not always poison.

Doc adjusted the plane's fuel mixture to try and get extra speed out of the ship as he and Monk rushed to the latest attack site in Cleveland.

"THATS AMAZING," exclaimed Harvey Grace.

"Just not quite," Long Tom said to nobody in particular. The scrawny electrical engineer was seated at the radio station's main "sound mixing board". This large console was devoted to the production of broadcast quality sound. Four hours ago it had been the most modern that Harvey Grace had ever worked with.

But now, thanks to Long Tom's modifications, Grace could barely detect its original design.

For Long Tom had changed it into a device that would literally take sound apart. Finely calibrated to decibel and frequency levels, it would allow him to separate the wild pandemonium of the Steel Hammer's attack into individual and distinct sounds.

First came the crackling noise.

"That's even louder than I remembered," Harvey Grace said. "You know what it is?"

"No," said Long Tom, "but Doc'll know." The Man of Bronze had trained himself in the use of his five senses far above the abilities of normal human beings.

The record rolled on and the screaming started. Long Tom worked the dials on the console, and the crackling noise disappeared. Without it, the screaming was more distinct.

"Some kind of siren," Long Tom identified.

"I think your right," said Harvey Grace. "When you're able to hear it alone, it's a lot less frightening.

"But its a big one," puzzled Long Tom.. " To get that much volume, it'd have to weigh a couple of hundred pounds."

"Mounted on a truck?" suggested Grace.

Long Tom shook his head. "This is more like an air raid siren. It'd need a good-sized power source. Besides, from the Doppler effect on this, it doesn't seem to move. In fact...."

Long Tom worked several switches on the console.

"What is it, " Grace asked.

"This was recorded right out in front of the studio here?" Long Tom queried.

"Absolutely," replied Grace. "What do you have?"

"Because I 'm not sure what the crackling noise is," Long Tom answered. "But the so-called screaming comes from a large air raid siren. And that siren had to have been located right in the middle of the Allegheny River!"

Chapter 8 Mystery Woman Number Two

TWO YEARS earlier, a reform-minded mayor of Cleveland had set out to make great changes in a police force known for corruption. He had in a retired Army Military Police Colonel to be the new chief. The mere announcement of this had caused the retirement or resignation of nearly 200 of Cleveland's less-than-finest.

"We won't miss one of them," the new chief commented, and he was prophetic. With firm leadership, high standards, and respect for the individual police officer had turned The Cleveland Police Department into one of the finest in the country.

But no police department in the world was ready for the Steel Hammer.

The chief did make a game try.

After hearing the news from Pittsburgh, he had ordered a special motorized squad to be equipped with gas masks, to respond to any possible attack. These rushed to the Cuyahoga River docks as soon as the yellow-green clouds were reported. The reports had arrived quickly -- freighter captains had ship-to-shore radios capable of reaching the police radio frequencies.

As the gas clouds rolled east, accompanied by the crackling and screaming sounds, panic filled the streets. Pedestrians rushed into any available building to seek shelter. Motorists either abandoned their automobiles in the streets while they ran for shelter, or they drove wildly at high speeds to get away from the clouds.

When the panic seemed like it could get no worse, the news came in from the Fourth Federal Reserve Bank. A courageous teller had tripped a silent alarm.

"Rush all available units to the bank, Chief?" his top assistant asked.

"Negative," the Chief growled.

"But Chief, that's standard policy."

The Chief whirled. "Look, I don't like this any more than you do!" he snapped. "But we've only got fifty gas masks in the whole city, and they're all with the motorized squad at the river! I'm sure not going to order police officers into poison gas without protection."

"Should we send the motorized squad to the bank, Chief?'

"Negative, negative! We've got panic in the streets already. The boys drive into that gas cloud, and they'll be running over civilians before you know it, and just making things worse. No, here's what we'll do..."

He walked over to a city map on the wall of his office. "The gas is coming off the river. According to Pittsburgh, these crooks have some kind of gadget that turns water into poison gas. They're using it to cover their robberies.

"Figure that there's two bunches of crooks. One knocking over the bank, and one making the gas. Somehow they're going to get back together. Either the crooks from the bank will head for the river and make their escape by water, or the crooks at the river will try and drive away.

"Get me the head of the motorized squad," the Chief ordered. "I want a cordon thrown up around the Cuyahoga River. Full scale roadblocks. Nothing goes toward the river; nothing goes away from the river

"And get me the Coast Guard," he added. "Have them get their patrol boat over to the river's mouth. Have them block it off and check out any suspicious characters."

It was a sound plan. But it came to naught.

By the time the gas clouds dissipated, the roadblocks had stopped hundred of panicked citizens, and zero escaping crooks. Thinking the villains had holed up somewhere, the chief ordered a block-by-block, building-by-building search of the downtown area between the bank and the river. It also failed to turn up anything.

The closest the Coast Guard came to finding a suspicious character was when they reported a large, tri-motor airplane buzzing the lakefront. They radioed the police, and the Chief himself was on hand when the plane made a water landing on Lake Erie, and two suspicious characters emerged -- Monk Mayfair and Doc Savage!

CLEVELAND'S TOP cop quickly filled the Man of Bronze in on what had happened.

"Not a trace of them to be found," he concluded. "Doc Savage, whatever you can do to stop this menace, you need to do it quick!"

"Where have the poison gas victims been taken?' Doc asked. "There's a medical procedure I'll want to instruct your doctors on performing."

"They're centralized at Memorial Hospital, for the most part."

"I'll go there immediately," said Doc. "I'll want to talk with you more later."

"Time is of the essence. Flying is quicker," $\ensuremath{\text{Doc}}$ replied.

"Flying? But Memorial Hospital is in a downtown area. You can't land an airplane there," the chief protested.

"I'm not going to land."

SEVEN MINUTES later, with Monk at the stick, the tri-motor was circling Memorial Hospital.

Doc was fastening himself into a parachute harness. He would jump from the plane by parachute, carrying with him the initial batch of medicines needed in treating the poison gas victims. Since he had arrived here sooner after the attack than he had in Pittsburgh, he hoped for an even greater rate of recovery among victims.

"I'll hit riverfront," Monk hollered over his shoulder. Try and see what I can come up with in the way of samples.

"Look for a poison concentration," Doc instructed. He was busy packing glass bottles of his serums into a shock-proof container he would jump with.

"Like in Pittsburgh?"

"Exactly. My theory is that the entire cloud is not poison."

"Huh?" Monk sputtered. "Whatta you mean, Doc?"

"The big cloud is to induce the maximum amount of terror over the widest area possible. But the poison concentration is small. My bet is that you'll find no evidence of poison gas anywhere near the Federal Reserve Bank." Doc made the final adjustments to his parachute harness.

"But Doc," Monk protested. "A gas cloud that's poison some places and not poison other places? There's Boyle's Law, and Gay-Lussac's! It just ain't possible."

There was no reply. Doc Savage had left the airplane.

HAM BROOKS cursed his luck. He would have far preferred to accompany Doc Savage to Cleveland, for a chance to take on the Steel Hammer. But he followed the bronze man's orders without question, as did all of Doc's assistants.

Since he had been flying with Renny in the speed plane, he had actually reached Buffalo, New York before Doc and Monk reached Cleveland. Never one to waste time, and anxious to be on to his own errand in Detroit, Michigan, Renny had taxied up to the public wharf and kept the motor running while Ham nimbly jumped to the pier. Then he turned and was in the air before Ham had found a taxi cab to take him to City Hall.

Panic had taken hold there. The mayor's advisors were brimming with advice.

"Send for the National Guard!"

"National Guard, hell, send for the Army!"

"We must evacuate the city!"

"Seal off all doors and windows!"

Ham wiggled unconsciously under his jacket. Lately, he'd had his tailor give him a double-breasted style. The extra material made a more natural drape over the supermachine pistol that he carried in his shoulder holster. The superfirer, of Doc Savage's own design, had more power than a conventional machine gun. It had a variety of ammunition cartridges, including high explosive, incendiary, and special anesthetic mercy-bullets which induced sleep rather than death in their target.

Ham sighed. Shooting it out with the Steel Hammer gang would have been straight forward action, against an enemy he could focus on. Here in Buffalo, the enemies were fear and ignorance. It would require a nimble mind and a quick tongue to defeat them. This was why Doc had sent him here.

Ham Brooks started to adjust his tie, but then decided that it was already perfect. He walked

into the mayor's office to began bringing order out of chaos.

"ARE YOU sure the siren had to be in the river?" Harvey Grace asked Long Tom.

"Absolutely. Maybe mounted on a boat," Long Tom replied.

"Listen, I understand that this gang was able to turn the river into poison gas," Grace said. "So that would explain a boat on the river. But why the siren?"

"Good question." Long Tom rubbed his chin. "Why a loud siren indeed? I can think of two reasons."

"What?"

"First, the noise is terrifying. It could be calculated to panic people to the greatest degree possible."

"I'd think the crackling and the poison gas would do the trick," argued Grace. "How much more terrified can people be?"

"I think you're right, " said Long Tom. " So, second, it just might be there to cover something up."

"To cover something up? Like what?"

"Let's see." Long Tom reset the record back to the beginning. "I've got the crackling noise figured. This time I'll isolate the frequency and decibel level of the siren."

It became more complicated than that. Long Tom had to isolate and remove city traffic noises, and then the sounds of panic in the streets. It was nearly midnight by the time he finished and played it back.

"Harvey keep track of the running time on the recording," Long Tom ordered.

"Got it."

 $\mbox{\tt ``O.}$ K., and mark, the crackling starts."

"Check."

The record continued to play.

"Mark, the siren starts," said Long Tom.

"60 seconds," Grace replied.

The record played on.

Suddenly there came the sound of sharp explosions!

"Mark!" Long Tom yelled.

"120 seconds!"

The sound of the explosions repeated!

"Mark!"

In all, there were nine explosions. They came in three sets of three. The first three occurred almost simultaneously 120 seconds after the crackling began. The next three followed four second later, and the final three came from the 128 seconds to 130 seconds after the initial sound began.

"What are those explosions?" asked Grace.

"From the decibel level, I'm going to guess they're mortar shells going off," Long Tom answered.

"Mortar? In a city? That doesn't make any sense!"

"Neither does poison gas," said Long Tom.

"I mean, I mean, this is like a war!"

"That's exactly what I'm afraid of." Long Tom began disassembling his apparatus. "I appreciate you letting me use your studio here, Harvey. I've got to get this news to Doc Savage as soon as possible."

"Let me go and try to get you a long distance line in my office."

"That'd be great. Try the Chief of Police's office in Cleveland."

"Got it."

Harvey Grace left the recording studio. He returned a moment later. "There's somebody out hear you need to see," he said.

Long Tom went out into the corridor outside the recording studio. There stood a Pittsburgh police officer and a pretty young brunette girl.

"You're Tom Roberts, the Doc Savage man?" the cop asked.

"I am."

"I'm Tobias Wetzel," the patrolman introduced himself.

Long Tom started with recognition of the name. He said, "You're the one who was with Renny when...."

"Yes," Wetzel interrupted. "I've been most of the day trying to track one of you down. Found out Doc Savage had headed for Cleveland, and most of you had gone with him. Finally found a cab driver who had dropped Savage off at the Point Bridge. Started looking for other cabbies who had picked up a fare in that area, and eventually tracked you down here."

"So has there been a new development in the case, Officer Wetzel?"

"Sort of," Wetzel dissembled. "You see, this young lady," he indicated the brunette, "came into the precinct house this morning with a very interesting question that I'm pretty sure you'll want to hear."

"I've had all of this I can take!" the brunette burst out suddenly. "This idiot," she indicated Wetzel, "has been leading me on a wild goose chase all over town since this morning.

"Now, you," she pointed her finger at Long Tom, "you, Mr. Doc Savage man, you tell me where's Doc Savage, and what's he done with my brother!"

Chapter 9

When Renny Met Sally, Again

Monk was taking samples along the Cuyahoga River when a Cleveland police officer directed him to the Great Lakes freighter Tecumseh. "The captain says he saw the start of the whole thing," the copsaid.

"Are you sure you saw this thing start, Captain Andrews?" Monk asked.

"Yes, are you certain, Grandpop?" added Jimmy Andrews.

"Hell, yes, I'm sure!" spat the elderly sea captain. "I may be old, but I ain't senile just yet!" Captain Aaron Andrews used a pocket knife to cut a chew from a plug of tobacco. He shoveled it into his mouth. "Whole thing started on the river right behind us."

"Can you tell me what happened?" Monk questioned.

Captain Andrews looked Monk in the eye, and then spat brown juice over the rail. "Coppers say your a Doc Savage man. That true?"

"That's right."

Captain Andrews nodded. "Do me a bit of reading out on the lakes. Newspapers and magazines mostly. They can't seem to figure Doc Savage out. Goes around helping folks. Doesn't seem to try and make a fast buck like so many folks seem to try and do. They can't figure out how he does it."

Monk stayed silent. One of Doc Savage's greatest secrets was the source of his funds. Once a month a mule train left a gold mine in the wilds of Central America. The mine was operated by an Indian tribe that owed its continued existence to Doc's protection. The mule train made it's way to the coast, and eventually the gold reached the 86th floor headquarters of Doc Savage in New York City.

Wiping some stray tobacco juice from his chin with the back of his hand, Captain Andrews continued. "Seems like the papers and magazines all figure he should be trying to cash in. Go to Hollywood. Buy him a big mansion. Take it easy. Live the good life."

"Uh. Doc just ain't like that," Monk said, uncomfortably.

"No reason he should be," Captain Andrews. "I just like to be knowing that there are still good, decent folks in this world who'll help out." He shook his head. "It's a wonder me 'n Jimmy ain't dead our ownselves."

"You did see this start up?" Monk prodded.

"Sure did," the old sailor replied. "There watching my cargo go ashore when I heared this crackling noise, like an ice cube hitting a griddle. Coming right from behind me, on the river."

"And the gas cloud?"

"Bubbling right up out of the river. When I first see'd it, it was maybe thirty feet high. Could see over it to the other side of the river."

"Well, then what happened?"

"Tarnation, it just kept getting bigger and bigger. Rose up into the sky, and the wind brought it right over the Tecumseh here."

"We were incredibly lucky," broke in Jimmy Andrews. "I came on deck right then, and as soon as I saw it I hustled Grandpop below. We dogged all the hatches down as tight as we could so the poison gas wouldn't get us."

"You were incredibly fortunate to escape from this predicament," came a voice from the Tecumseh's gangplank.

Turning, Monk saw the trim form of Johnny. "Permission to come aboard?" Johnny addressed Captain Andrews.

"Who be you?" questioned the captain.

"William Harper Littlejohn, at your service," answered Johnny.

"He's another one of Doc's helpers," added Monk. "When'd you blow into town, Johnny?"

"I make a water landing at the lakefront approximately half an hour ago," Johnny said. "The authorities directed me to this location as the proverbial scene of the crime.

"Now you, good sir," Johnny addressed Captain Andrews, "have stated that this unexplained phenomena was initiated directly adjacent to your vessel, and yet fortuitously you were completely unaffected?"

Captain Andrews squinted at Johnny, spit over the rail of the ship, and drawled, "Yah wanna put

that in English, young fella?"

Johnny had a love of words. He never used a five cent word if he could think of a two dollar one. He coughed, and then said, "In monosyllabic utterances, then: the - gas - came - right - up - next - to - you - but - you - were - not - hurt?"

"That's the ticket, all right!" Captain Andrews agreed enthusiastically. "Put it down to clean living, or pig blind luck, but old Aaron Andrews was right here where this poison gas thing started, and never even coughed once!"

Monk and Johnny found half a dozen other witnesses who verified that the yellow-green gas cloud had originated from the river behind the Tecumseh. But nobody in the area had been the least bit affected by the poison.

Monk took air and water residue sample from the area around the ship. When he analyzed them, there were very high concentrations of the harmless Phenol Yellow Four coloring compound, but no evidence of any poison whatsoever. The poison gas was not poison!

"TAKE ME through your story one more time," Long Tom told the girl.

They were sitting in Harvey Grace's office in the radio station. Patrolman Wetzel had turned the girl over to Long Tom. "We don't have anything to charge her with," he'd said. Maybe you can make sense of this story than your pal Renwick did."

"Like I've told you three times already," the girl replied, "my name is Margaret Adams. Doc Savage hired my brother Phil for one of his secret projects. He wrote to us from Norfolk a month ago and told us about it.

"When Momma got sick down home, we had no way to contact Phil. I was fixing to get on the train in Atlanta and come to New York City to check with Mr. Doc Savage in person when we heard he was here in Pittsburgh. So here I am. Now," her voice lowered into a tone that reminded Long Tom of a lioness defending her cubs, "where's my brother?"

"And like I've told you three times already, lady," Long Tom replied, "Doc doesn't work that way. Your brother's been duped."

"How can you be so sure?" Margaret Adams stormed back, her dark eyes flashing.

"Because you're the second girl in two days to come in with this same story. The last one was flakier than the crust on an apple pie."

That stunned Margaret. "Are, are you sure?"

"Let me lay out the other girl's story so you can try it on for size. Your brother was out of work, and couldn't hold a job. Somebody who said he represented Doc Savage hired him for a secret project. Your brother never actually meets Doc, but he's told he's working for him, and he isn't to contact his family until the hush-hush work is over. That sound familiar?"

"Well, except for the part about not holding a job. He'd learned a good trade when he was in the Navy."

Long Tom's ears perked up. "The Navy?"

"Yes," Margaret Adams answered. "In fact, he'd been working as a mechanic at the big Navy Base in Norfolk until they cut back their civilian work force. And then he couldn't find work any place else."

A light bulb went on for Long Tom. He asked slowly, "Why couldn't a mechanic find work anywhere else but for the Navy?

"He's a specialized mechanic," Margaret answered. "He works on submarines. And who else besides the Navy had submarines?"

"Submarines! Well, I'll be damned," said Long Tom.

He stood up. "Congratulations!" he told Margaret. "You get your wish!"

"What?" the girl responded incredulously.

"You're going to talk to Doc."

"What do you mean?"

"I mean we're renting a plane and heading for Cleveland," Long Tom announced. "I want you to tell your story to Doc Savage in person!"

DETROIT WAS bracing itself against the threat of the Steel Hammer.

Renny arrived in the speed plane to see the preparations. Two battalions of the Michigan National Guard were digging defensive positions along the banks of the Detroit River. Every soldier was carrying a gas mask for protection

The governor and the mayor had requested authority from the president to declare a city-wide bank holiday. Until the request was approved, the large downtown banks had added squads of private detectives for additional security.

Renny visited all of the main banks, giving advice, and helping arrange their security preparations. Then he proceeded to the Detroit airport. A major part of his plan was to have his airplane in constant readiness. The Steel Hammer's attacks in Pittsburgh and Cleveland had shown how futile pursuit on the ground would be. An airplane, speedy and flying above the clouds of yellow-green death, would be the perfect means of running down the criminal gang when they struck.

Once there, he radioed to Doc in Cleveland, to see if the bronze man had any more clues.

"Doc's still at the hospital," Monk replied.

"Have you learned anything?" Renny asked.

"This thing is crazy!" squeaked Monk. "There's these poison gas clouds, but they're not poison."

"That doesn't make any sense!"

"You tell me. Anyhow, Doc's still at the hospital. He's finishing up his treatments, and he was going to check on the autopsies of the people the gas killed."

"Dang it, Monk, has Ham smacked you in the head one too many times!" Renny roared. "You're talking crazy! How can gas that isn't poison be killing people?"

"I dunno, but it is," Monk said in a small, confused voice.

Johnny's voice replaced Monk's. "A most mysterious conundrum," he commented.

"Johnny? Is that you? What's going wrong with Monk?" burst out Renny.

"Indeed, it is I," said Johnny "Our chemist colleague perhaps puts it best when he says 'this thing is crazy'."

"Is Monk O. K.?"

"I believe so. His reasoning powers seem to have been impacted by the situation here. We have the toxic vapors appear from the river, apply their lethal ways to the citizenry, and then examination shows that they are not really toxic at all. According to Monk, this is "plumb dang impossible'!"

"Poison gas that ain't poison, but kills people anyway?"

"You have deduced the conditions we are observing," Johnny answered.

There was a banging on the door of Renny's plane. "O. K., I'll check back with you in a couple hours to see what's up." Renny made his way out of the cockpit to the rear of the plane and opened

the door.

There on the tarmac stood Sally Morgan.

Renny paled and slammed the door closed.

Sally pounded on the door again. "Open up, Renwick!" she called. "You and I've got a job to do!"

"Go away! Get lost! Put an egg in your shoe and beat it!" the big engineer responded.

"Aw. c'mon, big guy," pleaded Sally. "I know we didn't get off to the best start. But let's let bygones be bygones."

"Let's not! Let's have you leave the premises before I decide to wring your pretty little neck!"

"Listen, Renwick, I'm sorry about the smack in the head..."

"Smacks!"

"... sorry about the three smacks in the head. It wasn't personal. But listen, we can't dwell on the past, because we've got to get going."

"You've got to get going," Renny suggested menacingly. "Get going far, far away from here."

"No, we've got to get going, because we can get 'seven'."

Renny opened the door. Sally was still standing there.

"Explain yourself," he demanded.

"You know as well as I do, big fella," Sally Morgan replied, climbing up into the airplane. "One of the crooks in the Cleveland robbery addressed the Steel Hammer as 'Seven'." She brushed by Renny, and made her way up to the plane's cockpit. Renny followed her, dumbly.

"Nobody's been able to figure out what it means," Sally said, sitting down in the co-pilot's seat and strapping herself in. "But I know what it means."

She looked up at Renny. "Are you listening to me?"

Renny nodded.

"Then get this bucket of bolts in the air, and let's go catch the bad guys!"

Chapter 10

Searching For Seven

The newspaper headlines blared the story across the country.

STEEL HAMMER STRIKES CLEVELAND POISON GAS MENACE CONTINUED

The authorities still had managed to keep the demand for a ransom of one hundred million dollars from the press. But almost all other details of the attack in Cleveland had become public knowledge.

HAMMER GANG VANISHES ELUDES POLICE CORDON

* * *

Gang of Seven Grabs \$100 Grand Escapes Into Poison Gas Cloud

The newspapers all had their own interpretation of what had happened in the robbery:

Obviously, the Steel Hammer gang is organized with military precision. Each member of the gang seems to have a code number to use instead of their name. So the gang of seven crooks was lead

by a man named Seven.

Not all the newspapers agreed themselves. One ran a story proclaiming that the Steel Hammer was obviously the leader of a misguided cult, so lacking in humanity that it indulged in wholesale murder, and had impersonally replaced names with numbers. Another paper insisted that the Steel Hammer had been addressed as "Sven", not "Seven", and advised authorities to round up "suspicious-looking Norwegians and Swedes" for questioning.

"II'S ALL bunk," said Sally Morgan.

Renny and Sally were in the cockpit of Doc's speed plane, flying over southern Michigan at over 250 miles per hour.

"And you're so sure of the because..." Renny suggested.

"Because I know who the Steel Hammer really is," Sally continued. "He's a Chicago gambler named Steve McSwain, called 'Seven-Eleven' because he loves craps."

"And hearing the number seven, you automatically figure him to be the Steel Hammer?" Renny commented. "Lady, I need my head examined, listening to you." He began to work the stick and the rudder pedals to turn the plane around.

"No, listen!" Sally cried earnestly. "McSwain is big cowboy motion picture fan. He often decks himself out with a pair of six-shooters, just like the Steel Hammer."

"And that's all?" Renny said quizzically. But he kept the plane flying straight.

"No. The surveillance cameras at the bank show the Steel Hammer to be about six foot three, 220 pounds. That exactly matches Seven-Eleven McSwain's rap sheet."

"Anything else?"

"Just that the guy has dropped out of sight for the past month. Nobody's seen him anywhere."

"Just like your brother," Renny whispered under his breath.

"I heard that," snapped Sally.

"Do you deny it?"

Sally turned in her seat to face Renny, "Look, I know things don't look real good right now for my brother. But if Hank is wrapped up in this thing, then I want to try to get him out of it.."

"Strange, I figured you for more the wanna-win-the-Pulitzer-Prize type of newshen, myself," said Renny sarcastically.

"Believe what you want," Sally stated defiantly. But the fact is, my sources tell me that the biggest crap game of the year is happening tonight in Toledo, Ohio. If he's alive, Seven-Eleven McSwain will be there."

"And if he is?" asked Renny.

Sally smiled. "I figure between your muscles and my brains, we'll take care of him."

THE POLICE department delivered the two telegrams to Doc Savage just as he was leaving Memorial Hospital. The first read:

DOC SAVAGE
CARE OF CHIEF OF POLICE
CLEVELAND, OHIO

RECORDING OF ATTACK ANALYZED STOP HAVE ANOTHER GIRL WITH MISSING BROTHER AND BIG REPEAT BIG NEWS STOP COULD NOT GET YOU OR MONK ON RADIO SO RENTING PLANE AND COMING

LONG TOM

The second telegram was also in care of the Chief of Police:

SALLY MORGAN HERE IN DETROIT STOP IDENTIFIES CHICAGO GAMBLER SEVEN ELEVEN MCSWAIN AS THE STEEL HAMMER STOP COULD NOT GET YOU OR MONK ON RADIO STOP FLYING TO TOLEDO TO TRY AND TRAP HIM

RENNY

The low trilling sound emitted from Doc.

"What can we do?" asked the police officer who had delivered the message.

Realizing that he had been unconsciously making the noise, Doc instantly stopped. ""My aircraft is probably anchored at the lakefront," he said. "Can you take me there?"

"Right away, sir!"

"WHAT HAVE you found out?" Doc Savage asked Monk and Johnny when he arrived at the big tri-motor plane that was anchored off the Cleveland lakefront. It was nearly midnight.

"Blazes, Doc, I hardly know where to start!" exclaimed Monk. "Johnny got here, and me and him gathered samples until dark, and interviewed witnesses. Then we came back here, and found recorded messages from Renny and Long Tom."

"I got telegrams from them. Where are they now?"

"Renny's landed in Toledo, Doc," said Johnny. Doc Savage was the one human being he did not use his advanced vocabulary on. "He and the girl have cooked up a scheme to capture this Seven-Eleven McSwain character that they think is the Steel Hammer."

"And Long Tom?"

"He should be here in about an hour or so. He's bring a girl named Margaret Adams who supposedly also has a brother working for the Steel Hammer gang."

Monk slammed a huge hairy first into the metal side of the plane. There was a resounding metallic, gong! "This thing is getting screwier and screwier! Guess what I found when I ran the liquid samples I collected through the testing process?"

Doc turned and faced Monk. "You found amounts of the chemical compound Phenol Yellow Four throughout the downtown area. The concentrations of it were strongest near the Cuyahoga River. The only place you found any trace of the poison gas was in a two block area along East Second Street."

"Blazes, Doc, how'd you know that!" Monk was astonished.

"Because the only authenticated poison gas fatalities which were brought to the hospital came from that area." Doc turned to Johnny, "I'm glad you're here. What do you make of this?"

"On the surface, Monk has it right -- it doesn't make sense," Johnny replied. "Poison gas that isn't always poison. Gamblers and bank robberies and insane ransom demands. I'm starting to think ..." He paused.

"Go ahead," said Doc quietly.

"Certain cultures place a great value on complicated rituals. They tend to use misdirection and schemes to confound their enemies to a greater extend than we do. The logic of western civilization tends to be linear. A leads to B, which leads to C, and so on.

"But in other cultures, A leads to D, which leads to J, which leads nowhere, while B leads to C, which leads to K and the true path," Johnny finished.

"You lost me with the alphabet," Monk said glumly.

"I believe you have deduced this correctly, Johnny," said Doc. "Much of what we have been dealing with here has no doubt been calculated to confuse us and deflect out inquiries. There are many things which are not what they seem to be. We are dealing with a very dangerous group who wishes their motives to remain secret."

Monk snorted. "Doc, I think them asking for a ransom of one hundred million smackers in gold would give a guy a pretty good idea as to their motive."

"That's a crimson Clupea harengus," elucidated Johnny.

"Translate or I wring your scrawny neck." growled Monk.

"A red herring," Johnny said. "Something they want us to puzzle over which they have no intention of following through upon."

"How do you know?" Monk asked.

"Mathematics."

"Huh?"

"The price of gold is fixed by the government at \$32 an ounce," Johnny said. "One thousand dollars in gold weighs roughly about two pounds. One million dollars in gold weighs two thousand pounds, or one ton. One hundred million dollars weighs..."

"...One hundred tons!" Monk finished. "They'd need a locomotive to haul it away!"

"Precisely," agreed Doc. "Nobody could ever realistically hope to collect such a ransom. We can assume such a demand was made only to divert us from investigating the Steel hammer's real purpose."

"Which is?" asked Johnny.

Doc shook his head. "I do not know. I've gained some information, but not enough."

"Police boat coming out from shore," Monk called.

IT CARRIED Long $\ensuremath{\mathsf{Tom}}$ and the brunette he introduced as Margaret Adams.

"I've got big news, Doc," he said. "I didn't want to put it in the telegram: too many prying eyes out there. We rented a plane and landed at the Municipal Airport here about twenty minutes ago. The cops gave us a lift here."

"You were able to analyze the sound recording?" asked Doc.

"Absolutely. I've made a copy to play back for you," said Long Tom.

"Set it up on the plane's electrical lab equipment," Doc ordered. "Monk, Johnny, prepare for take-off."

"Now just a coal-fired minute here," said Margaret Adams. "What is going on here and where's my brother?"

"Miss Adams, we are in a desperate situation, and the lives of countless fellow Americans depend on our success," Doc said sternly. "I need to find out information from you, but I also need to begin traveling immediately. Therefore, I'm going to have to ask you to accompany us for a while.

Please sit down here," Doc guided her to a seat, "and strap yourself in with these belts, and you and I will talk presently."

Three minutes later the plane bearing Doc Savage, Monk, Johnny, Long Tom, and Margaret Adams took off into the Ohio night.

Chapter 11 Lucky Seven

"Listen to this, Doc," said Long Tom.

The Man of Bronze sat in the electrical section of the big tri-motor plane's laboratory. He had a set of headphones on.

"First, the crackling noise," Long Tom said, flipping a switch to play back the recording.

"Rapidly boiling water, in massive amounts," said the bronze man.

"Exactly. Now, the so-called screaming."

"An air raid siren. English manufacture." Long Tom raised his eyebrow at Doc's ability to discern this merely from hearing the sound.

"And now this, Doc."

Doc listened silently.

"I take them to be mortar shells," Long Tom suggested.

"Yes, of course," Doc said. "I suspected as much."

"You did?"

Doc clicked on the airplanes intercom. "Monk, have Johnny take the controls and come back here."

"Sure thing, Doc," Monk replied. The burly chemist quickly made his way back to the big tri-motor plane's lab. "What'cha got?"

"Long Tom has solved the poison gas mystery for us," Doc announced.

"So how is it that a poison gas isn't all poison?" challenged Monk.

"We're not dealing with Boyle's Law, Monk," said Doc. "Think more along the lines of van der Waal's Equation."

"Old van der Waal's Equation?" Monk's brow furrowed. "Van der Waal? You mean?" he snapped his fingers. "Of course! Blazes! There's two gases!"

"Exactly," agreed Doc. "The crackling noise comes from water being rapidly boiled, which forms the cloud. During the boiling, Phenol Yellow Four is added, giving the cloud its distinctive yellow-green color."

"So how does the poison gas get there?" Monk asked.

"After the yellow-green cloud is built up, they start the screaming siren, Partly, it terrifies the populace, but it also covers up the sound of mortars being fired."

"Mortars!"

"Yes, they shoot poison gas shells from mortars into the yellow-green cloud. With the cloud and the noise, nobody knew that had happened, and everyone assumed the entire cloud was poison."

"A little bit of the poison gas goes a long way to scaring innocent people," commented Long Tom.

"And they're careful not to get it near where their own guys are," said Monk.

"Yes, in both Pittsburgh and Cleveland, the poison gas was introduced far away from where the actual robberies took place," Doc said. "Even with gas masks, the crooks don't want to take any chance with poison gas."

"O. K., I see how that part of it is working," Monk said slowly. "But how are they making the yellow-green cloud in the first place?"

Long Tom smiled. "Doc, Monk, I think it's time you met Margaret Adams."

"IF THIS doesn't work, I'm never listening to you again," Renny rumbled.

"Don't be ridiculous," snapped Sally Morgan. "If this doesn't work, we'll both be dead."

The big engineer's appearance was greatly altered. Using one of Doc's disguise kits in the speed plane, he had altered his appearance. His hair was died black, parted down the middle, and slicked down. A black, pencil-thin mustache adorned his upper lip.

The disguise had been Sally Morgan's inspiration. "It's kind of a stretch," she had pondered, "but with your build, and voice, I think we'll be able to pass you off as Blackie White, the East Coast mob boss.

"Besides," she added, "a crook that big will get admitted automatically to a game like this."

"Just two little problems," Renny had rumbled.

"You can find a problem with anything," retorted Sally.

"Problem number one," Renny continued. "What if the real Blackie White shows up?"

"He won't. Things got too hot for him last winter, and he had to leave the country until things cooled off. Nobody's seen him in months."

"And problem number two," Renny plowed on ahead, "what if we run into somebody who knows the real Blackie White, or knows where he really is?"

"If there's trouble," Sally said confidently, "either we bluff our way through it, or shoot our way out of it."

"Helluva plan."

"You do have one of those super pistols that Doc Savage has invented, don't you?" asked Sally.

Renny nodded, and drew it from his shoulder holster. The super-firer, of Doc's own design, could fire hundreds of miniature bullets minute. "This'll clear a room in a hurry." he said.

"Good, let's get ready," Sally, had said.

A QUICK hours shopping had provided Renny with a gray double-breasted, pin-striped suit, and Sally with a red dress. Neither suit nor dress was large enough for the wearer. But while Renny looked like a large fellow who had trouble buying clothes large enough, the effect of the too-small dress on Sally was rather sensational -- she looked like a first-rate gangster's moll!

Sally's newspaper and underworld contacts had provided them with the location of the big crap game. It was in the Elite Auto Garage in downtown Toledo. Two hoods were standing guard outside of the. When Renny and Sally got out of the cab on the street, Sally got most of their attention, but one of them took a close look at Renny.

"Hey, ain't you ..." the guard began.

"Who I am is kind of my business," growled Renny. "And maybe you ain't supposed to be seeing me, understand?'

"Yeah, sure, uh. Bla..., uh?" mumbled the hood.

Renny forced a smile to his lips. He slipped two bills out of his pocket. "But maybe you and your buddy recognize my buddy? President Grant?"

"Yes sir!" The two fifty dollar bills quickly disappeared. "Right this way, Mr. White!"

"Please, no names," Renny said with a sharp edge to his voice.

"Yeah, sure thing." The hoods held the door to the garage open.

"Let's go, Doll Face," he order Sally, for the benefit of the hoods.

"Sure thing, Sweetie Pie," she replied.

The automobiles and repair equipment had been moved out of the Elite Auto Garage. A large gaming table for rolling dice was in the center of the garage. Smaller tables, for the not-so-high rollers, surrounded it. A bar was set up in the back of the garage, and liquor flowed freely among the fifty or so gamblers present.

"Do you see him,?" Renny whispered out of the corner of his mouth as he and Sally enter.

Sally scanned the room as unobtrusively as she could, looking for Seven-Eleven McSwain. "I don't think so." They circled the room, stopping at the bar, and ending up at the big crap table. There was no sign of the gambler Sally suspected of being the Steel Hammer.

"It's still early," whispered Sally. "Lots of times the real action doesn't start at these things until after midnight.."

Renny and Sally went to the big, center table. They watched the action, and Renny had Sally make small side bets, which she invariably lost, accompanied with a squeal of dismay. They both drank steadily, but beforehand had taken a special pill of Doc Savage's design which completely neutralized the effects of alcohol, and so were completely sober.

Various participants in the game came up to them, but Renny quickly made it clear to one and all that the name "Blackie White" was not to be spoken, and that his fondest desire was for his presence to remain unnoticed.

It was shortly after midnight when there was noise and shouting from the doorway.

"The big money's here!"

"Now the table gets hot!"

A tall man in a cowboy hat and a western suit with a string tie swaggered into the room.

"That's him!" Sally hissed.

"Wahoo!" the man in the cowboy hat shouted. "Seven-Eleven's here, and the dice are calling!"

The gambler was obviously well-known, and he exchanged greeting with many people as he made his way to the center crap table. Grabbing the dice, he said, "The new shooter's here! Now let me see whose money I'm going to be winning!"

Seven-Eleven McSwain looked around the table. When he saw Renny, his face contorted, and he instantly fell to his knees.

"Oh, God, Blackie, please don't kill me!" he screamed.

Chapter 12 Snake Eyes

Renny was stunned. No one else that they had met had seemed that well acquainted with Blackie White. Sally Morgan had not mentioned any special relationship between the gangster he was impersonating and Seven-Eleven McSwain.

Renny knew he'd have to play this one by ear.

"Maybe I'll kill ya, and maybe I won't," he said menacingly. "How about you give me a reason?"

The big gambler, still on his knees, cringed. "Aw, jeez, Blackie, this is maybe the biggest game of the year. How could I miss this?"

"You tell me," Renny said flatly. He was trying to draw McSwain out, to try and figure out what the gambler's connection to the crime boss really was.

"Blackie, I know you want to keep us all isolated, but --" McSwain suddenly looked around, as though he'd said something he shouldn't have.

"You and I need to talk," Renny said boldly. "But not here. Too many ears."

"Gotcha, Blackie," said McSwain. The gambler got up off his knees, and dusted himself off.
"There's are alley out back here," he said, indicating a dim doorway at the rear of the garage.

"Sounds good," Renny agreed. Things were working out swell. Seven-Eleven McSwain was voluntarily heading for an isolated spot where Renny could grab him and begin getting to the bottom of the mystery of the Steel Hammer.

They headed for the rear doorway, with Sally following. McSwain shot a curious glance at the girl.

He's getting suspicious, Renny thought. He turned and growled gently to Sally, "You stay inside here and stay warm, Doll-Face. Man's business."

He turned and followed Seven-Eleven out the door. Better and better, Renny thought. He was going to put the bag on McSwain, and then ditch the pesky girl reporter, all at the same time. A rare grim crept over Renny's rough features.

LONG TOM quickly filled Doc Savage in on what he had learned from Margaret Adams. "It's the same story that Morgan dame gave Renny," he finished.

"I understand," Doc said. To Margaret Adams, he said, "How did your brother learn about submarine engineering in the first place?"

The brunette girl simply stared at Doc.

"Miss Adams?" he repeated.

The girl remained speechless. Doc had experienced this phenomena before. Young women would be overcome by the tremendous physical appearance the Man of Bronze presented. Some would even throw themselves at him. To these, Doc would have to explain that there was no place for romance in his life. His enemies would use any known female companion as a way to get at Doc.

"Miss Adams, please!" There was a commanding tone to Doc's voice.

"Huh? Oh, excuse me," the girl replied. "You were saying?"

"Your brother, Phil. Where did he gain his knowledge of submarines?"

"In the navy, during the war. He was a machinists mate. Then, after the war, he got civilian job working for the navy working at the big base at Norfolk. But they cut back two years ago, and he hadn't had a job since until you hired him." The girl stopped. "But I guess it wasn't you that hired Phil, was it?"

"Someone has gone to a great deal of trouble to make people think I was hiring people, Miss Adams. I believe your brother has been innocently duped into their scheme. We are desperately searching for clues. Can you remember any details of letter your brother wrote to you?" Doc asked.

"I'm trying," pleaded Margaret. "I really wish I could."

"Do you see my watch, Miss Adams?" Doc asked quietly.

A bronze pocket watch, suspended from a chain, was swinging back and forth slowly in front of Margaret Adams face.

"Yes."

"Please keep your eyes on it. See it swing back and forth?"

"Yes."

"As you look at it, you will find that you are getting sleepy. When I count to three, you will fall into a deep, relaxing sleep. Do you understand?"

"Yes."

"One. Two. Three."

Margaret Adams was instantly asleep. Hypnotism had been part of Doc's medical training. Not every person can be hypnotized, but Doc had realized that Margaret's close interest in him made her an ideal subject.

"Can you hear me, Margaret?" Doc asked.

"Yes." The girl's voice was normal; not the fake, ethereal sound used often to depict hypnotized subjects in motion pictures.

"Do you remember the letter your brother Phil sent you?"

"Yes."

"Do you remember what the letter said?"

"Yes."

"Tell me what the letter said."

The girl spoke normally and surely. "Dear Momma and Everybody. I got a job. It is a special project run by Doc Savage for war veterans. We are helping him. The pay is real good. I haven't seen the big guy personally yet, but I am looking forward to it. I can't tell you much about what we are doing cause it is one big secret, let me tell you. Hint, hint, I'm working on a new-fangled kind of the same thing I worked on in the navy. Don't worry about me, cause I am fine. We are real good took care of, with plenty to eat. But is sure is cold up north here, and the damp tunnels play heck with my old sinus problem. Give everybody down on the farm a big hug from me. Love, Phil."

"Submarines and tunnels!" exclaimed Long Tom. "What in blazes is going on here?"

"When I count to three, you will awaken," Doc said to Margaret. "One. Two. Three."

"I did remember, didn't I!" Margaret burst out immediately. "But do you know what it means, Mr. Savage?"

Doc Savage sat motionless. But the low, trilling sound Doc made during periods of intense concentration filled the cabin of the plane.

IN CRAPS, a roll of seven is a "natural" -- an automatic winner. When the shooter rolls a seven, he wins.

When Renny Renwick stepped out into the alley after Seven-Eleven McSwain, he found himself on the losing side of a "natural".

Waiting for him out in the alley were six of the ugliest toughs whose photographs had ever graced wanted posters. Not one of them was under six feet tall, not one was under two hundred pounds.

"Get him!" shouted McSwain, and the seven jumped the big engineer.

Without thinking, Renny lashed back. His huge fist shot out and laid two of his attackers low almost immediately. No time now to consider how McSwain had seen through his disguise; there were only the incredible seven-to-one odds to fight against.

It was a hopeless fight. But the darker the picture, the more near cheerful Renny became. A ghost of a smile almost came over his puritanical features.

In craps, a roll of a pair of ones is known as "snake eyes".

It is a losing roll for the shooter.

Renny fought a valiant battle. He had fought against seven.

But the fight ended with only two men standing. Neither was Renny.

He had crapped out.

Chapter 13

Under the Hammer

Doc Savage moved quickly to the plane's cockpit. "Johnny, we're approaching Toledo. I want you to activate the homing tracer on Renny's shoe."

"Will do, Doc."

"Circle over it. I'm going to bail out. Land the plane, get a car, and I'll meet you there on the ground."

"I'm bailing out with you, Doc!" cried Monk, who was ready for a fight.

"No. You're flying this plane to Detroit as soon as you let Johnny, Long Tom, and the girl off in Toledo."

"But Doc---"

"Work with the Detroit authorities. Assume an attack is planned in the financial district near the waterfront, somewhere near Cass Avenue. Sweep through and guard every park and vacant lot within a five mile radius," Doc ordered.

"Guarding parks and vacant lots?" Monk queried. "What gives, Doc?"

But Doc was already moving away to the radio room.

Monk turned to Long Tom. "Can you figure it?"

"Five miles is about the maximum effective range of a mortar shell?" replied Long Tom.
"If you can get all the firing positions covered, you may be able to catch them trying to deploy the mortars and stop a poison gas attack."

"Yeah, I got it," squealed Monk. "Hey Doc ---"

But he was addressing the planes open door. Doc Savage had leapt out into the inky black of night.

"GET UP, you muggs," Seven-Eleven McSwain growled.

Slowly, the five thugs Renny had put down struggled to their feet.

"Who was that guy?" One of them lisped, as he spit out a tooth.

Another rolled over Renny's unconscious form. The streetlight shown down on Renny's features, made up to look like Blackie White. "Kee-ripes! We got the boss!" the man exclaimed.

"We got a spy," corrected McSwain. "Blackie White should be in the hideout up in Michigan right now. There's no reason for him to have come to Toledo, and even if he had, he wouldn't have us here,

not the way 'Wheels' drives." He thumped the biggest of his henchmen on the arm.

"So when I walk up to the garage, and they boys out front tell me that Blackie White is inside, I knew that it had to be a set-up. I had you boys wait for me out back here, and all I had to do was get the guy to come out into the alley."

"Pretty clever, Seven-Eleven," mumbled Wheels.

"Yeah, I even amaze myself sometimes," McSwain stated with proud self-admiration. "Now let's get this guy in the car."

"Where we headed?" came a question.

"We're going to make him a present," said McSwain. "The guy wants to dress up like Blackie White -- why, I say we give him to Blackie White! Let Blackie figure it all out."

There was general chuckling approval to this suggestion. Two of the men grabbed Renny's feet, and they began dragging him down the alley, none too gently.

"Get your hands in the air or I'll blow your heads off!" came a loud, unmistakably female voice.

Sally Morgan had not waited inside.

SEVEN-ELEVEN MCSWAIN responded by drawing his twin six shooters and blasting away into the

In response came the roar of an automatic weapon, resembling the sound of a huge bullfiddle. One of McSwain's henchmen went down, and the rest scurried for cover.

"Let's scram," suggested the big, burly Wheels.

"Yeah, we're scrammin'," agreed Seven-Eleven quickly. "Rocko, Nails, lay down some covering fire while we get these guys to the car."

Lead flew in both directions. Determined not to be cut out of the action, Sally had followed Renny into the alley. While she'd been in Renny's plane, Sally had appropriated one of Doc's super-firers, and concealed it in her purse. Unfamiliar with the weapon, she was not very accurate, but she laid down a huge volume of fire, and McSwain's henchmen were glad to pile into their big touring car and quickly leave the scene, to the sound of squealing tires.

"Did we get everybody?" Blackie demanded as they sped through the streets of Toledo. "Do we got the fake Blackie back there?"

"Got him," came the reply.

"How about Leon? Wasn't that him that got hit back there?"

"We got him too, Seven-Eleven."

"Good," McSwain said with satisfaction. He hadn't wanted to leave anyone behind to become prisoners, who might be interrogated. Then, thinking his men might not understand his attitude, he added, with feigned concern, "Is Leon hit bad?

"I can't even see where he was hit," replied Nails.

"Huh?"

"I mean there's not a mark on him. Nothing. But he's just sleeping like a baby."

"Sleeping?"

"Yeah... Like he's been knocked out instead of shot. Like he'd been ..."

All at once, everyone in the car said it out loud.

"Doc Savage!"

"Yeah!" yelled McSwain with glee. "The Savage guy uses knock-out bullets instead of regular slugs."

"I don't like the idea of Doc Savage being on our tails," Nail said.

"Don't sweat it," said McSwain.

"Don't sweat it? With Doc Savage out there?"

"Ya moron, Doc Savage ain't out there," said Seven-Eleven.

"Whatta ya mean, he ain't out there? How do you know?" argued Nails.

McSwain turned in the front seat of the car. "Think about it, stupid. Doc Savage is a great big tough guy. He's a master of disguise. Think what we got." He pointed at Renny's unconscious form on the floor of the car.

"Doc Savage ain't 'out there'. He's right here.

"Don'tcha understand, ya muggs? We've captured Doc Savage!"

A STRAY shot in the gunfight behind the Elite Auto Garage had creased Sally Morgan's arm.

The sounds of the gunfight had attracted the Toledo police. They were debating rather to take her to the hospital for stitches, or to take her to the police station for questioning. Sally's side of the debate consisted of advising them to go jump in the lake.

That was the situation when the taxi cab pulled up with Johnny, Long Tom, and Margaret Adams in it.

"Are we going to be jake with the local law?" Long Tom asked Johnny as they got out of the cab.

"Indubitably," Johnny replied. He searched through his wallet and pulled out a credential card showing an honorary commission in the Ohio State Police. Doc and his men habitually carried such identification, given to them for their many past efforts in helping law enforcement agencies.

"That's got to be Sally Morgan," Long Tom said, indicating the blonde reporter.

"Yes, such pandemonium could only be causated by that illustrious member of the fifth estate," pronounced Johnny.

"What did he say?" asked Margaret Adams.

"I'm not quite sure," said Long Tom, "but dollars to doughnuts, that's the other girl with a missing brother. Now let me get over there before Johnny hopelessly confuses the cops."

THR TOLEDO police were only too happy to turn over custody of the combative newshen to Doc Savage's aides.

Sally Morgan was less impressed.

"So where's the big bronze guy himself?" she asked.

"He isn't here?" replied Margaret Adams.

Sally considered the small brunette. "Littlejohn and Roberts I recognize, but how do you fit into all this, little sister?"

"I'm looking for my brother. He's ---"

"Listen," interrupted Long Tom, "we'll play twenty questions later on. Right now, we're looking for Renny and Doc."

"You don't know where they are?" Sally shot back.

"Perhaps you would enlighten us by recounting recent occurrences in these environs," Johnny said.

"Nothing like a big vocabulary to attract a woman," said Sally sharply, But then she quickly told of Renny's disguise as Blackie White, the arrival of Seven-Eleven McSwain, and the subsequent kidnapping of Renny.

"Doc Savage never showed up all," she concluded.

As she finished, Long Tom pulled a small device from his jacket pocket. It was a miniature radio direction finder. He tuned in to the frequency of the small transmitter that was hidden in Renny's shoe.

"This is crazy," he said.

"Explain." said Johnny.

"According to this, Renny hasn't gone anywhere. He's right here in this alley!"

"That is crazy," agreed Sally Morgan. "I saw McSwain and his thugs haul him off."

"Let me recalibrate," Long Tom said.

The device again indicated that Renny was not more than fifty feet away from them.

"That's so spooky," said Margaret Adams.

"There's got to be a rational explanation," said Long Tom.

It only took them five minutes to find it.

The violence of Renny's fight against seven-to-one odds had separated him from a good part of his clothing.

His jacket was in the alley, in three pieces.

So was the left sleeve from his shirt.

And so was the shoe with the radio homing transmitter in it.

Renny was truly gone!

Chapter 14

The Real Blackie White

No police officer had ever visited Paulson Orchards.

There was no reason. The small apple orchard located in the "thumb" of Michigan, about seventy-five miles north of Detroit was an ordinary looking place. That made it the perfect criminal hideout.

The owner, "Apples" Paulson, had provided refuge for his brother-in-law, a noted Mid-Western bank-robber. Word had spread, and now Paulson Orchard was one of the best-kept secrets of the underworld, providing a secure hideout for wanted men -- at a price of a hundred dollars a day.

Following careful directions from Seven-Eleven McSwain, Wheels pulled the getaway car containing the captive Renny into the orchard when it was almost dawn. Driving past the carefully ordered rows of apple trees, he came to a stop in from of what appeared to be an apple storage barn.

In reality, the building housed a dormitory for wanted criminals, and meeting rooms in which they could plan future crimes.

"Keep an eye on him, boys," commanded McSwain, as his thugs cragged Renny out of the car. "You've

all heard how tricky this guy can be." He disappeared into the apple barn.

Tied hand and foot, Renny lay on the ground with his eyes closed. He had become conscious over an hour earlier, but was keeping quiet, hoping to learn more information about the Steel Hammer gang.

Seven-Eleven McSwain was gone inside the building for about ten minutes. Then the door opened, and he stepped out, followed by another man. The man walked over to where Renny lay, grabbed him by the hair on his head, and pulled his face close.

"Wake up, Savage," the man growled.

Renny opened his eyes. It was like looking in a mirror. He was facing the real Blackie White.

"How'd you tumble onto us, Savage?" Blackie asked.

Renny said nothing. Somehow the crooks were convinced that he was in fact Doc Savage in disguise. Renny was going to let them go on thinking that. It would give Doc time to take his own actions to stop the gang.

"The guy really is a master of disguise," said Seven-Eleven. "If I hadn't known it couldn't have been you. I would've been fooled."

"Yeah, for once your stupid way of not being able to follow orders really paid off," Blackie said. He looked closely at Renny's disguised face. "Somebody get me a flashlight," he suddenly ordered.

The thin light of dawn was not giving Blackie enough light to see by. A flashlight was produced.

Blackie White shined in intently on Renny's disguised face.

"Doesn't Doc Savage have golden-colored eyes?" he asked.

There was general agreement.

Blackie let go of Renny's hair, and let him fall to the ground. "Then this guy ain't him," he said disgustedly.

THE FIRST person Monk met when he landed in Detroit was Ham Brooks.

"You over-dressed fashion-plate! What are you doing here?" demanded Monk. "I thought Doc told you to go to Buffalo."

"Change in plans, King Kong Junior," Ham replied. "Doc radioed me to rent a plane and come here before you all left Cleveland. And he sent me another quick message before he bailed out of your plane over Toledo."

Amid much noise and threat of bodily harm, if not actual physical dismemberment, the two filled each other in on the details of the case.

"...and so I let Johnny, Long Tom, and Margaret Adams out at the airport in Toledo, and headed straight here," Monk concluded. "Now you can help me convince the Detroit Police and the Michigan National Guard to start poking around in the city parks."

"That out to be a snap, compared what he asked me to do."

"What's that?"

"Chase down a submarine. On dry land."

ONE OF Seven-Eleven McSwain's henchmen recalled hearing rumors that Doc Savage employed thin lens of glass, inserted onto the eyeballs, in order to change their color. After much poking and prodding of Renny's eyes, they determined that their prisoner was not in fact Doc Savage. Exactly who he was, and what he had been doing, impersonating Blackie White remained at mystery, since Renny remained grimly silent during a series of kicks, punches, and threats about what might be done to make him

talk.

While this was going on, nobody noticed that the driver, Wheels, had slipped away into the apple barn. The large man made a quick yet thorough tour of the building. There was nothing there. Blackie White had been the only member of the gang at Paulson Orchards.

A low, trilling sound filled a small corner of the apple barn.

For Wheels, Seven-Eleven McSwain's huge drive, was in fact Doc Savage!

DOC HAD arrived by parachute while Renny had still been inside the Elite Auto Garage with Sally Morgan. He had made an investigation of the premises from the rooftop.

From there he had observed the arrival of the large touring car. One man had left the car, talked to the guards in front of the building, and then returned to the car. The car had immediately pulled around the alley behind the building, and the seven men piled out to set up their ambush.

Slipping silently off of the roof, Doc had moved silently behind the largest of the men, and grabbed him at the base of the neck. The man, Wheels, went limp. Doc's skill as a surgeon allowed him to isolate a particular nerve cluster, and by compressing it, produce instant unconsciousness.

Using a small, yet well-equipped disguise kit that he carried with him always in a special compartment of his vest, Doc hurriedly disguised himself, and joined Seven-Eleven's gang.

The joker in the deck came when Sally Morgan came out into the alley and started blasting away with the super-firer. Doc's plan was to go with the gang, trying to trace the base of operations of the Steel Hammer.

It would not serve to get involved in a running gun-battle in Toledo. Though he never carried a gun himself -- Doc believed that the habitual carrying of a firearm made a man too reliant on a physical weapon, rather than his wits -- he was a master marksman. Using Wheels' pistol, he had placed several accurate shots very near to Sally Morgan. These forced her to keep her head down while McSwain's henchmen loaded Renny's unconscious form into the big touring car.

But the plan was not working out how he had hoped. Apparently, Blackie White was the only other member of the gang here at the orchard hideout. There were no mortars, no mortarmen. No submarine, no sailors.

So as not to arouse suspicion, Doc slipped back outside.

The interrogation of Renny was just concluding.

"Probably some G-man," Blackie White guessed. "The only thing I don't know is that if they've figured out the Steel Hammer angle, or it this is some old business catching up with us."

There was some grunting and concern from all present. There was not a man there with less than \$5,000 in rewards posted of their capture.

"Hey, don't you muggs start worrying now!" Seven-Eleven crowed. "This thing is fool-proof. All you've got to worry about is how you're going to spend the million bucks apiece you're each going to get for your share of the payout."

"Newspapers say the payout is supposed to be a hundred million smackers," commented Rocko.

"And what do you care about the newspapers?" McSwain challenged.

"Aw, I ain't saying nothing, Seven-Eleven," Rocko answered. "Just that we're the ones walking into the banks, moving through the poison gas, and taking the risks."

"Listen up!" said Blackie White. "You need to appreciate how big this thing really is. I've got a lot more than you guys on the payroll, and there's been plenty of expenses too. You agreed to your end of the split when we started this thing. Besides, none of you have been anywhere near the gas when it's gone in.

"Now I'm gonna get Paulson to set us up some breakfast here in a little bit. You guys get some

rest. The Steel Hammer is scheduled to take down the Peninsula Bank on Cass Avenue in Detroit at high noon today!"

Chapter 15
The Dry-Land Submarine

The writing on the wall had led Johnny and Long Tom to Detroit.

After finding Renny's shoe, they had made a more thorough search of the alley. Using devices which looked like miniature flashlights. The devices projected light beams of ultra-violet, outside of the visible spectrum of lights. Doc and his men carried pieces of a special chemical chalk, which could be seen only when an ultra-violet light hit it.

They found the unconscious body of Wheels, and a message chalked on the wall:

I'M FOLLOWING RENNY -- SEND THIS GUY TO COLLEGE -- GO TO DETROIT

It was in Doc's handwriting.

"What's that?" came Sally Morgan's voice.

Both men quickly shut off their ultra-violet light projectors. The so-called "college" was one of Doc Savage's biggest secrets.

"Well, what did it say?" Sally continued.

Relieved that she hadn't seen the contents of the message, Long Tom gave her an edited version. "Doc is with Renny. They're no doubt shadowing the gang. We're to head to Detroit." He omitted any mention of the "college".

Doc Savage rarely turned over any criminals he captured to the authorities. Instead, he sent them to his "Crime College" in upstate New York. There, they received a delicate brain operation, devised by Doc, which erased their memories and cured them of the criminal tendencies. They were taught citizenship and a useful trade, and released back into society as useful citizens. The concept of "curing" crime was probably a hundred years ahead of its time, and Doc kept the operation very secret, for fear of public outcry.

Johnny took Sally Morgan and Margaret Adams along with him to cry and make arrangements for travel to Detroit. Long Tom contacted the local branch of a nationwide detective agency to arrange for the transport of the prisoner to Doc's college. The agency was most reliable and discrete -- almost all of its employees were "graduates" of Doc's facility.

IT TURNED out the quickest way to Detroit was to continue on in the taxi cab. No speedy airplanes were available for quick rental, and an automobile driven with a heavy foot would beat the fastest train. The promise of a \$100 bonus for speedy delivery gave the Toledo cabby a very heavy foot indeed.

The command post of Colonel Lawson of the Michigan National Guard was where they managed to link up with Monk, who was helping organize search grids.

"Jeez, am I glad to see you guys," the big chemist said to Johnny and Long Tom. "Is that blonde babe Sally Morgan?" Monk always had an eye for the ladies.

"And I'm guessing you would be Monk Mayfair?" Sally replied.

"At your service," Monk said gallantly.

"So with you here, and Doc Savage and Renwick undercover somewhere, the only member of your group I haven't met would be the lawyer, Ham Brooks. Where's he?"

"Aw, old Ham just left to try and make a telephone call to check on his wife and thirteen half-wit children," Monk lied solemnly. Ham and Monk often competed for the favor of good-looking

women, and neither ever missed the opportunity to ruin the other's chances.

"And what are you doing here, Mr. Mayfair," Sally said, taking Monk's arm in her hand.

"Oh, call me Monk. I here coordinating..." Monk suddenly stopped. More than once, he had gotten into trouble for blabbing to a pretty face. He looked to Johnny and Long Tom.

"Go ahead. Tell her everything," said Long Tom.

"The two females of the species have conducted an epic conversation, and have deduced virtually the entirety of the situation," said Johnny.

"I've warned you about that vocabulary," Sally told Johnny. "And might I remind you, if it wasn't for us females, you fellows would still be in Pittsburgh scratching your heads."

That wasn't entirely accurate, but there didn't seem any point in arguing with it, so Monk went ahead and began explaining that they were looking for places where mortars could be fired from.

"I still can't believe that my brother Hank would have anything to do with these poison gas attacks," Sally said.

"My brother either," said Margaret Adams.

THE TRUTH was that both girls were right.

Their brothers had been played for prize suckers by Blackie White.

He had not, as was popularly believed, been hiding out somewhere out of the country. Instead he had been, as "Frank" White, been assembling one of the most clever criminal gangs in history. A gang all the more dangerous because most of the members had no idea that they were involved in anything criminal.

Instead, they understood that they were helping for fight crime with Doc Savage!

Hank Morgan, the former army mortarman, had no idea he was actually firing poison gas shells. It had been explained to him in this way.

"Doc Savage has learned of an incredible plot to attack this country with poison gas," Black White had lied, just as he lied to all of the men he recruited. "He has come up with new inventions to stop this threat.

"One of them is this "Anti-Gas" mortar shell. When it explodes, it instantly provides a neutralizing effect that stops poison gas.

"Another is the "Anti-Gas" gas that the submarine produces. It sets up a protective barrier that stops the gas from affecting people. You'll be able to tell that it's working, because it will appear as a yellow-green fog."

This line proved to be surprisingly effective. Almost everyone knew that Doc Savage operated secretly, with a disdain for publicity. The mortarmen had no idea of the contents of the shells they were firing, and the submariners did not know the fog they produced only served to help a vast criminal conspiracy.

In fact, both groups of men were feeling very proud of themselves. They were convinced that they were helping Doc Savage, and that what they were doing had prevented hundreds, maybe thousands, of people from being killed by poison gas.

Frank White gave them directions, based on what he said were "orders from Doc Savage". The submarine fog and mortar shelling would be coordinated down to the very second. Neither group of men knew of the existence of the third group -- Seven-Eleven McSwain's group of bank robbers.

Questions the men asked were answered with lies. They were to meet Doc "shortly". Doc thought they were doing a terrific job. They had to move in and out secretly, so that they could be more effective -- if the Steel Hammer managed to find out how Doc was "stopping" his poison gas, he might change his formula. The air raid siren on the miniature submarine was really a warning alarm for

poison gas.

Now both groups, based on orders relayed to them by the man the thought to be, "Doc Savage's contact man, Frank White" were headed for Detroit. The mortars would deploy to a wooded area of Wolverine Park. The submarine would be launched from a secluded sight into the Detroit River.

Doc had deduced that there was no way the submarine could be continuously traveling by water. There were no waterway connections, and miniature submarines lacked the speed and fuel capacity to make long distance voyages. The submarine, he concluded, must be carried from place to place on a large, covered or paneled truck.

This was the "submarine on dry land" that Ham had been sent out to find.

SURPRISINGLY, HE had little trouble finding it.

Doc's instructions were to look for a site along the Detroit River, not more than thirty miles from the city. It must be on the American side of the river -- the Steel Hammer would not take the risk of trying to cross through customs into Canada on the opposite shore. It needed to be private, and able to support a large motor vehicle. Doc's estimate was that a five ton truck would be required to transport the sub.

There were really only three places that fit these requirement. In his rented plane, Ham flew a patrol pattern, checking each in turn.

At nine o'clock in the morning he was rewarded with the sight of a large, covered truck pulling up to an isolate river landing just north of Detroit. Canvas was pulled from the rear of the truck, revealing a slender, cigar-shaped craft.

Banking his airplane in and out of clouds, to avoid ground observation, Ham kept watch.

He switched the plane's radio to the command frequency of the Michigan National Guard.

"Calling Monk, calling Monk," he said.

"Whatta ya want, shyster?" squawked a reply.

"Listen, you furry oaf, you'd better get cracking," said Ham loudly.

There was commotion, and a female voice in the background said, "Is that Ham Brooks?"

"Who is that?" Ham asked.

"None of your business, fancy pants," said Monk. "You just keep right on with your little submarine hunt on dry land."

"I've found the submarine," Ham replied. "Now you'd better find the mortars before the Steel Hammer strikes downtown Detroit!"

BACK AT the Hammer gang's hideout at Paulson Orchards, Seven-Eleven McSwain and his men were finishing their breakfast.

"You get on the road, Seven," said Blackie White. "The timetable for this is very precise. The fog will start coming in off the river at 11:53. The mortar shells with the gas have a time-on-target of 11:59."

"They're nowhere near us, right?" McSwain asked.

"The target in the intersection of Second Avenue and Holland. That's eight blocks south of the bank. You go in on Holland, from the north, and make your getaway on Tenth Avenue. You'll be perfectly safe." Blackie White stood to leave. "I'll see you at the warehouse hideout in Chicago tonight."

"Think the feds will be ready to pay the ransom by then?" asked Rocko.

"I think our this demonstration will convince them that we're serious," Blackie said. If they need more convincing, we'll do the Lincoln Federal Bank in Chicago tomorrow to keep the pressure on.

"Oh, and one more thing." He pointed at the bound form of Renny laying on the floor. "Before you go, put a bullet in this guy's head!"

Chapter 16

Hammer Time on Holland Avenue

The crackling and sizzling noise and yellow-green fog started just before noon.

One minute the Detroit River was quiet and placid.

In the next moment, the Steel Hammer struck!

The terrible crackling noise, like a piece of bacon the size of a Mack truck sizzling on the devil's own griddle, filled the air. The very river itself seemed to be burning, and the yellow-green fog rose.

Dug in along the riverfront, two battalions of the Michigan National Guard quickly put on their gas masks. They maintained perfect discipline -- until the screaming started.

When the screaming sound began coming in off the river, several machine-guns cut loose. The effect was just as Doc had foreseen -- the air raid siren, with its unholy wail coming as such close quarters, caused panic, even in trained men who anticipated the event.

Corporals and sergeants ran up and down the line, stopping the wild firing.

"You know better!" an old First Sergeant, a Great War veteran, roared. "Hold your fire until you can see your target!"

"Sarge, we can't see three feet in front of us," protested a machine-gunner.

"Well, hang on until you can. Them's orders!"

"But Sarge...."

"'But Sarge' nothing! Just shut your yap, and hold your fire. Word is that we've got Doc Savage and his men helping out on this."

"The Man of Bronze himself!"

"That's right. He might even be out there on the river right now, fighting this thing. So hold your fire until you've got a definite target."

"Will do, Sarge."

AT THAT time, Doc Savage, still in his disguise as "Wheels", was maneuvering the big Packard touring car down Holland Avenue.

Beside him, in the front seat, Seven-Eleven McSwain was checking the loads in his twin six-shooters. In the rear of the car, the six henchmen were readying their tommy-guns and burlap loot sacks.

"I've never seen you so blood-thirsty, Wheels," McSwain said. "I had you picked as a top-notch driver, but I didn't figure you for such an anxious gun-hand, especially to bump off a fed."

"Yeah, well, you know..." Doc replied non-commitally. "There was this job once..."

"Back when you were running with the Barrow gang?" McSwain asked.

"Something like that," Doc replied.

 $\mbox{\em "I'd}$ always heard that an undercover informer set you up for the Texarkana job. And you were the only one to get anyway on that one."

Reasoning that nobody in the back of the car could contradict him, since Wheels had been the only one to escape, Doc spoke more freely, inventing a story of a federal undercover agent who had passed information about the gangs activities. His encyclopedic knowledge of criminal activity enabled him to recall reports of a Texarkana bank robbery with one presumed escaped robber some five years previously.

"... so I figured I was finishing up paying them back, bumping off that fed back at the apple farm," he concluded violently.

When Blackie White had order the execution of the disguised Renny, Doc had volunteered to do the job.

As "Wheels", he'd drug the bound figure of Renny down the long rows of apple trees to where Paulson, the hideout's operator, stood beside a freshly dug grave.

Reaching the grave, he threw Renny violently into the hole.

"I don't need to see nuthin'," said Paulson, turning his back. "I ain't witnessin' nuthin." He never heard Doc step up behind him, and never felt Doc squeeze the nerve cluster at the base of his neck, producing instant unconsciousness.

Doc quickly untied Renny, gave him hurried instructions, and fired a single shot into the now-empty grave. Then he headed back through the rows of apple trees, to drive the Steel Hammer gang to Detroit.

Now as the gang approached the central business district, Seven-Eleven McSwain gave final instructions.

"Get ready, ya muggs. Get you gas masks on."

"I can't see for nothing wearing this thing," complained one of the bag-men, Rocko.

"You'd rather breathe poison gas?" chided McSwain.

"Ain't supposed to be no poison gas anywhere near us!" shot back Nails.

"I know that and you know that," said McSwain. "But nobody in Detroit knows that. They expect the yellow-green stuff to be poison, so we wear the masks, so that they don't think any different, see?"

"Gotcha, Seven," Nails said.

"Besides, we don't know how good those mortarmen are. Are they really going to be able to hit where they're supposed to?"

THE MORTARMEN were very good.

Their truck came rolling in to Wolverine park at 11:45. The mortar crews quickly carried their mortars to three firing positions, forming a triangle around the truck. Azimuths were checked with a compass, and direction stakes quickly pounded into the ground. Ammunition bearers stacked the supposed "Anti-Gas" shells and powder charges at each gun.

Mortar crews take their instructions from a Fire Direction Center. The firing chief, having successfully computed the required trigonometric functions for launching a bullet into the air and making it come down in a particular place, relays this information to his gun captains, who pass it to their crews.

Hank Morgan was the chief of the Fire Direction Center. "Gun Crews! Perform safety inspection!"

"Perform safety inspection!" echoed the gun captains. At all three mortars, gunners and their assistants inspected their weapons."

"Gun One up!"

"Gun Two up!"

"Gun Three up!"

Satisfied, and marking the time by his wristwatch, Hank Morgan began calling out the various pieces of information required for the fire mission -- the precise direction of fire, how far the gun tubes should be elevated, how many charge bags of powder should be used, and finally, with particular pride, he called out, "Ammunition, 'Anti-Gas' Special!"

"Ammunition, 'Anti-Gas' Special!" the gun captains echoed. This was the moment they had come to savor. All the men were convinced that their actions were going to make a difference, were going to help Doc Savage, were going to save lives...

"Hang the first round!" Morgan ordered.

"Hanging!" At each gun, the loader held a mortar shell "hanging" over the end of the tube. On command, he would drop the shell, which would fall to the bottom of the mortar tube. There is would hit the firing pin, which would set off the primer, which in turn would ignite the seven charge bags of powder. This explosion would send the shell blasting out of the mortar, up into the air, on a long, rainbow-shaped parabola that would end twenty-eight seconds later with the shell impacting at the corner of Second and Holland.

Hank Morgan had his eyes glued to his watch. Everything was going exactly according to schedule. The shells were to land at exactly 11:58. Figuring a twenty-eight second flight time, that meant that the shells had to be fired at exactly 11:57 and thirty-two seconds. Per standard mortar operating procedure, the order to hand the first round was given ten seconds before firing.

Frank Morgan gazed intently at the second hand on his wristwatch, and opened his mouth to give the command, "Fire!"

But it never came.

Instead, Hank Morgan looked up to see his sister Sally in the company of a very tall, gaunt man wearing a monocle.

"Stop!" tall Johnny ordered, using the single syllable. "Stop! Cease and desist!"

"Hank, stop!" cried Sally.

Hank Morgan was beside himself.

On the one hand, he was confused and amazed at the presence of his sister, and the tall stranger, telling him to stop. But on the other hand, he was convinced that his duty was to launch the special "Anti-Gas" mortar shells to help Doc Savage thwart the plans of the Steel Hammer.

Duty won the day.

Hank Morgan cried, "Fire!"

AS "WHEELS", Doc turned the car containing the Steel Hammer gang right off of Holland, and squealed to a stop in front of the Peninsula Bank and the corner of Tenth Street and Cass Avenue. The streets were clouded with the yellow-green fog, and the sizzling and screaming sounds from the river, some eleven blocks distant, were tremendously loud.

There were no people out on the street. All had taken cover immediately as soon as attack had begun.

"Right on the money," Seven-Eleven McSwain said with satisfaction as he looked at his watch. "Keep the motor running, and be ready to zip out of here, Wheels."

"Gotcha." Doc replied.

"Set the time, Nails!" ordered McSwain.

"One minute, and mark time now!" replied Nails, pushing the button on a stop-watch.

"Let's go!"

The three tommy-gunners entered the bank first. Seeing their gas-masked faces, the customers and employees fell to the floor. Most of them didn't see the three gas-masked men with burlap sacks when they entered. And they didn't see, but rather heard, Seven-Eleven McSwain when he entered, crying, "Hello, Detroit! The Steel Hammer is in the Motor City!"

Out in the getaway car, Doc was using a small radio transmitter he'd kept concealed on his person. He was trying to contact Johnny, Long Tom, or Monk, hoping that they had been able to stop the mortarmen from launching the poison gas attack. The radio set only was effective over relatively short distances, but if his aides had been able to stop the poison gas attack, they should be in range.

Again Doc tried to reach his friends.

But there was no answer.

Chapter 17 Hammer and Anvil

Downtown Detroit was chaos.

The yellow-green fog from the river covered the central business district. throughout the area the sizzling, crackling screaming noise -- the trademark of a Steel Hammer attack -- reigned supreme. Citizens cowered inside buildings, pressing handkerchiefs and any piece of cloth they could find against the cracks around doorways and windows, hoping to keep out the dreaded poison gas.

Inside the Peninsula Bank, Seven-Eleven McSwain swaggered about with his trademark six-shooters in his hands, as his men emptied the vault.

"People, if you live through this, you need to tell them that they'd better pay up!" McSwain roared theatrically. "There's no bank in the country that can stand up to the Steel Hammer!"

"Thirty seconds," reported Nails.

Outside in the getaway car, Doc continued to try and raise his aides on the radio. Had they not been successful, there would once again be civilian casualties.

Doc hoped to keep up his disguise, and follow along with the Hammer gang. But if there were poison gas victims in Detroit, his oath as a physician would require that he break the disguise to rush to their aid.

Once more he tried the radio.

"That you, Doc?" came Monk's small, squeaky voice.

IT HAD been a close shave.

Really, it was Johnny who had saved the day. Using a topographic map, his geologist's eye had seen that the terrain of Wolverine Park had offered the best mortar firing position. Rushing there with carloads of Detroit police officers, they had arrived just in the nick of time. Hank Morgan had actually hesitated when he'd seen his sister, not for long, but for just enough time for Doc's aides and Detroit's finest to intervene.

Two of the mortar shells had never left the loaders' hands. The final man had actually dropped his shell into the tube, but a flying kick from Monk had sent the mortar flying sideways. It never reached the firing pin at the bottom of the mortar tube.

"Whew!" exclaimed Monk, picking himself up off the ground. "They don't get much closer than that!"

"You don't understand," Hank Morgan was saying to the police officers who were trying to slap him into handcuffs. "You've got to let us go! We work for Doc Savage, and we've got to save the city!"

"Hank, you poor simple lug," said Sally, hugging her brother.

"Sis, you've got to listen to me. They've got to let us go."

"No, Hank. You've got it wrong. You've been tricked."

"Tricked? What do you mean?"

"I mean..." Sally Morgan stopped, for once at a loss for words. How could she explain to her brother that he had been tricked into causing the death of innocent Americans.

"What do you mean, Sally?" Hank asked.

Monk filled the silence. "She means we've got a lot of talking to do. See, I work for Doc and..."

"Me too," interrupted Hank.

"That's what they told you, and that's what we've got to talk about," Monk said. Monk suddenly became aware of a buzzing noise, coming from the area where he had fallen after kicking over the mortar. Looking, his saw that his miniature radio had fallen from his pocket, and was laying there on the ground buzzing. Rushing to it, moving fast and close to the earth like his simian namesake, he grabbed it and held it to his ear.

"That you, Doc?" he asked.

"Have you stopped the mortars?"

"Sure have, Doc."

"Good. Can you keep what is going on there secret?"

"I believe so," Johnny said over Monk's shoulder. "I think we can convince the authorities to cooperate with us."

"I'll sweet talk'em," added Sally Morgan.

Doc paused for a moment. He hadn't expected to hear the girl's voice. Obviously, she was still involved in the case, despite the best efforts of he and his aides.

"Keep things quiet. I'll radio instructions shortly." Doc turned the radio off.

INSIDE THE bank, Seven-Eleven McSwain was leaving his calling card. The small steel hammer made a ringing sound as it fell on the marble floor.

"Remember, tell'em to pay up, or else!" he threatened, as he followed his gang out of the bank's door.

Out on the sidewalk he found a surprise.

Doc had taken out the tommy-gunner first, since they were the biggest threat. Getting out of the car, and moving through the yellow-green fog, he had stepped between two of them as they exited the bank. Simultaneously, using both hands, he had applied pressure to the nerve clusters in their necks, and they had fallen unconscious.

The third tommy-gunner had started to raise his weapon, only to find it town from his grasp. Doc grasped the man, and used him to knock over the three men carrying the loot. From there on, it was plain rough-and-tumble fighting, with Doc supplying the rough, and the Hammer gang doing the tumbling.

This was the surprise that awaited Seven-Eleven McSwain when he came out of the bank. Six of his gang lay prostrate on the sidewalk. The seventh man, Wheels, was standing there in front of him.

McSwain was quick.

He didn't spend time talking. Taking the situation in at a glance, he aimed both his six-shooters right at Wheels.

Or rather, tried to aim them.

Both weapons were slapped from his hands before he could pull the triggers.

But McSwain was still quick. He managed to block Doc's hand, reaching for his neck, and followed up by actually landing a punch to Doc's head.

Doc followed with a single punch of his own.

McSwain flew backward through the air for twenty feet before hitting the sidewalk and skidding to a stop.

Doc loaded him and the other six members of the gang into the car and drove off. the screaming and crackling noises had stopped, and the yellow-green fog was beginning to drift away.

THE BORROWED Detroit policecar was headed toward the river. Margaret Adams was behind the wheel.

Doc had issued further orders. Johnny and Long Tom, together with Sally Morgan, her brother, and all the other mortarmen, were to go to an isolated Michigan farm, called Paulson Orchards. Doc provided directions. Monk was to take Margaret Adams to the airport, meet Ham, and follow his directions to locate Phil Adams and the crew of the miniature submarine.

Monk and Ham had begun quarreling before the propeller on Ham's plan even stopped turning.

"Finally, the legal beagle turns up after the fun is over," Monk stated as his greeting.

Ham ignored him, concentrating on Margaret Adams. "And you would be the Miss Adams that Doc Savage has been telling me about," he said.

"He told you about me?" the girl asked.

From her tone of voice, Ham could see that this was obviously another girl with a crush on Doc. He answered her question indirectly. "Doc has let me know how important it is that we reach your brother. He thinks if you are with us, that your brother will be more apt to understand the situation. Your cooperation is vital"

"Pretty slick line, clotheshorse!" snorted Monk.

"You'll excuse my colleague," Ham said to Margaret. "His mother was an epileptic, and frequently dropped him on his head when he was a small child. No doubt he's already regaled you with his ridiculous fantasy about my having a wife and thirteen children.

"A psychologist would call it 'projection', a delusion resulted from his inability to confront his feeling about Mrs. Mayfair and the thirteen simian off-spring swinging from the chandeliers at the Mayfair household."

"That does it!" roared Monk. "I'm taking your head right off those shoulders!"

"Whenever you think you're ready," Ham replied, swordcane in hand.

"About my brother," interjected Margaret Adams. "Can we get around to finding him?"

An ensuing argument about who should drive had only been settled by the trim brunette girl's getting behind the wheel of the borrowed policecar and starting the engine. "Save the animal act for another time!" she said. "Let's get my brother."

Monk and Ham had piled in beside her, and the car left the airport at a high rate of speed.

Now, thirty minutes later, they were approaching the river. The site where the miniature

submarine had entered the river was an abandoned fishing camp, right near a good hard-surfaced road.

As Margaret pulled up, the submarine, an ingenious craft only about twenty feet long, was being winched up out of the river onto wooden stay on the truckbed. Once on the truck, false walls would be erected around the undersea craft, and a tarpaulin draped over it, hiding it completely.

A dark-haired man wearing a mechanic's coveralls came walking towards the police car. "Officers, just contact Doc Savage, he'll explain every--"

He stopped suddenly when he saw Margaret Adams get out from behind the wheel. "Margaret, what are you doing here?"

"Oh, Phil," said Margaret, and she ran and hugged her brother.

"Say, I recognize you," said the driver of the truck to Monk. "You're one of Doc's top five aides, ain't that right?"

"That's right," Monk replied.

"So does this mean we're going to finally meet the big bronze guy himself?"

"Something like that," said Monk.

"Hey, what are you crying for?" Phil Adams asked his sister.

"It's a long story," Ham said, "and we need to get you to where you can tell your side of it to Doc."

Within fifteen minutes, the borrowed policecar and the truck loaded with the miniature submarine were headed north, bound for Paulson Orchards.

Chapter 18 Blackie White Sees Red

The newspaper headline blared the news from Detroit:

STEEL HAMMER STRIKES DETROIT! 25 Killed in Gas Attack!

TERROR SPREADS

MORE DEAD -- \$60,000 TAKEN

WHERE WILL THE STEEL HAMMER STRIKE NEXT? "Pay Ransom" Says Public

The Chicago "Inquirer" ran a special eye-witness account from their on-the-spot reporter:

DEATH STRIKES DETROIT! The Fatal Gas Attack! by Sally Morgan

The story detailed Sally Morgan's eye-witness account of the Steel Hammer's attack on Detroit. It told of people being overcome on the streets of Detroit by poison gas, of the efforts of ambulance drivers, who braved death to take the victims to a local hospital, of doctors and nurses who labored there to save lives, and of the anguish of the relatives of the victims, as they waited to find out if their loved ones would live.

The story was an outstanding piece of journalism. It detailed facts. It caught the mood of the city in its hour of peril. It praised the courage and dedication of those who worked to save lives. It showed compassion for the those who had been stricken.

It was an outstanding piece of journalism, in every way but one.

Like all of the other stories coming out of Detroit, it was totally false.

After apprehending Seven-Eleven McSwain and the gang, Doc had quickly contacted authorities, and outlined his plan. Accordingly, ambulances had been dispatched to the vicinity of the corner of Holland and Second Avenue. They then proceeded to Sister of Mercy Hospital, where the supposed "victims" were isolated in a special ward.

The doctors issued bulletins about the condition of their supposed patients. The police commissioner provided information about the robbery and the attack. To all intents and purposes, the story matched the pattern of the attacks in Pittsburgh and Cleveland. The Steel Hammer had robbed a bank in the middle of a major American city, under the cover of a vicious cloud of an unknown yellow-green poison gas.

In the meantime, Doc arranged for Hank Morgan's mortarmen and Phil Adams' submariners, who had also been duped by "Frank" White, to be released to his custody. His aides were escorting them to Paulson Orchards, which Doc planned to use as an isolated base of operations, while he questioned everyone involved in the case.

The interrogation of Seven-Eleven McSwain and his gang of bank-robbers came first. Unfortunately, it provided very little information. Even under the administration of Doc's special "truth serum" and hypnosis, they added very little to what Doc had already found out.

Blackie White had recruited McSwain and the others as his bank robbers. They knew about the ruse of the submariners and mortarmen, who thought they were working for Doc Savage. Each was convinced that they would be part of a one million dollar per man pay-off once the hundred million dollar ransom was paid..

Doc had finished his interrogations by the time that Long Tom and Johnny arrived with Sally Morgan, her brother, and his fellow mortarmen. The group had been delayed in Detroit as Sally Morgan telephoned in her "on-the-spot" story about the Steel Hammer's attack to her newspaper

It was a despondent group of men that unloaded from their trucks. Sally Morgan had told her brother how he had been tricked. Long Tom and Johnny had sadly confirmed her story. Hank and his fellows now realized how they had been fooled.

DOC ADDRESSED the men as soon as they arrived.

All eyes were drawn to the bronze man as he stood in front of them. "Men," he said, "you are the victims of an ingenious plot. Evil men have used your patriotism and trust to take advantage of you, and enlist you in their scheme."

Doc spoke in clear, even tones. He used his study of psychiatry to try to relieve the men's anxieties about what they had been involved in. He assured them that he considered them to be innocent victims of a foul plot, and that they would not be prosecuted. The men were visibly relieved at this news.

"But right now, my aides and myself are going to need to ask you some questions. We need to find out what you know about what has gone on. We need to find out as much as we can. Please try and remember as much as you can. There may be details that you know, which you don't think are relevant, which may in fact be clues to tracking down the Steel Hammer."

Long Tom and Johnny broke the mortarmen down into two groups, and began questioning them. Doc removed one of the poison gas shells from the truck, and began examining it.

He was interrupted by Sally Morgan.

"Where's Renwick?" she asked abruptly.

Doc said nothing.

"He's not hurt, is he?"

Doc turned and faced the young woman. She seemed genuinely concerned. Doc surmised that Renny

might have an interesting situation on his hands when he met up with Sally Morgan again. "Renny is fine," Doc said.

"Is he here?"

"No."

"I'll bet you've got him on the trail of Blackie White?"

Doc was surprised, though he showed no emotion. Sally had figured out a part of his plan. Since she had already come up with several good clues, and had a reporters understanding of how the Chicago underworld worked, Doc decided to turn the questioning around.

"Why would I have him trailing Blackie White?" Doc countered.

"To find the real boss of the Steel Hammer gang, obviously!"

"Are you so sure Blackie White isn't the boss?"

"Don't patronize me, Mr. Clark Savage, Jr.," Sally said. "Blackie White is a big-time mobster, sure. But he never would have had the brains to set something like this up by himself."

"Are you sure?"

"Darn sure," said Sally. "Not to mention the fact that this thing was incredibly expensive to set up. He's had over fifty men on a payroll for months, feeding them, hiding them out, buying submarines, setting up hide-outs, moving people all around the country. He's easily spent over a million bucks just setting all this up."

"You don't think he spent the money to set it up, with the idea of collecting it back a hundred times over with his demand for a hundred million dollar ransom?" Doc quizzed.

Sally Morgan ticked off points on her fingers. "One, Blackie White never had a million bucks at one time in his life. Two, if he did, he'd be swigging rum on the beach in Rio. And three, I seem to recall that the Steel Hammer requested that ransom 'in gold'."

"And you think that significant?"

"Mrs. Morgan's oldest daughter paid attention during arithmetic, mister. A million dollars in gold weighs just about 2,000 pounds -- one ton.

"While we were driving up here, I asked my brother Hank how much those trucks he's been using could carry. He told me that they had a payload capacity of two tons each.

"I've worked kidnapping stories in Chicago. Crooks look for a ransom that can be delivered quickly and secretly; a suitcase thrown out of a car window at night at a special spot on a deserted highway. Nobody with half a brain would expect to get away with a ransom that had to be delivered by a convoy of 50 trucks!"

"You've obviously thought, this out, Miss Morgan," said Doc.

"You bet I have! And I've been a good scout all through this," she continued, conveniently forgetting clouting Renny and kidnapping him back in Pittsburgh, "and I filed the story with my paper like you asked. So the least you can do is let me in on what is going on."

"We're waiting," said Doc.

"Waiting? For what?"

"For the submarine, and for Blackie White."

BLACKIE WHITE got the news of the Steel Hammer's attack on Detroit at a gas station outside of Flint, Michigan. He was headed for Chicago in a shiny new Ford, and had stopped to fill up the tank, when he heard the news flash come over the radio the station had playing.

"Bulletin! Downtown Detroit has come under attack by the Steel Hammer! Poison gas has filled the street and ..."

Blackie White paid for his gas, and cruised on toward Chicago. The Detroit robbery had gone according to plan, and should net a minimum of another \$50,000. The bank job he had planned in Chicago for the day after tomorrow, targeting the third largest Federal Reserve Bank in the country, should net a minimum of \$100,000.

Maybe his silent partner really believed the U. S. government would fork over a hundred-million dollar ransom. Maybe Seven-Eleven McSwain and his band of robbers believed that would happen, with a million dollar pay-off apiece.

No way Blackie White believed it. The problem with any ransom caper was that you had to show yourself to make the pick-up. And even if the government would pony up the gold, there would be no getaway, no matter what his partner might think.

Not that he was worried. His partner had provided the plan and financial backing to set up the entire Steel Hammer operation. Blackie White had been his front man, setting things into motion. And now, he would have the loot from the biggest bank heists in history. Let McSwain and his gunmen wait for a million bucks tin gold they'd never see -- Blackie White planned to be south of the border with close to \$300,000 in U. S. greenbacks -- the proceeds of the Steel Hammer robberies.

He didn't notice the pick-up truck from Paulson Orchards that was following him, mainly because it was rarely in sight.

Behind the wheel of the truck was Renny. He followed Blackie White's Ford by means of a tiny radio tracking device that Doc had planted in the car while he was disguised as the driver, Wheels. Doc's instructions to him had been to shadow Blackie White.

Renny followed the radio signal, keeping back out of sight, until his radio buzzed.

"Go ahead Doc," he answered.

"I just finished questioning McSwain and the others," came Doc's voice over the small two-way radio he had left with Renny when he'd left him in the orchard. "They know nothing. Stop Blackie White and bring him back to Paulson Orchards."

"Will do," Renny rumbled.

He popped the pick-up truck into top gear, and stomped the gas pedal to the floor.

All Blackie White saw was an old pick-up truck trailing a cloud of oily smoke roaring up behind him. Then in an instant, the truck was beside him, forcing him off the road into the ditch. His head bounced off the steering wheel.

That's when Blackie White saw red. He was not going to have some ignorant farm boy in a best up truck ruin his plans. Roaring, he forced open the car door, which had been slightly jammed by the crash. "Why I'll...."

He got one foot out of the car.

That was as far as he got.

Blackie White only saw red for a very short time before his face met one of Renny's giant fists. He went to sleep very soon after.

When he woke up, Blackie White would be black and blue.

Chapter 19 Tunnel Terror

The questioning of Hank Morgan and his fellows Provided some useful information. The "tunnels" used as their headquarters were located about seventy miles east of Pittsburgh.

Originally, they had been planned as part of the Pennsylvania Turnpike, cutting under Laurel Mountain. But frequent cave-ins at the west end had caused the turnpike to move to another location to go through the mountain, and the tunnels had been abandoned.

Blackie White, known as "Frank" White to them, had been their only contact. All of their order came through him.

When equipment was delivered, all of the men had been cleared from the area, "for security purposes". A tunnel sector was cleared of all people. Doors, flanked by read and green lights, were closed. Nobody was allowed in while the red light was on.

Then the green light came on, they were allowed back in, and a supply truck was there. Once they unloaded the truck, they left again/ The red light came on, and the truck left, without being observed..

"We just thought we were following your orders, Doctor Savage," Hank Morgan explained, tearfully.

Examination of the mortars showed them to be standard American Army issue from the Great War, except -

"They're counterfeit!" said Long Tom.

"Replicated reproductions," echoed Johnny.

As for the captured poison gas shells, Doc examined them, but he did not discuss his findings with anyone.

"So what now?' asked Sally Morgan.

"We wait," Doc said. The blonde news-reporter had managed to become more involved in one of Doc's adventures than anyone ever did. She was clever, and would not take "no" for an answer.

"Wait for what?"

"Wait for Monk and Ham to get here with Margaret Adams, her brother, and the submarine. Wait for Renny to arrive here with Blackie White..."

"Blackie White! Renwick's got him?"

Doc ignored the question. "...so that we can question him about who is really behind all of this.."

"And then do we head for the tunnels in Pennsylvania?"

Doc did not answer, although he had to admit that Sally had correctly guessed the plan. He wanted to discuss the tunnels with Renny -- the big engineer had been the man who had done the cave-in survey that had caused these tunnels to be abandoned, and he would have first-hand knowledge on how to proceed in getting into them.

That was Doc's plan.

But it didn't come off.

"Come in, Doc," came Monk's squeaking voice over the radio.

"How long until you get here?" Doc replied.

"We're not coming." That was Ham

"Change in plans." That was Monk.

Doc noted that Monk and Ham were not squabbling. They must have found out something important.

"What's up?" said Doc.

"Meet us at the Detroit airport," said Ham. "We talked to Phil Adams and found out the location of the tunnels. We need to fly to Pennsylvania."

"I know about the tunnels," Doc said.

"Doc, we gotta get there fast," Monk said. "We talked to these guys and they told us --" Monk stopped to catch his breath, "--they told us there's another submarine!"

ORDERS WERE quickly given.

Hank Morgan and his comrades volunteered to the man to come along for any possible fight. Since there would not be room for them on Doc's plane, their services were very politely declined. They agreed to wait at Paulson Orchards for further order from Doc. Phil Adams and the crew of the miniature submarine would be joining them.

Doc, Johnny, and Long Tom raced to the Detroit airport. Accompanying them was Sally Morgan. Her press credentials and reputation might come in handy again. At least, that was what Doc told himself. It was easier that arguing with Sally.

When they arrived at the airport, they found that Monk and Ham already had Doc's plane ready for take-off.

"Head west," Doc ordered as they rolled down the runway. Monk was in the co-pilot's seat.

"West?" Monk questioned.

"We need to pick up Renny first," said Doc.

"Renny?"

"He's captured Blackie White, and is headed this way. We'll be landing on the highway to pick up him and his prisoner."

"Gotcha. Hey, you need to go see the shyster, Doc. He's got this book Phil Adams had on the submarine that might be a clue. We hadn't had time to look at it."

Leaving Monk at the controls, Doc moved back to the cabin of the plane.

"Doc," said Ham, "I've got something to show you."

"Monk mentioned a book," Doc said.

"Yes. Apparently some sort of technical manual on how certain engine components of the submarine were supposed to operate. But written in the weirdest English you ever read." By now, Ham had patted every pocket he had, but had not located the book. "I just had it," he said weakly.

"Weird English is right," said Sally Morgan. The book was in her hands. "Listen to this," she read. "If turbine revolutions go above 700 in a minute, turn the releasing value a twenty-five cent piece turn to the right, please."

"Now what does that mean?" she asked.

Doc said nothing. He merely reached out for the book, which Sally surrendered. Doc leafed through the book, seemingly only glancing at each page.

The low trilling sound filled the airplane. It seemed to come from everywhere and nowhere at once. All aboard knew that Doc had discovered something..

"What is it, Doc?" asked Long Tom.

Doc silently handed the manual to Johnny.

Johnny turned through several pages. "Cultural eccentricities abound," he murmured.

"Last warning on the big words," said Sally Morgan.

"Merely an intellectual note on the linguistic patterns which manifest themselves in certain cultures," Johnny said.

Sally Morgan's reply was stopped by Monk's announcement from the cockpit.

"I've got Renny on the road down below!"

RENNY HAD a deputy sheriff helping him stop traffic on a straight stretch of the highway just outside of Flint, Michigan. Doc put the big plane down on the road and taxied up to where the Paulson Orchards truck was parked by the side of the highway. Renny, carrying Blackie White easily by collar and belt, ambled aboard, and the plane wheeled around and took off again.

"Holy Cow!" rumbled Renny as soon as he saw Sally Morgan. "What's she doing here?"

"Nice to see you too, Muscles," said Sally.

"Miss Morgan has been -- helping -- us with our inquiries," said Doc. "Has your prisoner given you any information?"

Renny glanced at Blackie White, who lay unconscious on the floor of the aircraft. "Yeah, after I knocked him out, he came to, and sang like a canary. His name may be Blackie White, but at heart he's yellow. He told me the whole story. Made me so mad I slugged him and knocked him out again.

"Blackie White isn't the Steel Hammer. He's been the front man for a secret partner. and his partner --"

"-- is Japanese," finished Doc.

"BLAZES!" EXCLAIMED Ham.

"How'd you know?" gasped Renny

"Idiosyncratic cultural manifestations now become apparent," said Johnny.

Doc nodded. "Exactly," he said.

"You want to explain that?" asked Sally Morgan.

"Lots of little clues added up," said Doc. "The poison gas was not of American or European manufacture. Only a very few countries in the world could have manufactured it, Japan being one of them.. And Japan is one of only a few countries doing developmental work on miniature submarines. The manual we just read from had been obviously translated into English from Japanese."

"But what was Mr. Big Words going on with about the cultural stuff?" Sally queried.

"Japanese cultural does not follow the same direct lines of reasoning that we use. They are very likely to wrap an idea in secrecy, so as to misdirect people as to its true purpose. You yourself mentioned that the ransom idea made no sense at all. That was correct.

"This whole thing, from the story of hiring men to work for me on a secret project, to a series of bank robberies, to the ransom demand, has been nothing more than a series of deception plans to cover-up the true purpose -- a terror attack on the United States."

"Of course," said Ham. "Japan has been making all kinds of military noise in the Pacific, building new naval ships and airplanes. They're afraid we'll try and stop their expansion."

"And so by having a supposedly criminal conspiracy attacking our major cities, they hope to divert attention from what they're doing in the Pacific," concluded Sally.

"Exactly," said Doc. "The poison gas attacks terrify the public. The American people would demand to be protected. Our defense money would be spent defending our cities, and not on new aircraft carriers and battleships, which would worry Japan."

THE ATTACK on the tunnels came by parachute.

The wild mountain country of central Pennsylvania offered no place to land an airplane. Doc, Renny, Monk, Ham, and Johnny put on parachutes. Doc gave a reluctant Long Tom instructions, and he stayed at the controls of the plane. For once, Sally Morgan did not demand to accompany Doc. Jumping out of a perfectly good airplane was where she drew the line for getting a story.

The tunnels were two black holes, twenty feet high, entering the mountain. In between the two tunnels was a series of maintenance and control rooms for the tunnels. Hank Morgan had reported that this was were gasoline-powered electrical generators were located, which provided power.

But the gasoline tanks had been emptied.

The tunnels were pitch black. Doc and his aides used small, but very powerful flashlights to illuminate the interior. In the first tunnel, they found the area that had been used as a barracks to house the men who thought they had been working for Doc.

"The other tunnel should have the submarine workshop area," Ham said.

"Yeah, that's where they were working on the two miniature submarines, according to Phil Adams," added Monk. And then, "He, what the ----"

There was the sound of wild scuffling. Monk's flashlight went flying. Monk growled.

There was the sound of flesh meeting flesh, and then the sound of something crashing on the far side of the tunnel.

"Monk!" shouted Ham.

There was no answer.

Chapter 20

The Bronze Hammer

Monk was down and out.

They quickly located him, unconscious, laying against some packing crates at the side of the tunnel.

"Is he O.K., Doc?" Ham asked anxiously.

"He'll be fine," said Doc.

"Holy Cow!" Renny exploded. "What could've knocked Monk out so quickly?"

Doc didn't answer. But suddenly, there was a quick noise behind the group.

They turned. There lay Johnny, in a pile.

"It got Johnny, too!" Renny shouted.

"What is it, Doc?" Ham said.

Their flashlight showed nothing in the tunnels except darkness.

"Get Monk and Johnny out of here," Doc ordered. "I'll meet you outside."

Ham and Renny were besides themselves. They wanted to stay and fight at Doc's side. But they had also learned from years of experience that following the bronze man's orders was for the best .

Reluctantly, they gathered their fallen comrades and carried them from the tunnel.

Doc was left alone in the darkness.

THE MIGHTY bronze man. turned off the beam of his flashlight. He slipped out of his shoes so that he could move silently in stocking feet.

Then he simply stopped breathing.

From birth, Doc had been trained in a wide variety of disciplines. Every day he put himself through a series of exercises designed to increase his physical and mental capabilities, so that they were improved far beyond those of most men.

The tunnel was too dark even to allow Doc to see. But he could still hear.

By stopping his breathing, Doc could concentrate on the what he could hear. Air moving slowly through the ventilation shaft. Dropping water. And something moving.

Something big.

Something not quite human.

Whatever the something was, it was attempting to follow Doc's aides out of the tunnel.

Doc trailed it, concentrating on the sounds of the creatures breathing and its almost silent footfalls.

The creature stopped.

Doc stopped as well.

Then the creature stopped breathing.

Doc stopped breathing again at the same moment.

The tunnel was silent and dark.

A minute passed.

Two minutes.

Doc had studied under the pearl divers of the South Seas, and was able to hold his breath for an extraordinary amount of time.

At the three minute mark, there was a gasp as the creature opened its mouth for air.

Doc sprung like a panther. He flew across the tunnel.

A huge arm caught him in mid-flight and flung him back the way he came. An arm larger than any human arm had any right to be.

Doc rolled as he landed. There was no silence now; the creature, whatever it was, came directly after him.

Springing to his feet, Doc reached out to grab the nerve cluster at where he assumed the base of the creature's neck would be. He felt cloth -- whatever it was, it wore clothes -- and muscle underneath.

Doc squeezed.

Nothing happened. The nerve cluster was buried under a solid mass of muscle.

A giant hand grabbed Doc's own neck. Doc wiggled to keep it from getting a grip. Again he reached for the nerve cluster and squeezed. Again, nothing happened.

Two giant arms wrapped around Doc's body, and held tight.

And suddenly Doc understood what he was fighting.

Not a creature. But no ordinary man either.

The real Steel Hammer had left behind as a guard in the tunnel a sumo -- one of the giant wrestlers of Japan. Enormously muscled, weighing perhaps four hundred pounds, and very highly trained, the sumo were the most unique fighters in the world.

Punching the sumo was useless. Layers of muscle and fat would deflect the power of all blows. All nerve clusters and pressure points would also be protected.

Choking the sumo was impossible. There was no neck; the head merely widened down into the massive shoulders.

Doc squirmed and pushed, trying to escape from the iron grip that held him. There seemed to be no way free.

Then Doc felt something brush against his back. It was one of the non-working ceiling lighting fixtures of the tunnel. Doc reached around and grabbed it, pulling with all his might.

The lighting fixture could not stand the strain. It fell from the ceiling, trailing electrical wires. But before it did it gave Doc the advantage he needed. It created the slight change in angle needed to change the leverage Doc required to break the sumo's grip.

The bronze man and the giant Japanese warrior crashed to the floor, and Doc rolled free.

On his feet immediately, Doc concentrated his hearing on listening to the heartbeat of his opponent. Conventional fighting styles would not work in this battle, and the normal rules of human anatomy which Doc used to defeat his enemies did not apply.

The only way to defeat a sumo was to fight as a sumo.

When the giant sumo wrestlers of Japan fight each other, they hurl their bodies into violent collisions. Their mass and muscle force are used to force their opponent from the wrestling ring.

Crouching to the floor, coiling like a spring, Doc launched himself through the darkness, aimed at the vague sound of his opponent's heartbeat.

The sumo was quick, very quick. Hearing the sounds of Doc's feet racing across the tunnel floor, he was able to turn and push himself in Doc's direction.

The collision of the two men was gigantic. Flesh and bone collided as hard as humanly possible.

Doc rebounded immediately after hitting the sumo, not wanting the giant wrestler to get a grip on him. He stopped and fell silent, listening for his opponent. The sumo's breathing had change, but only slightly.

Dropping down to the tunnel floor, and then exploding like a sprinter out of the blocks, Doc threw himself at the sumo.

The two giants collided.

And this time there was only one man left standing.

The Man of Bronze.

"HOLY COW, what's that!" exclaimed Renny as Doc drug the sumo from the tunnel.

"Looks like Monk's Japanese kinfolk," said Ham. "Didn't know they had apes there."

"I'll 'kinfolk' you one, you Harvard fashion-plate," threatened Monk, now recovered from being knocked out.

"A sumo," observed Johnny, recovered as well. "Left behind to guard the tunnel. I'll wager you had to combat him in the traditional style, Doc?"

"Yes," answered Doc. "Have you checked the other tunnel?"

"We did," said Renny. "No sign of the second submarine."

"But we did find this," Ham said. he held out a folded piece of paper to Doc.

It was a map of Washington, D. C.

Chapter 21

The Bronze Anvil

In Washington, D. C., on Capitol Hill, the House of Representatives was debating whether or not to pay the \$100,000,000 ransom demand of the Steel Hammer. Opinions were fairly evenly divided, with representatives from Pennsylvania, Ohio, and Michigan, states that had undergone the Hammer's deadly attacks, warning their colleagues of the dangers of doing nothing.

One mile west of Capitol Hill, on the Potomac River, near the Tidal Basin, and the soon-to-be-completed Jefferson Memorial, clouds of yellow-green fog began forming, quickly hiding the shape of the small submarine was surfacing. By the time the sub was fully on the surface, and activated its siren, sending the screaming noise out over the U. S. capital, the yellow-green fog of death covered the river from bank to bank.

And one mile east of Capitol Hill, in a lightly wooded area of Lincoln Park, two trucks were pulling onto the grass and rapidly unloading men, mortars, and ammunition.

The men were a dozen in number, obviously Japanese. The mortars were three in number, and they were identical to the ones Hank Morgan had used in Pittsburgh, Cleveland, and almost Detroit.

The ammunition was poison gas

The intended target was the U. S. Capitol. While the nation's elected representatives debated whether or not to pay the outrageous ransom, the yellow-green fog would conceal the poison gas shells launched by these mortars.

Guttural commands in Japanese echoed as the mortars were deployed, and the shells readied.

Then the Steel Hammer met the Bronze Anvil!

The map in the tunnel gave the details of the plan. The supposedly unbeatable sumo was to have guarded the secret, but Doc had defeated him, and gained the clue he needed.

When the real Steel Hammer gang of Japanese arrived at Lincoln Park, they were walking into an ambush carefully laid by the Man of Bronze.

A bronze whirlwind fell on the villains. Doc raced among them, his hands darted left and right. Every time his hand reached, gripping a nerve center, a man fell to the ground unconscious.

Renny was less fancy -- he merely looked for targets for his giant fists. Whenever he found one, he almost smiled.

In battle, Monk tended to grab onto one opponent, and use that man's body to batter others into submission. This was accompanied by roars that suggested feeding time at the zoo.

Ham had his swordcane unsheathed, was ready to use it to thrust into the enemies, the tip being coated with a chemical which produced unconsciousness. But when he leapt into the fray he was disappointed, along with Johnny and Long Tom.

"It's all over," said Ham in disgust, reluctantly putting away his sword cane.

"Nobody left for us to fight?" Long Tom asked.

There was not. In less than a minute Doc and his crew had vanquished the Steel Hammer. Eleven of them were on the ground, unconscious, and the twelfth was Doc's prisoner.

"Well, I'll be superamalgamated!" said Johnny.

DOC'S PRISONER was a thin, non-descript Japanese man, apparently in his early forties. He spoke perfect English.

"Obviously you have defeated the dupe Blackie White, and my sumo as well," the man said.

"A boarding party of U. S. Marines from the Washington Navy Yard is capturing your submarine on the Potomac River even as we speak," replied Doc.

"Then you need to know that My name is Tak Tayamoto. I am assigned to the Japanese Embassy here in Washington, D. C. as the Cultural Attaché."

"Then you and your men will be sent back to Japan," said Doc.

"What the blazes kind of idea is that!" squawked Monk. "You mean your going to let this murdering slime go?"

"Diplomatic immunity," Ham said.

"Diplomatic what?" exclaimed Monk.

"Diplomatic immunity," Ham explained. "This man is part of his embassy's staff. Under international law, he is immune from prosecution by the laws of our country. We cannot imprison him; we must send him back to Japan."

"That is correct," said Tayamoto. "Unless --" he looked at Doc Savage, "unless you would do me the favor of killing me now?"

Doc shook his head, and spoke a quick phrase in Japanese. Tayamoto, the brains behind the Steel Hammer attacks, lowered his head, and allowed himself to be handcuffed and led away by the FBI agents Doc had standing by for just this purpose.

"He wanted you to kill him? What was that all about?" asked Monk. ""The guy is going to get away with this Scott free! Why was he asking you to kill him? It makes to sense!"

"To us, perhaps," said Johnny, "but in Japanese culture, Tayamoto is a dead man walking."

"What?'

"Tayamoto has been captured and failed to complete his mission," said Doc. "His superiors back in Japan will not tolerate such a failure."

"So what will happen to him?" asked Long Tom.

Doc said nothing. Johnny replied, "If he had been killed here in battle he would have been considered a hero. If he had died fighting Doc, his death would have brought him great honor in dying while trying to complete his duty.

"But he failed, and he was captured. His countrymen will consider him to be a man with no honor.

"He will be left alone in a room with a sword and given the chance to commit ritual suicide by hari-kari."

IN THE end, the government decided to hush things up. The prisoners were returned to Japan, and the State Department made it quietly very clear to the Japanese government that the presence of any Japanese spies planning sabotage within the United States would be considered as an act of war. Tak Tayamoto and his men were never heard from again.

Blackie White, Seven-Eleven McSwain, and all the American crooks involved were sent to Doc's "Crime College" in upstate New York, where Doc's special surgery removed their criminal tendencies, and they were given rehabilitation to make them into good citizens and productive members of society.

Phil Adams and the American submariners went to work for a company Doc operated that was doing research on submarine construction. Hank Morgan and the other mortarmen found themselves recalled to

active duty in the US Army, as a special training team on using mortars in urban combat. All were sword to secrecy about the incident, as was Margaret Adams.

That left Sally Morgan.

She got to write the exclusive story about how the Steel Hammer gang, led by the notorious gangster Blackie White, had been captured by the authorities, with the assistance of Doc Savage.

She also got to publish an exclusive interview with Doc Savage. Shunning publicity as he did, Doc normally did not give interviews, but this was part of Sally's price for being sworn to secrecy. As part of the interview, Doc let it be known that his five aides were the only assistants that he ever used. He did not want another criminal genius tricking men into thinking they were helping Doc Savage.

There was one more demand Sally Morgan wanted met.

"She wants to fly back to Chicago," Doc announced.

"The sooner the better," rumbled Renny.

"...and she wants you to be the one to fly her there." continued Doc. $\,$

Holy Cow, no! You didn't agree to that, didja, Doc? That dame's crazy!

"Crazy for you, ya big galoot!" Monk said to Renny. "Imagine, a fine looking babe like that, and she wouldn't even give me the time of day. I figured Ham had given her some big story about me, but it turns out she's sweet on you, ya old sourpuss!"

"Sweet to see me get my head busted," said Renny. He turned. "Doc, what'll I do?"

"Go to the airport," said Doc. "Beyond that, I offer no advice."

THE END