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CAUSE OF THE CALAMITY

The Pittsburgh Fishing Club Chiefly Responsible.

A DAM OF DIRT AND RUBBLE.

The Waste Gates Closed When the Club Took Possession.

IN THE VALLEY OF DEATH.

The Living Chiefly Occupied in Burying the Dead.

A Sun Reporter's Personal Investigation of the Broken Dam Shows that it was Simply a Pile of Dirt Dumped Across a Stream Between Two Hills—The Waste Gates that Relieved it of the Immense Pressure of Water Permanently Closed—The Terrible Force of the Torrent, Sixty Feet High at the Start, Obliterated Forests on the Edge of the Valley—Picture of the Destruction in Johnstown—Dynamite Used to Blow up the Big Jam at the Bridge—Ghastly and Heartrending Scenes in the Morgues—Ghouls Among the Dead—The Burying of the Dead.

JOHNSTOWN, June 4.—The day in Johnstown has brought little change in the situation. The chief labor of the living is still the burying of the dead. Their sole dependence for support is upon the charity of the country, a charity, he it said, that is proving as ready as the ocean is pressing. The immediate daily necessities of the suffering people are being met by the train loads of provisions and clothing that come in from all directions. The money available is being used to employ the idle in clearing away the debris, exhuming the dead from their hiding places, and generally in making Johnstown, to an extent, an inhabitable place once more for those of its people who have further need of homes above ground. What has been done and can be done with the money already in hand is a trifling beginning, but already the place shows the effects of the work of the gangs of laborers who have been set to pulling down damaged buildings, removing and burning the bodies of animals and other offensive debris, and doing whatever else seemed most immediately necessary for the health and well being of the place.

Dynamite had added its horror to the sixty-acre mass of wrecked buildings, railroads, streets, and human beings that lie above the railroad bridge. A half dozen times this afternoon the heavy thunder of the huge cartridges was heard for miles around, and fragments of the debris flew high in the air, while at a distance the crowd looked on in dreadful sorrow at the thought of the additional mangled that the remains of the hundreds of bodies still buried in the mass were bound to undergo. There was little complaint, however, even on the part of those who have relatives or friends buried there, for the work of the past few days has shown how futile was the idea that anything but an explosive could effectually break up and remove the compact mass. All that hundreds of men have been able to do has amounted to nothing more than a little picking around the edges. Even the dynamite is doing the work slowly. The surface of the mass about where it was used it upheaved and washed about a bit, but the actual progress is, so far as can be seen, very small. It will be a week before the gorge can be opened even now. Meantime a proposition is being discussed not to open it at all, but to bury it deep, and by filling to raise the level of the whole city.

There has been an unpleasant feeling between rival committees of citizens, and at a meeting this afternoon the whole matter was settled by the resignation of Chairman Moxham of the old relief committee, and the appointment in his place of J. B. Scott of Pittsburgh, who is also Chairman of the local relief committee in that city. It is believed that this will be an additional guarantee to the country of fairness and impartiality in the disbursement of the funds.

There is as yet no reason to doubt the accuracy of Gen. Hastings's estimate that the number of proven deaths will reach 5,000 and that the total will be 8,000. Besides the bodies which are dug up in this city, scores are brought in daily in wagons and carts from places down the river, where they have been washed ashore. The number of the unknown increases as the passage of time increases the difficulty of identification.

The abject destitution is now believed to be confined to Johnstown and the knot of towns immediately surrounding it. South Fork is now in railroad communication with Altoona, and whatever is needed for people there and at Mineral Point and other adjacent places can come in from that direction until railroad and other routes can be opened up the valley from here. The towns are small and the proportion of deaths smaller than here.

The Cambria Iron Company management announces that it hopes to get its works in running order in thirty days. They will then provide wages and relief for thousands of the sufferers. All that can be employed are now at work cleaning out the works.

An investigation by THE SUN discloses a reasonable certainty that at least a share of the responsibility must fall upon the association of Pittsburgh gentlemen who have been making a resort of Conemaugh Lake.

The huge dam proves to have been merely dirt with a light rubble facing instead of solid masonry, and the waste gates, by which its waters should be run off, are said to have been permanently closed when the association took charge of the property.

Upon all the unidentified bodies some sort of an embalming process has been attempted to be carried out, and embalmers were at work upon the corpses as people passed by them. In a comparatively few cases was an identification made. The female looking for missing relatives or friends, who everywhere also in Johnstown, have become so hardened, or rather benumbed, by the awful experiences of the last four days, that in look-

ing at the corpses or even in actually identifying their friends, they seem to feel but little emotion. At any rate they show but little.

"That's Emma," said an old man before one of the bodies. He said it as coolly as though he spoke of his daughter in life, not in death, and as if it were not the fifth dead child of his that he had identified.

"The way some families have been broken up, is something terrible."

"Is that you, Mrs. James," said one woman to another on the foot bridge over Stony Creek to the Pennsylvania this morning.

"Yes, it is, and we are all well," said Mrs. James.

"Have you heard from Mrs. Fenton?"

"She's left," said the first woman, "but Mr. Fenton and the children are gone."

The policeman told the two women to move on, and they separated. And so whole families are gone, and of families of half a dozen or more three or four will be taken—father or mother, brother or sister, or both.

From the morgue in the Fourth ward school house 350 bodies have been buried, and more are taken to the Grove Hill Cemetery every hour. They are buried there singly, if identified, and in rows and narrow trenches, one on top of the other, if not.

The standard of different relief agencies, where food, clothing, and provisions are given out on the order of the Citizens Committee, are extremely interesting. These are established at the Pennsylvania Railroad depot, at Peter's Hotel in Adams street, and in each of the suburbs.

At the depot, where there is a large force of police, the people were kept in files, and the relief articles were given out with some regularity, but at such a place as Kernville in the suburbs, the relief station was in the upper story of a partly wrecked house.

The yard was filled with boxes and barrels of bread, biscuits, and sales of blankets. The people crowded outside the yard in the street, and the provisions were handed to them over the fence, while the clothing was thrown to them from the upper windows. There was apparently great destitution in Kernville.

"I don't care what it is only so long as it will keep me warm," said one woman, whose ragged clothing was still damp this morning.

The stronger women pushed to the front of the fence and tried to grab the best pieces of clothing which came from the windows, but the people in the house saw the game, and tossed the clothing to those in the rear of the crowd. A man stood on a barrel of flour and yelled out what pieces of clothing was as it came down.

"At each yell there was a universal cry of 'That's just what I want. My boy is dead; he needs a coat or ten feet of cloth for my poor wife,' and the likes of that. Finally the clothing was all gone, and there were some people who didn't get any. They went away bewailing their misfortune. The fortunate ones were cheerful.

The Sun reporter was piloted to Kernville by a man who had lost his wife and baby in the flood.

"She stood right there, sir," said the man, pointing to a house whose roof and front were gone. "She climbed up that when the water came first and almost smashed the house. She had the baby in her arms. Then the house came down and dashed against ours, and my wife went down with the baby raised above her head. I saw it all from a tree there. I couldn't move a step to help 'em."

Coming back THE SUN man met a woman who was pointing to a house whose roof and front were gone. "You look happy," said the reporter.

"Yes, sir, I've found my boy," said the man. "Is your house gone?" asked the reporter.

"Oh, of course," answered the man. "I've lost all I've got except my little boy," and he went on in a little while to the hall.

The man who had been piloted out of a smashed building in a dying condition.

The doctors in charge of the hospital say that it is a singular fact that the people in Johnstown seem to have either accepted or have been killed. There are few injured.

Very few people are seen about the streets with their heads or feet in the mud. The flood was a fury which either killed or let its victims go.

As yet the Pennsylvania Railroad seems to have done little toward repairing the damage done to its property. The road is very badly crippled, and it will be the work of a week to fix it here alone.

The water which has been pouring down in Johnstown steadily for a week past seems to have ended, and in the blue sky a hot sun is beating its rays fiercely upon the town.

Thus to the work of the flood is added the new danger, equally as great, of pestilence. The doctors who have been called to Johnstown from every Pennsylvania town, and from Baltimore, Washington, and the chief cities of neighboring States, shake their heads grimly when they are told that there is at present no need for their services, and say, "Well, you may want us in a little while. The flood was a fury which either killed or let its victims go. As yet the Pennsylvania Railroad seems to have done little toward repairing the damage done to its property. The road is very badly crippled, and it will be the work of a week to fix it here alone.

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to the accounts of the residents in the neighborhood as to what was the condition of the dam before the disaster. The visit to the spot was not easily made. No one had attempted it from this side until this morning, although views of various sorts about it had been brought down by a few people living near it, or who had been caught near it when the flood came.

At 6 o'clock this morning a man set out for the lake by way of Conemaugh, and the other side miles up into the mountains over the summits of some of the highest parts of the Alleghenies, and then down as near the dam as the road leads. The shorter and more direct route up the river was impracticable, the flood having washed out the railroad, and the other side and the wagon road on the other, and the river having cut out new channels so winding and crooked that they would have to be crossed a dozen times in every mile of the way. The stream is still so swollen that it cannot be forded.

After reaching the vicinity of the dam, two miles more of tramping over a mass of rocks and gravel, from ten to twenty feet deep, was necessary to reach and get around the dam. As to the dam itself, no description yet printed gives any hint as to its character. There was no massive masonry, nor any tremendous excavation, nor any evidence of a certain design or structure or cutting it up. There was no masonry at all in fact, nor any engineering worthy of the name. The dam was simply a gigantic heap of earth dumped across the course of a mountain stream between two low hills. It was faced on each side with a layer of heavy stones, loosely thrown together and uncemented. This pile of earth was, as has been stated, about 75 feet high and 90 feet thick at the base. At the summit it was leveled off so as to be about 20 feet wide, and a wagon road crossed it. It was an ordinary dirt road, and there was no reek or odor of decay about it. The stones, which were at the bottom of the dam, were about 40 feet. At the top the dam was about 40 feet long. It was built straight across the gap, and neither face nor back was curved. The slopes were about the same on both face and back.

The dam was built many years ago to create a head of water for use as a feeder to the Pennsylvania Canal. The builders placed in the forty-foot space at the bottom, where the creek ran, five huge pipes, each as large as a hoghead. These were covered by an arch of massive masonry, and were arranged to be opened or closed by levers in a tower that was built in the center of the dam. These five big pipes were calculated to be large enough to carry off all surplus water that could ever be poured into the lake above and which could not escape by the regular exit, which was a sluiceway around one corner of the dam at a depth of eight or ten feet below the surface. This was really a new stream, the water passing through it finding its picturesque winding course down the hillside, and running with the stream again some distance below the dam. The sluiceway and waste gates never failed to do the work for which they were designed, and there is no reason to believe that they would have failed to do so at the present time and for the future had they been maintained as the builders contemplated.

When the Pennsylvania Canal was abandoned the dam became useless, and was neglected. The tower in which the machinery for another waste gate was located, and which was to have fallen into ruin a few years ago. The lake was leased by the Pittsburgh Sportsman's Association. Engineer Fulton of the Cambria Iron Company made an inspection of it and pronounced it dangerous. The association set out to improve and strengthen it.

It did not do two feet from the top of the dam, and may have strengthened it in some respects; but either because the waste gates were so damaged that to repair them would have been an expensive job, or for the other reason mentioned, the fact that the sluiceway had escaped the water, and every one who lives near says the gates were permanently stopped up. The present appearance of the wreck of the dam indicates the truthfulness of the story. There are remnants of the waste gate masonry, but there is no indication that they have been of any practical use for a long time.

Whatever may have been the indirect cause of the giving way of the heap of dirt that dammed up Conemaugh, the fearful power of the mass of water which was the direct cause of its yielding is evident all about the place. In the center of the dam, where the four waste gates were located, the old bed of the stream, and sloping rapidly upon each side to the top, where it is at least 200 feet wide. Through this huge gap can be seen a vast area of yellowish gravel and mud—a very deep basin in the center back of the dam, rising at each side in bluffs thirty feet high. The water gradually backed away off until it curved to the left and is cut off from view by a point of land. At the further edge of the curve are the big club house and a number of cottages erected for members of the club, and bits of color in the midst of masses of green trees.

This was called on Saturday a quarter of a mile wide at its narrowest point. It is generally much wider, and is said to average a mile and a quarter.

There would seem to have been enough water to wash away Johnstown in the parts of the huge basin that can be seen through the gap in the dam, but the whole length of that basin, and it winds irregularly back some three miles, and all the water in that area of three miles by a mile and a quarter passed out through the gap in the dam and poured itself upon the devoted valley below in a torrent 75 feet deep and 200 feet wide. Rushing through with a velocity almost inconceivable for vast masses of water, it struck the dam, and the tremendous pressure from behind urged the flood on to its most disastrous work. Something of the awful force of the torrent can be seen on the land below the dam. Formerly it was a densely wooded valley, nearly straightaway for half a mile, where it winds irregularly back to the right almost a right angle. The creek, coming down through sluiceway and down the mountain side, wandered in a crooked course through the bottom of the valley. Just before the turn it swept out to the right, and a long point of land, very heavily wooded. On the opposite bank was a high bluff, covered with forest down to the water's edge. For three-quarters of the distance from the dam to the curve the formerly wooded flats are now covered with gravel, coarse sand, and big rocks, twenty feet above the upper end, and not less than ten at any point. The creek runs through the forty-foot gap where the waste gates used to be, and through a deep gully in the mass of gravel and sand. There is no vestige of trees or underbrush. Just before the curve the water begins to flow over the gravel, and the deposit of the torrent is thin, but the heavily wooded point on the other side has disappeared, and gravel ten feet deep covers the spot. On the opposite bluff the trees have been stripped away and the side of the hill torn out for forty feet up, as if by evidence of the terrible force of the torrent as it whirled about the right-angled turn. The surface of the little half-mile valley suggests nothing more forcibly than that the system of hydraulic mining used in the gold regions had been worked here for a long time. The debris is still of heavy rock and gravel. There is no light dirt in it. The heavy water that it carried with it everything but the heaviest that it picked up. Many of what have evidently been the largest and heaviest rocks in the face of the dam lie broken into fragments against some other rock upon which they were hurled.

There were two houses on the flat of the half-mile valley. George Fisher and his family lived in the first, right in sight of the dam. He had a large water tank, that the dam was going to, and he moved out in time and saved the lives of his family, but little else besides the clothes they wore. George Lamb, with his wife and children and two pigs, lived just by the bridge further down the valley. He also was afraid of the dam, but he stayed in his house until he heard the thunder of the waters pouring through the first breach in the dam. Then he shouted to neighbors who had come running down the hill to rescue his wife and children, while he ran himself to save the pigs. He didn't get the pigs. If the neighbors hadn't heeded him out along with his family he would have been caught in the first rush of the torrent. The flood, he says, seemed to follow almost instantly after the thunder of the storm. The stream is still so swollen that it cannot be forded.

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There would seem to have been enough water to wash away Johnstown in the parts of the huge basin that can be seen through the gap in the dam, but the whole length of that basin, and it winds irregularly back some three miles, and all the water in that area of three miles by a mile and a quarter passed out through the gap in the dam and poured itself upon the devoted valley below in a torrent 75 feet deep and 200 feet wide. Rushing through with a velocity almost inconceivable for vast masses of water, it struck the dam, and the tremendous pressure from behind urged the flood on to its most disastrous work. Something of the awful force of the torrent can be seen on the land below the dam. Formerly it was a densely wooded valley, nearly straightaway for half a mile, where it winds irregularly back to the right almost a right angle. The creek, coming down through sluiceway and down the mountain side, wandered in a crooked course through the bottom of the valley. Just before the turn it swept out to the right, and a long point of land, very heavily wooded. On the opposite bank was a high bluff, covered with forest down to the water's edge. For three-quarters of the distance from the dam to the curve the formerly wooded flats are now covered with gravel, coarse sand, and big rocks, twenty feet above the upper end, and not less than ten at any point. The creek runs through the forty-foot gap where the waste gates used to be, and through a deep gully in the mass of gravel and sand. There is no vestige of trees or underbrush. Just before the curve the water begins to flow over the gravel, and the deposit of the torrent is thin, but the heavily wooded point on the other side has disappeared, and gravel ten feet deep covers the spot. On the opposite bluff the trees have been stripped away and the side of the hill torn out for forty feet up, as if by evidence of the terrible force of the torrent as it whirled about the right-angled turn. The surface of the little half-mile valley suggests nothing more forcibly than that the system of hydraulic mining used in the gold regions had been worked here for a long time. The debris is still of heavy rock and gravel. There is no light dirt in it. The heavy water that it carried with it everything but the heaviest that it picked up. Many of what have evidently been the largest and heaviest rocks in the face of the dam lie broken into fragments against some other rock upon which they were hurled.

There were two houses on the flat of the half-mile valley. George Fisher and his family lived in the first, right in sight of the dam. He had a large water tank, that the dam was going to, and he moved out in time and saved the lives of his family, but little else besides the clothes they wore. George Lamb, with his wife and children and two pigs, lived just by the bridge further down the valley. He also was afraid of the dam, but he stayed in his house until he heard the thunder of the waters pouring through the first breach in the dam. Then he shouted to neighbors who had come running down the hill to rescue his wife and children, while he ran himself to save the pigs. He didn't get the pigs. If the neighbors hadn't heeded him out along with his family he would have been caught in the first rush of the torrent. The flood, he says, seemed to follow almost instantly after the thunder of the storm. The stream is still so swollen that it cannot be forded.

After reaching the vicinity of the dam, two miles more of tramping over a mass of rocks and gravel, from ten to twenty feet deep, was necessary to reach and get around the dam. As to the dam itself, no description yet printed gives any hint as to its character. There was no massive masonry, nor any tremendous excavation, nor any evidence of a certain design or structure or cutting it up. There was no masonry at all in fact, nor any engineering worthy of the name. The dam was simply a gigantic heap of earth dumped across the course of a mountain stream between two low hills. It was faced on each side with a layer of heavy stones, loosely thrown together and uncemented. This pile of earth was, as has been stated, about 75 feet high and 90 feet thick at the base. At the summit it was leveled off so as to be about 20 feet wide, and a wagon road crossed it. It was an ordinary dirt road, and there was no reek or odor of decay about it. The stones, which were at the bottom of the dam, were about 40 feet. At the top the dam was about 40 feet long. It was built straight across the gap, and neither face nor back was curved. The slopes were about the same on both face and back.

The dam was built many years ago to create a head of water for use as a feeder to the Pennsylvania Canal. The builders placed in the forty-foot space at the bottom, where the creek ran, five huge pipes, each as large as a hoghead. These were covered by an arch of massive masonry, and were arranged to be opened or closed by levers in a tower that was built in the center of the dam. These five big pipes were calculated to be large enough to carry off all surplus water that could ever be poured into the lake above and which could not escape by the regular exit, which was a sluiceway around one corner of the dam at a depth of eight or ten feet below the surface. This was really a new stream, the water passing through it finding its picturesque winding course down the hillside, and running with the stream again some distance below the dam. The sluiceway and waste gates never failed to do the work for which they were designed, and there is no reason to believe that they would have failed to do so at the present time and for the future had they been maintained as the builders contemplated.

When the Pennsylvania Canal was abandoned the dam became useless, and was neglected. The tower in which the machinery for another waste gate was located, and which was to have fallen into ruin a few years ago. The lake was leased by the Pittsburgh Sportsman's Association. Engineer Fulton of the Cambria Iron Company made an inspection of it and pronounced it dangerous. The association set out to improve and strengthen it.

It did not do two feet from the top of the dam, and may have strengthened it in some respects; but either because the waste gates were so damaged that to repair them would have been an expensive job, or for the other reason mentioned, the fact that the sluiceway had escaped the water, and every one who lives near says the gates were permanently stopped up. The present appearance of the wreck of the dam indicates the truthfulness of the story. There are remnants of the waste gate masonry, but there is no indication that they have been of any practical use for a long time.

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