



*Destruction by Fire of*  
**Knights of Columbus Hostel,**  
*St. John's,*  
*December 12th, 1942, with loss of 99 lives.*

*paper loss*

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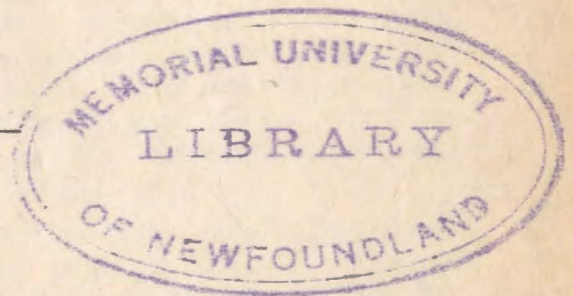
# REPORT

*of*

**HON. MR. JUSTICE DUNFIELD**

**SPECIAL COMMISSIONER UNDER PUBLIC ENQUIRIES ACT 1934**

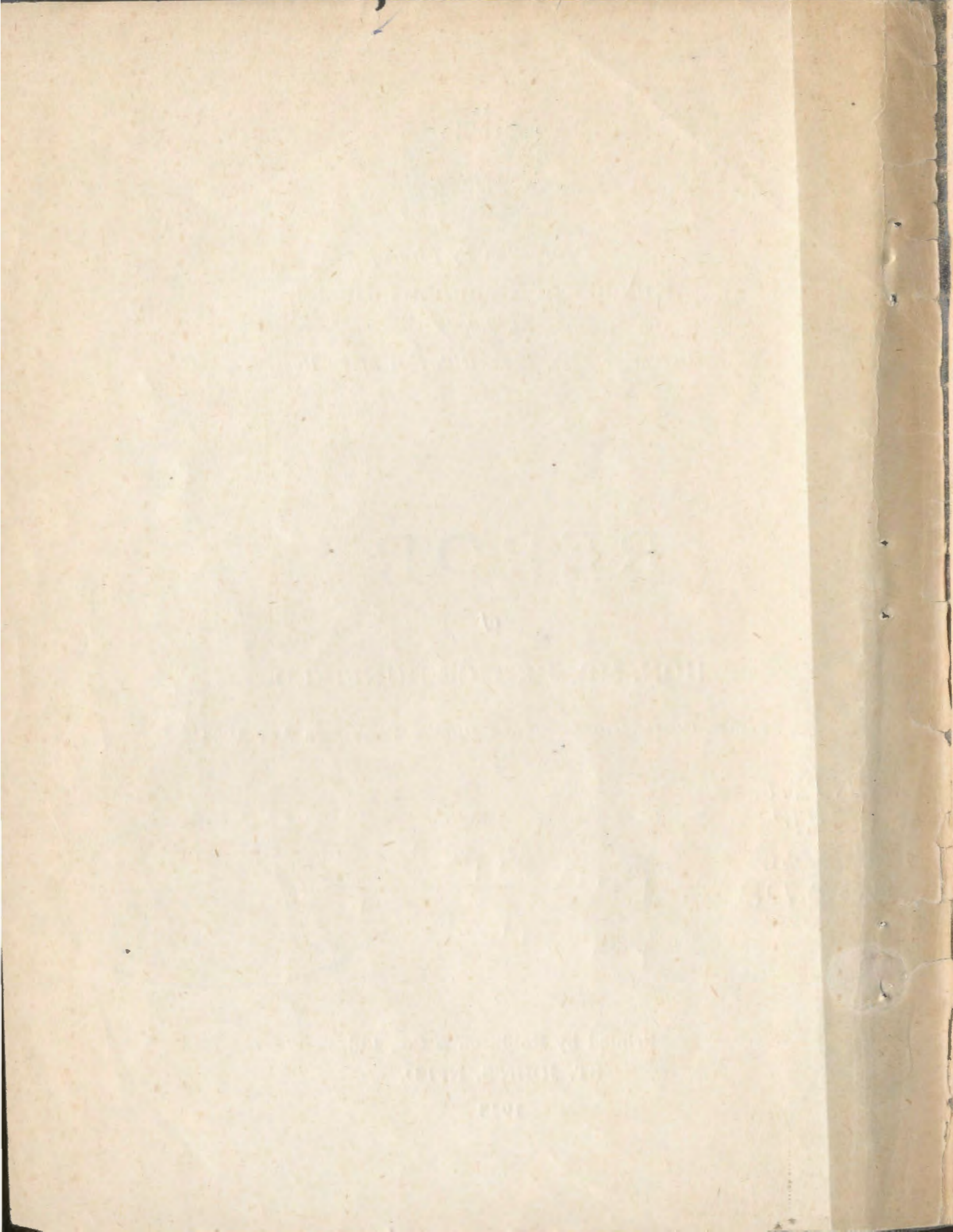
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ST. JOHN'S, NFLD.

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YOUR EXCELLENCY,—

In pursuance of the Commission under the Public Enquiries Act addressed to me on December 23rd, 1942, I have enquired into the fire which took place at the Knights of Columbus Hut in St. John's on December 12th, 1942, and now beg to report thereon.

(2) The Knights of Columbus Hut, a building erected by the Knights of Columbus Canadian Army Huts, which is, I understand, a Committee of the K. of C. organization in Canada, as a sleeping, eating and recreation centre for service men, was destroyed by fire during the night of December 12th and morning of December 13th, 1942, with great loss of life. So far as can now be discovered ninety-nine persons died in the fire, while one hundred were treated in hospital or elsewhere for more or less severe burns. The magnitude of this tragedy, measured by local standards, moved Your Excellency to appoint a special Commission of Enquiry instead of having the fire investigated by a magistrate in the ordinary course.

(3) I began sitting on Saturday, January 2nd, 1943, in the second court room in the Court House of St. John's, by permission of the Judges. There appeared at the first sitting the Attorney General, Hon. L. E. Emerson, K.C., and Mr. H. P. Carter, K.C., Public Prosecutor on behalf of the Crown; Mr. James A. Gibbs on behalf of the Knights of Columbus Society; Colonel John Shaw (of the Michigan Bench and Bar) United States Army; Captain G. W. Hall, Legal Officer of the Canadian Forces in Newfoundland; Mrs. Elizabeth Conroy, of Conroy, Bradshaw & Conroy on behalf of the City (later Mr. J. M. Bradshaw appeared); Mr. John A. Barron on behalf of the Fire Underwriters; Mr. R. J. Kent of the Supreme Court Registry, acting as Secretary.

(4) I have had the advantage of having with me as scientific adviser, Lieut.-Colonel John W. Beretta of the United States Corps of Engineers, who was jointly nominated by Major-General L. F. Page, Canadian General Officer Commanding, and Major-General G. C. Brant, Commanding General, Newfoundland Base Command, U. S. Army. While Lt.-Col. Beretta has been unable to sit throughout the whole Enquiry owing to the pressure of his military duties, he has been of great assistance in connection with technical matters arising in the course of the Enquiry.

(5) I have held 38 sessions and examined altogether 174 witnesses, and have read statements from a number of witnesses whom it did not seem necessary to call. I have also had the advantage of discussing various angles of the situation with local experts in chemistry and physics. Medical evidence was taken from Squadron Leader A. W. Farmer, a medical officer of the R.C.A.F., who is in civil life a member of the medical teaching Faculty of Toronto University and a specialist on the treatment of burns. The pertinence of his evidence will appear as we go on.

(6) The first step in the investigation of a fire is to obtain the plans and specifications of the building and the normal place to look for these is in the office of the St. John's Municipal Council. Section 344 of the St. John's Municipal Act provides that all persons desirous of constructing any building shall submit to the City Engineer plans and specifications, together with an affidavit of truth, and that one copy of these plans and specifications shall be filed in his office and be deemed to be a public record. Only on compliance with these provisions is a permit to build to be issued. In the present case, as appears on the evidence of the City

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Engineer and the City Clerk and from the minutes, nothing of the kind was done. The representative of the Knights of Columbus, who was here from Canada, asked for permission to build and met the Council, who there and then ordered that the permit to build be issued to him. No plans or specifications were filed, and in fact there probably were not any at that time, which was a couple of months before the building started. The City officials were unable to produce plans, and in fact the only plan they had in their possession was a ground floor plan obtained by the City Engineer after building had well advanced. I think it may be pointed out to the City Council, by way of warning rather than of blame, that administrative laws provided for the protection of the public should not be departed from in this manner. The Council's intentions were of the best and its desire was to expedite the construction of a building for the accommodation and entertainment of the troops; but in the case of a war going on for years the matter of a week or two which might be lost in the preparation of plans and specifications was not important and the Act should have been carried out. In the present instance the failure to carry it out did no harm, because we could obtain plans from the owners, a reputable organization, and, further, there is nothing to suggest that the construction of the building was scamped in any way; nor would there be any motive for scamping it even if anybody had been inclined to do so, since the builder was paid on a fixed fee basis; but it would be easy to imagine a case where there was no reputable source from which to obtain plans, or where fire precautions in a building had been scamped without the knowledge of the owners in order that someone might save money; and in such a case the plans and specifications in the City Engineer's office would be the record for the protection of the public. It may be observed that the plans and specifications themselves as ultimately produced could hardly be called complete. The specifications consisted of four sheets of letter-size type. The plans did not show any constructional details. Alterations were made during construction.

(7) Your Excellency's attention is also called to Act No. 20 of 1925 entitled "An Act to Amend Cap. 52 Consolidated Statutes (Third Series) entitled 'Of Egress from Churches, Theatres and other Buildings.'"

This Act repeats, with slight variations and improvements, an older Act which has been in force for many years. It relates to places of public resort.

It enacts that all doors shall be hinged to open outwards. The screen doors in the K. of C. Hut, opening inwards, were a breach of this Act.

It throws an implied duty upon the City Engineer and the Chief of Police to order alterations in any place of public resort to make it safe for the use of the public. It provides also that no such place shall be constructed in any municipality without prior notice to the Council thereof and that a copy of the plans proposed to be used in such construction shall be forwarded to the Council. There is an implied duty on the Council to pass upon the plans. This was not done.

It also provides that the means of ingress and egress and the passages and aisles shall be kept free and unobstructed to such extent as the Chief of Police or any police officer may require. It does not appear that any comment had been made or any requirements set up in relation to the exit from the K. of C. auditorium, which could not be said to be free and un-



obstructed, but was across a restaurant filled with loose tables and chairs, well enough, no doubt, while the lights were on but dangerous as soon as the lights went off.

(8) I have the honour to append a series of plans and photographs which will give Your Excellency a full idea of the design of the building; but for the benefit of those who may have to read this Report without photographs or plans before them I will proceed to describe the building.

(9) The building took the form of three sides of a rectangle, the central block facing south on Harvey Road, St. John's, and the open side or courtyard facing north away from the road. The front block was about 115 feet long, and about 38 feet deep, and was of two stories with a gable roof over. At each end the wings ran back at right angles to the front. The east wing was of two stories with a gable roof over, and was about 88 feet long and of the same height and size as the front block. The west wing was of the same length and width as the east wing, but of one storey only, and contained the auditorium. The ceiling of the auditorium stood about three feet higher than the floor of the dormitories in the front block, and the gable over the auditorium ran into the higher gable of the front block about one-third of the way up.

(10) The rather long and narrow courtyard between the rear wings was further narrowed by two lean-tos. One lean-to ran on the inner or eastern side of the auditorium for its full length from the main block to the rear and contained in order, starting from the main block, (a) the kitchen; (b) a store-room; (c) a cold-storage room; (d) another store-room through which there was an exit from the auditorium; (e) yet another store room. On the inner or western side of the east wing there was a much smaller and shorter lean-to which contained the boiler and furnace room and coal storage.

(11) Having thus described the exterior we turn to the interior. The main entrance was in the middle of the front and reached by a few steps, as owing to the inequalities of the ground the main floor of the building which, except in the case of the boiler room, had nothing but props beneath it, varied from 10 inches off the ground at one of the rear corners to 4 feet off the ground at the opposite front corner. Going up the steps you entered by a sort of passage in which were two pairs of doors. Opinions differ as to the outer pair of doors. They were supposed to open outwards, and the builders say they did, but some witnesses say unequivocally that they opened inwards. The inner pair of doors undoubtedly opened outwards. On the whole I think both pairs opened outwards.

(12) Passing through this passage which was about fifteen feet long and seven or eight feet wide, you came into the lobby and found in front of you the reception desk, which backed against the rear walls of the main building and had on its right or eastern end a small office, and on its left or western end the check room for coats, etc. Turning to your left you would pass on your left first the private office of the manager, which formed one side of the entrance passage, and then a long reading room which occupied the rest of the front on that side. On your right, after passing the check room, you would find the canteen counter, which could be closed with two shutters sliding down from above; then passing the back of the projection booth you would find on your right the main entrance to

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the auditorium itself. It consisted of two pairs of doors swinging outwards, with a post between them. This brought you to the western wall, in which were a couple of windows. Outside the western wall at this point there was a small excrescence containing two toilet rooms, one for ladies, its door opening into the lobby just outside the auditorium entrance, and one for men, its door opening into the auditorium just inside the entrance. The space between the canteen counter and the reading room was used as a restaurant and pretty well filled with tables and chairs. There were two doors from the restaurant into the reading room. Behind the canteen was an opening into the kitchen, which, as has been said, was in the lean-to on the inner or eastern side of the auditorium. Returning now to the entrance doors and turning right, you had first on your right two rooms occupied by the Chaplain and on your left the small office first referred to (this is not the private office by the entrance), and then the stairs to the upper storey. These stairs were in two flights, turning at 180 degrees on a landing half way up. Passing those stairs and the Chaplain's rooms, you came into an open space occupying the whole end of the wing. In this were ping-pong tables, a piano, a "juke-box," etc., and it was called the recreation room. There was thus a continuous open space from end to end of the front block, from the auditorium doors at the west end to the ping-pong area at the east end. There was one exit in the recreation room; a single door leading out to some steps on the east side.

(13) Over all this was the upper storey of the front block. At the western end there were three small rooms against the western wall, which were a toilet, a shower and the maintenance man's bedroom respectively. Then there was a long front dormitory running right down the front, turning the corner and running a little towards the east wing. This was dormitory B. Behind it, but shorter, running from the maintenance man's room to the stairs, there was another long dormitory known as A. At the head of the stairs was a linen room, occupying the angle of B. dormitory.

(14) I now describe a feature which had a great bearing on the tragedy. The auditorium did not come right up to the main rear wall of the front block. By means of a false wall a few feet had been stolen from it, and the space so cut off was occupied in the centre by the projection booth for the showing of moving pictures. On the western side of the projection booth, as already stated, were the double doors of the auditorium. On the eastern side of the projection booth the stolen space was used to give more room behind the canteen counter.

(15) Now, turning to the upper storey again, the space over the booth and canteen had been used, by a sort of after-thought, to make two large storage cupboards, behind the main walls of the front block and over the stolen space already referred to. The projection room, the ceiling of the auditorium, and the false wall forming the back of the auditorium, came up about three feet above the floor of the dormitory. On each side of the top part of the booth a space, about six feet deep from front to back under the gable of the auditorium had been utilized to build a store cupboard; that is, one of these store cupboards was over the canteen, the other was over the main entrance to the auditorium and between them the top of the projection booth rose up three feet into the loft. The door of the easternmost cupboard opened into A. dormitory, the door of the westernmost cup-



board into a passage just outside A dormitory. (This passage led to an exit flight of stairs which ran down over the two toilet rooms already referred to and afforded a western exit from the dormitories. It was not used in this affair, probably because, as will later appear, the fire cut everybody off from it. The stair could not be reached from the two toilet rooms or from the hall below, which was very unfortunate as things turned out).

(16) Having thus described the main block we now turn to the wings. The western wing was an auditorium of one storey running out about 88 feet to the northward. Its rear or south wall consisted of the double entrance doors already referred to, on the western side, the projection booth in the middle and the false wall which formed the back of the canteen on the eastern side. The stage was at the further or northern end. In the left or western wall there were two emergency exits; a single door near the western end of the stage, which we have named Exit 1; three windows intervening; and then another single door near the main entrance, which we have named Exit 2. Both these led direct into the open air. Each consisted of a single wooden door with three vertical panes of glass in the upper part, the door opening outwards, and a screen door filled in with fly-wire set on the inside and opening inwards. The fly-wire in each case was covered by a detachable plywood baffle structure for purpose of securing blackout while giving ventilation. (It may be mentioned here that all the outside doors, with the exception of the front doors, and the cellar door which was a small one, were of this same type, that is solid pine doors with three vertical sheets of glass in the upper portion).

(17) On the right hand side of the auditorium looking towards the stage there was a long blank wall which had behind it the kitchen, store-room and cold-storage room, as already described. Then near the stage there was another exit, which we have named Exit 3. This formerly led direct into the open air, but two more store-rooms had been added, so that it now led to the outside through a store-room. At the inner door there was a single screen door opening outwards, without blackout arrangements. At the outer exit there was a solid door of the usual type opening out and a wire screen door opening in.

(18) The stage was about four feet off the floor and its ceiling inside the proscenium arch was about three feet above the auditorium ceiling. There was no exit from the stage except a window in the small dressing-room on the west side and half a window in the small dressing-room on the east side over the store-room roof.

(19) There was a fire hose in a wall cupboard on the eastern wall about half way between the rear and Exit No. 3.

(20) The chairs were light single folding chairs of metal, not fastened down.

(21) We now turn to the east wing. Coming into the recreation room already described, and turning to the left round the stairs you had before you the door of a private passage leading down through the wing. On the right of this passage were the rooms of the manager and other staff. On the left of the passage was a large room devoted to the use of the Free French. Just behind the Free French room there was a passage leading into the courtyard, which we have called Exit No. 7. There were five exits into the courtyard; Exit No. 3, it will be remembered, came out of the auditorium



near the stage; Exit No. 4 was from the middle store-room; Exit No. 5 was from the kitchen opposite No. 7; Exit No. 6 was a small door from the boiler room; Exit No. 7 we have just described.

(22) Going on through the passage past the private apartments and the Free French room you passed between a toilet room and a shower room and came into two long dormitories H. and G. with screen doors at the further or northern end.

(23) In the upper storey of this wing there were two long dormitories C. and E. over the private quarters and Free French room; then again a toilet and a shower, then two more long dormitories D and F. over G. and H. with doors at the further end. The northern screen doors of the dormitories above and below came out into a two-storey porch in which there was a stair, so that, coming out the northern doors of these dormitories and, in the case of the upper ones, coming downstairs, you came to the two exterior exits in the lower part of the porch, which we numbered 8 (the western one) and 9 (the eastern one). Exit 10 has already been mentioned; it was on the east end of the recreation room. All these exits, except the boiler room, had the usual pine door with three panes of glass. Exterior exits 7, 8 and 9 had no wire screen.

(24) Above the whole of the front block and east wing and under the gable roof there was a long loft or attic occupied only by the roof trusses. This was about ten feet high, and from the west end of the front block to the north end of the east wing about 220 feet long, open and continuous. The loft over the auditorium, which was lower and about 88 feet long, did not actually connect with the main lofts, but was separated from them by the board sheathing of the main roof, about seven-eighths of an inch thick, i.e., the original sheathing of the main gable before the smaller gable of the auditorium was fixed to it.

(25) These lofts had no ventilation to the outside air.

(26) The building was constructed of local timber, the usual spruce and fir. There was no fault to be found with the strength of the structure. The exterior was covered with an imitation brick siding, similar in nature to asphalt roofing, with building paper under it. The roofs were covered with a substantial asphalt shingle with tarred felt under it. All the partitions or inner walls and ceilings of the building were made of a wallboard called "Insul" Board. This, from a sample, appears to consist of six laminations of woodpulp material glued together, no doubt under pressure, with a black tarry substance, said by the makers to be asphalt. It was left in its natural colour unpainted. The lower parts of the walls were covered with a dado of plywood 4 or 5 feet high, applied over wallboard. The floors were hardwood.

(27) It is to be observed that, as is perhaps natural in a temporary structure of this kind, the whole was very inflammable. The resinous spruce and fir timber had been dried under the roofs and walls by the sun of a long warm summer. The wallboard seems to be highly inflammable; there is no difficulty in setting a sample of it on fire with a match, not merely at the edge, but on an unbroken surface. It is really a vapour-sealed insulation board, and doubtless excellent for that purpose; but, to my mind dangerous as a wall-surfacing material unless treated with some paint or other substance calculated to reduce inflammability. The asphalt roofing and siding



would no doubt afford considerable resistance to ignition from outside by sparks or small burnt scraps of wood, probably a good deal more resistance than sun-dried wooden shingles would afford in similar conditions; but once subjected to powerful heat sufficient to melt it it would, I should think add fuel to the flames. A sliver cut from the shingle with a pen-knife and lighted with a match burns somewhat like sealingwax, with a smoky flame and dropping melted and burning tar or bitumen. (It is noticeable that some houses on the opposite side of the street covered with the same brick siding had the whole sanded surface melted off by the radiated heat from the burning building, leaving the black tar or asphalt exposed and somewhat bubbled). The whole building was thus a very ready subject for a fire.

(28) The electric wiring was done by a reliable local man of good reputation. The material was supplied him from Canada and he states it to have been of good quality. The panel boxes and switches were standard articles. The current was carried from the front wall under the floor in conduit to a main panel in the office next to the registration desk. The rest of the wiring was by B X Cable (cable armoured with spiral metal) to a panel in the projection room which supplied the auditorium, a panel in the kitchen which supplied the kitchen and a panel at the head of the stairs which supplied the upper floors. There were no emergency lights or second circuit. The boiler was coal-fired by automatic stoker, and the cooking was electrical. There was no gas in the building. There is no evidence of any special trouble with the electrical equipment.

(29) Referring back to the exits; there was no panic bolts on doors in the building. The specifications called for these, but the General Manager, Mr. Robert Ryan, of Ottawa, who was here at the time, and the builder, both say that panic bolts were unfortunately unobtainable in Canada at the time the building was erected. Both the screen doors and the outside solid doors of the exits were accordingly secured with ordinary mortice locks. The windows, on account of the blackout, were covered with screens of plywood, set in flush and secured by turn buttons. There was evidence that in the reading room there were some screens of lighter construction. Ventilation was secured by electric fans set in the walls in various parts of the building.

(30) Having thus described the building, I now come to describe the actual course of the fire as seen through the eyes of a hundred and fifty or more witnesses in different parts of the building and outside. Each brings back a picture of the little area and period which he saw. The cool intelligent witness describes it accurately, and perhaps gives some time references which help in piecing evidence together; even the stupid witness usually has his picture or two, burnt photographically upon his brain by the fierce pressure of events, and for that reason usually reliable. As these stories are slowly heard, examined, compared and referred to a framework of time reference, the jig-saw puzzle builds up, the picture begins to come alive and presently the investigator sees the whole scene with his mind's eye as no single observer could ever have seen it, since he can watch simultaneously the events in different parts of the building from within and from outside through many different eyes. There are always some con-



traditions, owing to the stress and confusion; but the value of contradictory evidence can be estimated.

(31) The easternmost of the two store-cupboards on the second floor, the one which opened into Dormitory A, was situate over the space behind the canteen counter, and abutted in its lower three feet against the top east wall of the projection booth. In this cupboard there was piled a store of toilet paper (in flat packages, not rolls) and of paper wiping rolls used in the kitchen. These goods were in large cardboard cartons, piled one upon another, and one or two, those at the moment in use, were broken open. Upon the top of this pile fire started at some time unknown, probably between half past ten and eleven.

(32) The cupboard in which this paper was stored can be considered as more or less a large cardboard box; its inner sides and top were built of the six-ply wallboard already described. Its front wall was the main rear wall of the front block. Its situation will be remembered; it stood under the ridge of, and indeed within, the loft above the auditorium, but only a few feet outside the point where this ridge ran into the higher gable of the front block. Thus the burning paper formed a sort of torch, which would swiftly burn through the wall-board above it and throw its flames on the interior of the loft. Spreading out both ways, these would soon burn their way through the obstacle of 7/8 inch board which was the only barrier between them and the huge lofts over the main block and east wing and would lick up over and among the sun-dried and resinous timbers towards the peak. They would work out in a lesser degree horizontally along the loft of the auditorium, which lay on its own lower level. They had to feed on, not only the rafters, but the numerous plank stays and members which formed the roof trusses. Probably, while they burnt on top of the pile in the cupboard they worked slowly, damped down through shortage of oxygen. Coming out into the lofts they would spread for a while and then damp down again, when they had consumed most of the oxygen there available. We cannot say how long the fire had been working slowly, but it is quite clear that by the time it made its first public appearance all the extensive lofts of the building, tight and unventilated as they were, had become a gas-holder filled with inflammable and explosive gases, an immense bomb over the heads of the people in the building and unknown to them. That is what would naturally happen, and from subsequent events it is clear that it is what must have happened.

(33) A normal fire produces large quantities of carbon dioxide (CO<sub>2</sub>), a heavy, inert, suffocating gas which does not support combustion; but the moment it is short of air it begins to produce instead carbon monoxide (CO) in greater or less quantities. This gas is short of a molecule of oxygen and seeks oxygen. It is, when pure, clear, colourless, without taste or smell. It is highly poisonous because it swiftly combines with the blood to replace the oxygen-carrying substance therein (oxyhaemoglobin) with another compound which does not carry oxygen (CO haemoglobin) so that the victim perishes for lack of oxygen though his breathing and circulation are uninterrupted. It produces dizziness, muscular weakness and quick and painless unconsciousness. A small percentage of it in the air rapidly produces serious symptoms. These come on very quickly. There is utter prostration of strength, with inability to move or call for assistance. Taylor,



(Medical Jurisprudence), says that five minutes exposure to 1% CO in air would probably be fatal: the time would vary with the percentage. One affect of the gas is that the victim tends to become mentally incapable of the effort of moving or trying to escape.

(34) According to books I have referred to, carbon monoxide burns at 841 degrees Fahrenheit, which is about the temperature of some of the heavier woods burning naturally, and a mixture of any thing from 12.5% to 75% of it with air is explosive. And when pure it burns with a bluish flame, though with a much smaller development of heat than most ordinary inflammable gases. Flames from burning carbonaceous substances, such as wood, produce it in their interiors, where oxygen is short; but as it comes near the surface of the flame it burns again and produces carbon dioxide. Observers may have seen at the fire plumes of bluish flame from two pipes which went deep into the burning mass. This was probably impure carbon monoxide piped to the exterior of the flames before it could burn within.

(35) Mixed with the distillation gases produced by the damped-down burning and charring of resinous wood, paper, tar-paper and the like, carbon monoxide would form an excellent imitation of commercial gas. Fortunately, under circumstances such as those of the present, it would not be pure, evenly mixed, or evenly heated. If it were, air and ignition would produce a single explosion. But the uneven, mixed, dirty and unevenly heated gases from such a fire would, on gaining oxygen from the outside air, probably explode or flash from point to point, just as we see with the distillation gases which come up when a bright fire is covered in with small coal. Flashes come from place to place among the smoke and go out again, until at length temperature reaches the point where the gases break into continuous flame. And with every flash or explosion in a confined space, there would be developed a sudden violent heat-expansion.

(36) In brief, at this time the building was behaving exactly like a huge producer-gas plant, and with the same results. All this was over the heads of the people in the building, but they did not know it. Some observed faint smells of smoke; some abnormal heat or stuffiness. In the auditorium, five or ten minutes or even longer before the blast a few noticed noises; a cracking; a sound which one compared to the scratching of rats; a sound as of gravel or peas thrown along the floor; a sound as of rending; a noise which one attributed to someone moving a chair, and said "Hush." But their attention was fixed on the stage, and no doubt the music drowned small noises. At any rate, no one thought anything of it. Some speak of the extreme heaviness of the atmosphere.

(37) At this time, eleven o'clock, there were probably 350 people in the auditorium, listening to and watching the performance of "Uncle Tim's Barn Dance", a popular local variety entertainment. From a quarter to a third of these people were women and girls. In the restaurant, and at the canteen, which was about to close, and did close between 11.05 and 11.10, a substantial number of people were standing and sitting about. A few were in the reading room and a dozen in the ping-pong or recreation room. Small groups were standing within the entrance, waiting for the buses which would take them back to their stations. One or two small groups were approaching outside to meet the bus, and a couple of policemen were passing by westwards. The manager, Mr. Quinn, was sitting in his quarters on



the east side talking to Mr. Robert Ryan, the general manager from Canada, who was in town for an inspection. Various small groups were in their bunks or undressing for bed in the various dormitories. Three or four were in showers or toilets. The performance in the auditorium was going cheerfully on, and was being broadcast by a local radio station. Listeners outside heard the first beginnings of the tragedy before the microphone was cut off.

(38) At 11.10, as nearly as may be, the alarm came from two directions. The warning and the realization of what it meant came quickly to those in the lobbies; even more quickly to those in the dormitories; last of all to those in the auditorium, though the whole tragedy, from beginning to end, took nothing over five or six minutes.

(39) We have a good and clear story from Signalman Maurice Weldon of the Royal Canadian Navy. He and a friend named Richmond were preparing for bed in A dormitory, the rear dormitory in the front block. There were there, also, four men of the R.C.A.F. in bed, and a couple of others, who may have been Americans; he is not sure. A Newfoundland Militia man, in battledress, was also there, and Weldon saw him go to the door of the paper storeroom, which he possibly supposed to be a toilet. He opened it and was confronted with a sheet of flame. He left it open and ran for the stairs. He may or may not be the Newfoundland soldier, shortly to be referred to, who gave the warning downstairs.

(40) Weldon ran across the door, and saw in through it. Fire filled the top of the cupboard and was inclined to roll out. Beneath the fire he saw unburnt cartons and read "Toilet Tissue". Then he got behind the door, and at the second attempt succeeded in shutting it. As he did so a blast of flame blew over the top of the door, and burnt his arm and shoulder badly, so that he is still in hospital. This incident is confirmed by the evidence of an R.C.A.F. man, G. A. Wood, L.A.C., whose evidence shows that he saw it. Then Weldon ran, in his underclothes, not looking behind, tried to shake up the sleepers as quickly as he could, and ran on towards the stairs. Heat pursued him closely, and when he got into the stair well it was so fierce he could hardly stand it; only at the foot of the stairs did he emerge into cooler air. When Weldon got down he found that the alarm had already been raised in the lobby.

(41) Able Seaman John Juzenko, R.C.N.V.R., was in the recreation room with a friend, one Egan, when a soldier in battledress came downstairs, went to the office wicket and said there was a fire. An elderly grey-haired civilian, doubtless John J. St. John, the clerk of the institution, came out and ran upstairs with the same soldier. Juzenko and his friend followed to see what they could do. Men from the dormitories were coming down. They said the fire was in "a little pantry" down the dormitory. Juzenko saw two men at a door. They opened it, and he saw yellow flames, then they shut it again. This was a second opening of the door. He tried to shake up some men who were asleep, without much success; then the door burnt through and flames came along the ceiling, very fast. Egan turned into the other dormitory, and was not seen again. Juzenko went on downstairs, and when he got there, fire came down the stairs with a rush. He got out the front door without being burnt. Doubtless those upstairs, including Egan were overwhelmed by the rush of flames.



(42) Mr. St. John must have turned and run down while Juzenko was trying to rouse the sleepers, because he is almost instantly heard of at the door of the private quarters telling Quinn and Ryan that there is a fire. Having told them he turned and ran, they following on his heels. He passed the stairs, going up the lobby. As Quinn approached the stairs, Ryan a few steps behind him, a blast came down the stairs and cut him off from their view as he ran up the hall. Ryan describes the blast as consisting of gases, shot through with flame, but distinguishable from smoke. As they broke from the mouth of the stairs they burst into flame. They came down so hard, Ryan says, that they hit the wall at the landing with an audible bump. A soldier witness says they came down "like a bullet from a gun." As Quinn and Ryan retreated from this flame it swung west, up the hall and streamed out the front door. I think the stream was deflected from the Recreation Room because this formed a pocket of air, while the front entrance offered the path of least resistance to the gases, which were under slight pressure in the building.

(43) Here the succession of gas explosions from the loft was beginning. I suggest that the first of them blew down parts of the wallboard ceiling of the main block dormitories, smothering those there in hot gas and a flash of flame, while the aftermath of this blast blew down the stairs, as seen by Ryan. It was at this moment, I think, that the front dormitories burst into flame from end to end; all their windows were flaming just as soon after the gush of flames from the front door as the plywood blackouts on the windows burnt through. At the same time the chain of fire-gas explosions was proceeding through the lofts of the eastern wing. One witness in bed downstairs, saw the ceiling over him blow down, so that it rested on some steampipes. Flame came soon after. Another observer outside saw flame ooze, as if under pressure, through crevices under the eaves of the east wing. An American officer saw shoot from the western windows of the dormitories a long blast of bluish flame giving the impression that "there was power behind it." Another outside observer saw blue flames hiss, as if under pressure, from crevices in the building, and he thought there was to be a gas explosion and ran across the street. The burning gases under pressure from behind blew through the passages and dormitories of the east wing, driving their occupants swiftly towards the north-eastern porch [exits (8) and (9)]. A seaman says the flames came into the eastern dormitories as if under forced draught, a striking simile. The blasts of pressure came intermittently, but all the men had time to do was to snatch a few clothes, not to put them on. Some merchant seamen, perhaps caught asleep, died there, and some jumped through second floor windows.

(44) We now return to the auditorium. At just about the time when the soldier was opening the door on the flames above, and thereby perhaps giving them the final fillip of oxygen which started the explosions on their way, the fire burnt down to the roof of the projection booth, made a hole for itself, and began to come through with a hiss. Pressure was doubtless building up behind it above. We know the fire was coming into the top of the booth, because a Naval man broke open the door and looked in, and describes it for us. At the same time the fire was working down into the walls at the end of the canteen and south-west corner of the kitchen, which were also the walls of the right rear corner of the auditorium. Smoke, and [\*NOTE—Booth was non-fireproof; used only for non-inflammable films.]



very soon flames, began to blow out the projection slots. Those near began to shuffle and move. The performers stopped, thinking there was a fight. J. L. Murphy, the producer, exhorted the people from the stage to be calm, and called for music. Then the cry of "fire" was raised. The doors were either broken out (they were but lightly held) or thrown open by the Canadian Provost Sergeant, who was Military Policeman in charge, and those nearest began to rush out across the restaurant to the front door. There was no difficulty at the auditorium doors. A few, the quickest, got to the front entrance. Those who had been standing or sitting close about the entrance were already on the way out. The cry of fire had been raised when an early faint puff of smoke came down the stairs. Some clear flames had been seen to flicker along the ceiling, within the walls, not burning them. These, I feel sure, were from seepages of carbon monoxide through the ceiling; low-temperature flames which did not at once ignite anything. Such flames occurred in various parts of the building. Those in the restaurant were rising and running towards the doors. In a moment there was a packed mass in the entrance passage. Half of each pair of doors was open; the closed halves were quickly broken out. Then, as the people struggled out, the blast of heavier, hotter gases described by Ryan shot down the stairs and out the door over their heads. Some speak of being practically blown out the door. Some escaped, with burnt heads and hands; some ran or crawled out with their clothes on fire; the blast grew swiftly in magnitude and heat, and the rest were cut down and piled up in the doorway.

(45) It looks, from descriptions from outside and from consideration of the groups who got out the front entrance that there must have been a light preliminary explosion or blast of gases from the front door. Witnesses outside speak of a spurt of light flame going half way across the street and then being cut off or "sucked back" as they thought. Another compares it to a gasoline explosion.. This seemed to follow the first half-dozen out. Then there must have been a momentary interval and a further and larger rush of people got to the entrance, Then the less forcible blast of heavier and hotter gases came out and caught the last of them.

(46) The rush of flames did not at first go up to the auditorium doors; the entrance doors drew it off. Moreover, I think it came in impulses, not continuously. The crowd running out of the auditorium ran back, with them many of those who had been in the restaurant, when they saw that they were cut off from the doors. A few ran into the reading room, whence most were later rescued by the windows. A considerable number jammed into the ladies' toilet outside the auditorium doors; these were fortunate, for one of them broke the window and it is said that they were coming out of this as fast as they could for two or three minutes. A few, however, died there, probably asphyxiated. When most of the crowd had run back into the auditorium, the flames came on up the hall and began to come in the auditorium doors, and someone shut them. About this time the lights went out, and all was dark in there. A number of people ran into the men's toilet just inside the doors. This turned out to be a death-trap; as far as I can make out, only one person got out of it, and he by chance. These people were asphyxiated. He happened to be holding on to the window ledge when someone broke the window and pulled him out. He thought he was about



gone at the time. No one else was able to come to the window. The people outside called, but there was no reply.

(47) About this time the rear wall of the auditorium, the projection box and the wall on the kitchen side were beginning to burst into flame and disintegrate. A blast of rolling smoke and gases came along the ceiling, and the stage ceiling, according to the description of several, "burst down." Here we see the explosive drive of gases through the auditorium loft. It is quite clear that the loft was full of fire before anyone knew it. It was now dark, but while the light lasted men had gone to exits (1), (2) and (3) and begun to beat them open, while others had found windows in the dark and had begun to tear down the blackout screens and break out the windows. One or two flashlights were in use. All the screen doors were locked. -No. (2) was rapidly kicked out; the outside door here was open, and a stream of people began to issue forth. A large number came out here. Exit (3), the screen door into the storeroom, was rapidly smashed out by someone; probably a U.S. soldier with a metal chair. One witness says a man came and unlocked it from outside, but the majority say it was forced out. The people began to crush their way into the storeroom. Opinions differ as to the outside door. Mr. Quinn says he ran over from the east wing and unlocked it, then went on round to the west side. A sailor says he and others ran over and broke it in from outside. At any rate, some who went out that door say they found the door open outside. Some, on the other hand, speak from outside of breaking in the door and finding a mass of people inside, some of them fallen down, and helping them to get out. It is difficult to reconcile all this; a number of bodies were found here. Witnesses may refer to different times. Again, undoubtedly some had fallen insensible on the floor, while others ran out. Perhaps at some time the unlocked door may have slammed to again. People were working in the dark, in heavy smoke and heat, half smothered and perhaps confused by noxious gases they had breathed, so their evidence is not clear. A large number of people came out this way. On the whole I think this outside door was open. Exit (1) was slower in opening; some say that both doors were locked here, and that the outside door had to be kicked open by force with help from outside, but on the whole I think there was only one door; or at any rate someone opened the outside door at an early stage. The men kicked and tore down the inner screen door; a witness says the screen door when broken fell outwards and he walked over it; and eventually a number of people went out this way. Meanwhile all three windows had been broken out, though the plywood blackout screens presented some difficulty, and a good many got out through these. They were not easy exits, as they were four or more feet off the ground and there was a radiator in front of each. However, these served to stand on to open the windows. Some of the performers, and one or two others, got out the stage windows.

(48) But now the same thing happened here as had happened in the other parts of the building. It may have been because the opening of doors and windows let in air to mix with the gases; but suddenly the whole room exploded into flame. A policeman was at the moment trying to pull people out of Exit (2). He recounts that his cap was blown off his head and twenty-five feet away, up onto a bank. The flames burst forth from the windows with a gush. Few got out after that.



(49) The few helpers in the canteen ran back through the kitchen, the heat and flames pursuing them. The movement of the fire was surprisingly rapid here; I think it may have broken out of the projection booth directly into the canteen. The plywood shutters withered away fairly soon, and in any event there was fire in the kitchen walls at the corner. They just got out, most of them burnt. A naval rating recounts that a puff from inside blew him through a door onto the ground.

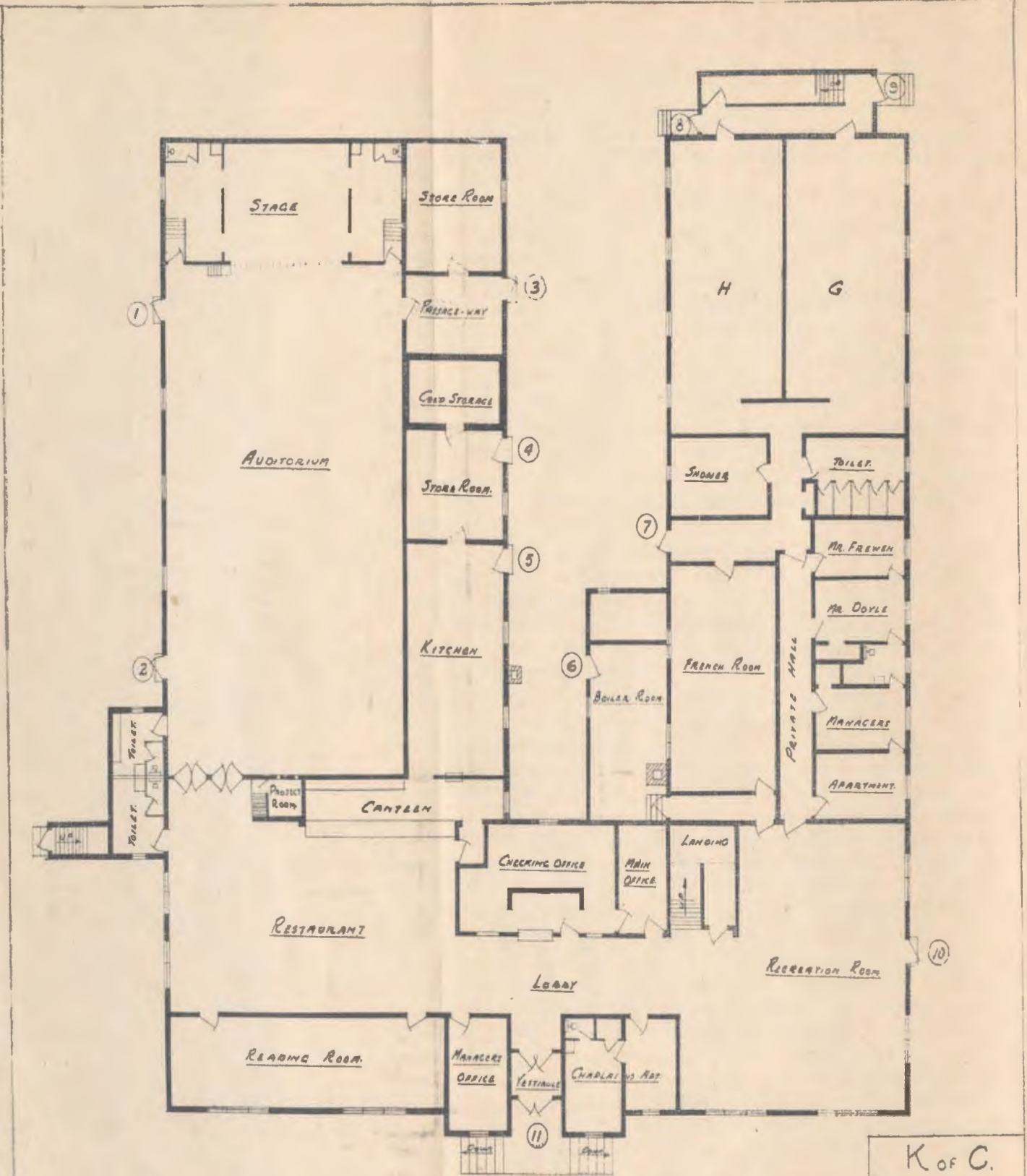
(50) All this takes longer in the telling than in its occurrence. The first warning inside was at 11.10. About 11.14 a constable telephoned that he saw the light of fire in the sky. The Fire Brigade received their first definite information, a telephone call, at 11.17. They were on the scene by 11.18½ or 11.19, at which time the situation was quite hopeless and every thing fiercely ablaze and unapproachable, so that they properly devoted their main attention to saving the surrounding buildings. I think that everyone who was still inside was dead by 11.15 or thereabouts. Many, fortunately, had fallen insensible from gas, so that they did not suffer.

(51) The comparative lateness of the fire's attack on the auditorium, and the speed of its spread under pressure in the upper stories is evidenced by the concurrence of most of those who went out Exit 3 that they saw the east wing before them in full flame, and some saw merchant seamen who had jumped from the windows.

(52) The Fire Brigade was unable to play a large part in connection with this fire, because it arrived too late. As has already been stated, the first warning within the building came at 11.10 p.m. It is believed that Mr. J. J. St. John, the clerk of the building, sought to telephone, as he was last seen by a Newfoundland soldier at the telephone in the office to the west of the entrance, probably about 11.11. Doubtless he was overwhelmed before he got his call through. Telephone service is slow at that time of night. The first definite intimation as to the whereabouts of the fire which the Fire Brigade had was a telephone call from some citizen unknown, made to the Central Police Station at about 11.15 p.m. and immediately relayed by the Police Station to the Central Fire Hall, where it was received at 11.17 p.m. The man on guard looked out, the fire hall being blacked out, and saw the light of flames in the sky and immediately sent the engines away. The engines are normally away in 30 to 40 seconds, and while the site of the fire is concealed from the fire hall by buildings, it is but two or three hundred yards from the hall. The alarm having been received at 11.17 p.m. engines were at the scene of the fire by, say, 11.18½, and the hose wagon from the East End Station by 11.19; but when they arrived the building was already ablaze from end to end. To throw water on it was quite useless and they devoted their attention mainly, and properly to preventing the spread of the fire to surrounding buildings. Two large buildings nearby caught fire but were extinguished. A little water was used on the flames, in the endeavour to protect piles of bodies which could be seen. The brigade laid out about four thousand feet of hose from the nearby hydrants. The pressure from the mains was excellent at first, but fell off somewhat when many hydrants were connected up, and the pumping engines were then used as "boosters."

(53) There were present at the fire: Two 1000-gallon pumpers (gallons per minute), One 750-gallon pumper, One 250-gallon light pumper; all



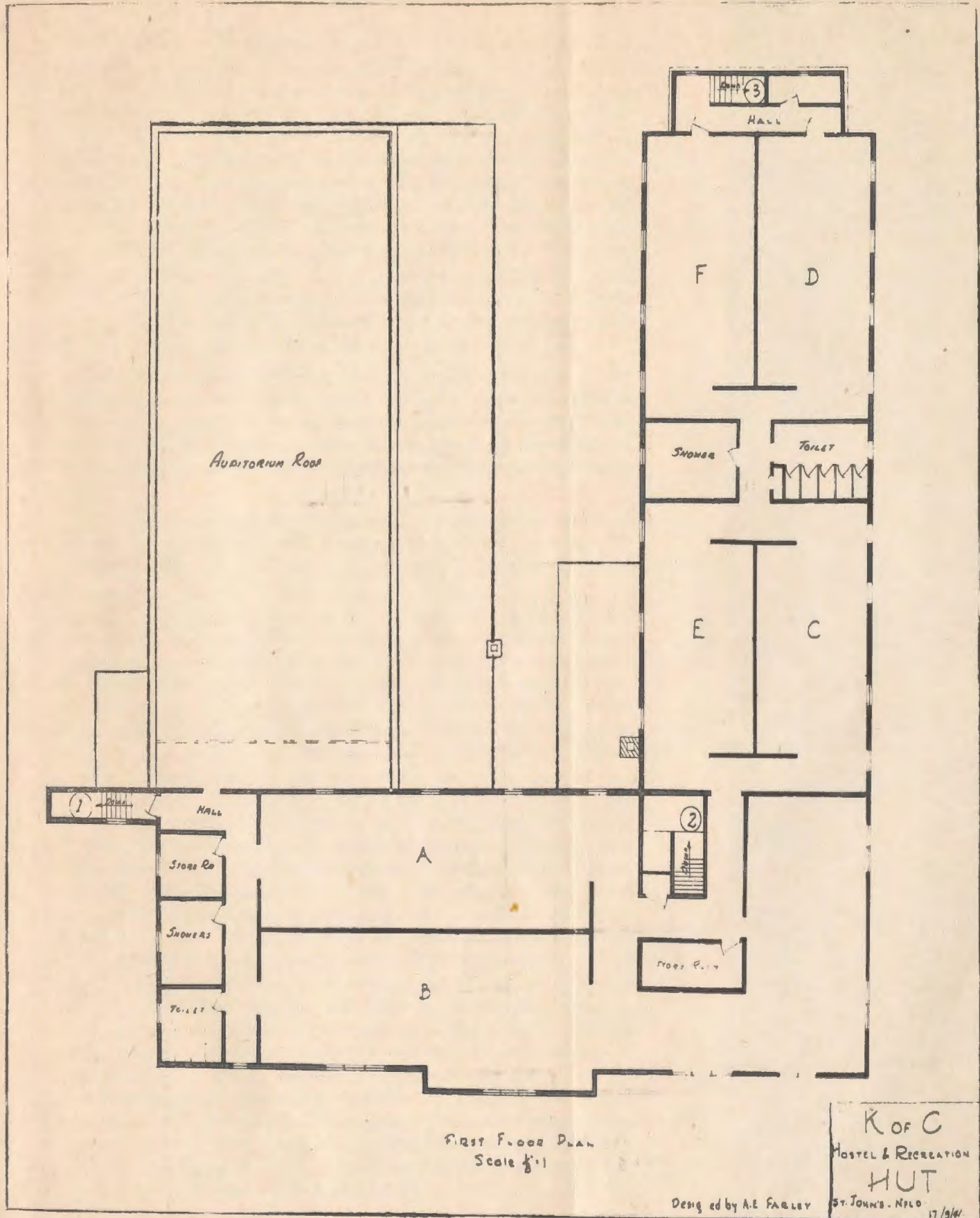


GROUND FLOOR PLAN  
Scale 1/8" = 1'

K of C.  
HOSTEL RECREATION  
HUT  
ST. JOHN'S WYLD 11/2/41.

Designed by A. E. PARLEY





FIRST FLOOR PLAN  
Scale 1/4"=1"

K of C  
Hostel & Recreation  
HUT  
ST. JOHN'S. Nfld 17/9/64

Designed by A.E. FARLEY



of the St. John's Fire Department; and the U.S. Army later sent one 1000-gallon pumper from Fort Pepperrell. The Department's chemical engine was also present, but, of course, useless in the circumstances. No call from a fire alarm box was received at the fire hall until 11.28, and this was sent in by orders of the Fire Captain to obtain all remaining apparatus. If citizens' houses and the fire hall itself had not been blacked out the fire would undoubtedly have been seen and noted a little sooner; but even so it is doubtful whether anything more could have been done. It is to be noted that citizens would have difficulty in finding fire alarm boxes in the blackout. It has been suggested in the press that their positions be marked by small shaded lights. This seems to be a good idea. However, the spread of the fire after gas explosions began was so rapid that even if the situation had been found and correctly diagnosed a few minutes earlier it would have been too late to do anything to vent the gases through the roof.

(54) The extraction of bodies from the ruins continued until the morning; while the injured were rapidly removed to various hospitals to have their burns treated. Excellent work was done by the police in connection with the identification of bodies. As will be seen by the schedule of casualties annexed, only in a very few cases was the identification of bodies uncertain.

(55) The prompt and energetic assistance of all the military and naval forces in town is very much to be commended. Their fire apparatus, hospitals and medical services were immediately made available in the fullest degree and there was no lack of attention to the injured.

(56) I make the suggestion, however, that it should be a part of standing orders with the Military, Naval and Air forces that if parties go to assist at a local emergency, officers in charge should immediately make contact with the police and/or fire officers in charge, take their instructions from them, and see that their men know and recognise these officers. In this case the military forces, being full of zeal and interest, took too much charge during and after the fire. The Assistant Chief of Police and the District Inspector in charge ordinarily wear plain clothes, uniform being worn only on dress occasions. Obviously they do not put it on to delve among the ruins. Locally everyone knows them, so no difficulty arises. Members of U.S. and Canadian Forces naturally cannot be expected to recognise them in plain clothes. As a result they were considerably inconvenienced, having continually to identify themselves, and even being ordered off the ground by uniformed military personnel. This embarrassment could be got over in any future case where military assistance is accepted by having uniformed N.C.O's. detailed to attend such plain-clothes officers continually. So long as there is life to be saved everyone's assistance is welcome and order is a secondary consideration; but after that stage the identification of bodies, protection of salveable property and search for evidence may be seriously prejudiced unless done systematically and with care. It is the business of the police (of which the Fire Department is a branch) and especially of the Criminal Investigation Division. In this case the remains of the electric panels and switch boxes were hauled away to a dump whence they had to be recovered for technical examination; one item was taken to Fort Pepperrell for examination; salveable radiators were hauled to a dump, and in some cases had to be got back from citizens who had taken them from the



dump; and a chimney was pulled down which might perhaps have been propped up and saved after inspection. The manager observed that it had been an expensive chimney. (This course, however, was very likely warranted by circumstances). Actions of this kind are irregular if done without police authority. Even the picketing and stoppage of streets requires police authority. Complete police control should be strictly asserted by the Chief of Police. I am left with the impression of a turmoil during and especially after the fire, with the armed forces dominating the scene. I make these observations only in the most general terms and by way of advice for any future occasion rather than of blame. Everybody's intentions were of the best, and their energy and zeal beyond praise. The case is merely one for better organization in future.

(57) People have been alarmed by the apparent extreme rapidity and fierceness of this fire and have consequently been disposed to imagine abnormal explanations. I do not think there is any need for these. First, as we have seen, the fire had been under way for some time before it became known to any one. Secondly it was a fire of the gassy or flash type. It appears that the phenomena known as 'mushrooming' of hot gases, "smoke explosions" and "flash-backs" are well known to firemen. In this particular case we had a set of circumstances most favourable to this type of fire and most disastrous for the people. There were the large, fairly airtight, unventilated lofts to act as gas reservoirs, and the start of the undiscovered fire in a place most favourable for filling them. The board, tarred felt and asphalt shingle roofs were tight and strong; the wall-board ceilings fairly tight but weak; so that any explosion must blow downwards into the dormitories. The dormitories themselves were continuous; there were no doors but only doorless openings, so that any flame or gas under pressure could drive through them unobstructed. The ceilings and walls of the apartments were highly inflammable. The plywood blackouts were strong enough to hold moderate heat and pressure where glass might have been blown out and relieved it. The design of the building was such that flames coming under pressure from upstairs could shoot up to cut off the auditorium exit and, indeed, enter the auditorium. The blackouts on the windows and the locked screen doors lost the people precious minutes in getting out; and the absence of emergency lights added to panic. The blackouts on the fire hall prevented the firemen from perceiving that there was a fire, which they would have done five minutes sooner if their windows had been unobstructed. It is a question whether they could have done any good by being there sooner, since it was too late to break through the roof and ventilate. In fact, all the circumstances conspired in unforeseen ways to bring about the heavy loss of life which occurred.

(58) There seems to be nothing uncommon about this flash type of fire. The Fire Chief's Handbook (1935, F. Sheppard, B.Sc., Editor of "Fire Engineering", a firemen's magazine published in New York) points out the necessity for giving top ventilation to fires in order to prevent mushrooming of poisonous and explosive gases. This is carried out by opening sky-lights and the like, or in some cases windows, or by making holes in the roof. It observes:

'A fire inside a closed building uses up most of the oxygen in the air. but the heat continues to distill off inflammable gases, mostly in the form



of carbon monoxide. In other words the building becomes a large gas plant, charring the combustible material and producing gas. This gas is highly heated, often to above the temperature of ignition, and only needs a supply of air to furnish oxygen for it to burst into flame. When a window or door is opened by firemen coming in this additional air is furnished, which, mixing with the heated gas gives an explosive mixture or results in such rapid combustion as to start a heavy rush of burned gases away from the fire."

This is almost exactly what happened, as I see it, in the K. of C. Hut. Possibly the opening of the cupboard door by the soldier supplied the last puff of air which was necessary to start the series of explosions. After that, by pushing down ceilings, which were merely of wall-board, the gases got more air for themselves. If a hole had happened to burn in the high part of the roof at an earlier stage in the proceedings it is possible or even probable that the gases might have risen out and passed away before explosion, and in that case there would have been ample time for everybody in the building to get out and the much slower normal fire would probably have been extinguished by the fire brigade; but, unfortunately, the roof was probably the firmest and most substantial part of the structure and there was no ventilation in it. Of interest in this connection is an account of a fire in a bowling alley at Chicago, taken from the New York Herald Tribune of January 7th, 1943. An extract reads as follows:—

"Eyewitnesses said some smoke had appeared in the rear of the alleys and had been followed by tongues of flame. Many of the customers started for the three exits, but many stopped at the checkroom to recover hats and coats.

"Suddenly there was a searing blast of hot air and flame. Those who felt it said they were pushed through the front doors and into the street. Some said they heard a muffled explosion, others had heard nothing.

"Firemen said the blast probably was a 'flareback' caused by ignition of the heated gases."

(59) I have had the advantage of hearing and of reading a report from Squadron Leader A. W. Farmer, a medical officer of the R.C.A.F. Doctor Farmer is in civil life a member of the medical teaching Faculty at Toronto University, and a recognised specialist on burns. He was at Halifax and was immediately sent by the R.C.A.F. authorities to St. John's to see to the R.C.A.F. casualties, but actually he saw all the persons in hospital and conferred with the civil and military doctors. He was sent from a Canadian port by ship, as it was considered that this was the quickest way, the weather being unfit for flying. In reference to the three burned cases who died, he observes that there was nothing which could have been done for them which was not done.

His report, however, is of special interest in connection with the view of the course of the fire which I have set forth in this report. He states:

"From a medical standpoint concerning the casualties of the St. John's fire, it would seem that the large death rate at the site of the fire, and the exceedingly small death rate among the people who were evacuated, would suggest that the burns sustained were not the primary cause of death. On examination of all the survivors at the hospitals in St. John's and Torbay,



certain features are prominent, such as—(1) There were a very small number of deaths among those who were evacuated. (2) The surface area burned in those cases was very small. The chief areas burned were on the hands and face. This type of small burn does not cause severe secondary shock or toxemia. A number of the survivors appeared to be in a toxic state within the first 12 to 24 hours. An occasional one was irrational and could not remember anything concerning his activities in the first 24 hours. (3) There were a number of cases of respiratory distress within the first 24 to 48 hours, as well as some minor ones, which will not be discussed here. This would indicate that a number of the patients were suffering from carbon monoxide poisoning. Unhappily the laboratory evidence for this, outside of the clinical manifestations, cannot be obtained now, due to the time which has elapsed since the fire, when this branch of the investigation might have been started. However, the carbon monoxide poisoning would explain the peculiar attitudes in which some of the bodies were found, and it would also explain the large number who were unable to evacuate themselves from the building after the commencement of the fire.”

These remarks tend to confirm my own view as to the extensive operation of gases, notably carbon monoxide, in this fire. A good many witnesses speak of people lying on the floor, apparently insensible.

(60) There has been much talk among the public as to explosions, and on this point it is desirable to set doubts at rest. I have had evidence of a large number of explosions, and, indeed, an R.C.A.F. man who was standing on a window ledge pulling people out speaks of the building as rocking and vibrating repeatedly; but all the explosions mentioned by witnesses were of the soft or muffled type, namely explosions of fire gases. No witness speaks of any sound which could be attributed to explosives ordinary so called. There were one or two sharp explosions in the midst of the fire, but at too late a time to have had anything to do with the origin of the fire. These may have been steel drums of disinfectants bursting, or possibly parts of the refrigerating apparatus. I have seen burst steel drums in the ruins.

(61) There has also been talk of doors being found wired up. There was one door wired up, a screen door opening out of the north end of one of the upper dormitories, and swinging outwards. The handle of this had been fastened to an adjoining radiator, apparently by putting a wire coat-hanger over parts of both and twisting it. A maid said that seaman in the dormitory had done this because they had been losing gear and thought that pilferers got in there by that way. One witness says the wire was not easy to get off; another says that it was.

(62) There has also been talk of bombs. Actually a bomb was found in the ruins. It is identified by the R.C.A.F. as an 11½ lb. practice bomb as used by them, unexploded and rendered safe. I have seen it. Quite obviously someone had it as a curiosity or souvenir.

(63) I have read a preliminary account of the Coconut Grove Disaster in Boston on November 28th 1942, compiled by the National Fire Protection Association. In that case there was the same flashing spread of fire, but apparently not so much by reason of gas as through the inflammable decorations and linings, of a one-storey area. Rapid extinction followed, and



structural damage was relatively slight. Apparently, however, the development of carbon monoxide by extensive flames in a limited space was a feature of the fire. The report observes:

"The victims showed definite evidence of carbon monoxide which would account for their quick collapse . . . Only a relatively small number of those killed and injured suffered serious burns, and the cause of the majority of the deaths seems to have been due to (sic) lung effects."

And again, dealing with theories of origin:

"The rapid spread of the fire and the presence of large quantities of carbon monoxide could readily be accounted for if there had been a fire smouldering for some time in some concealed space. Such a fire might build up quantities of carbon monoxide and could produce sufficient heat to touch off the flash which would spread the fire very rapidly through the combustible decorations. There is some testimony that some of the walls were hot before the fire, and that one or two of the patrons, being disturbed by the hot walls left the building before the fire broke out. It is not clear, however, that the hot walls referred were anywhere near the reported point of origin of the fire."

We have a curious parallel here. A witness in the reading room went away sooner than he had intended because of the excessive heat; but that was not near the point of origin of the fire. One or two in the auditorium speak of heat and excessive stuffiness, though most say there was nothing uncommon. A witness in the entrance noted unusual heat. He was probably feeling an escaping hot air current. The habit, however, seems to be to keep these buildings very warm.

(64) Since writing the remarks earlier in this report on the subject of authority and control at the fire, I have come across the following note in the Coconut Grove Fire Report:

"One glaring flaw in existing Boston disaster plans was revealed, however, and that is that while the various agencies were mobilised and despatched in an efficient manner, there was no apparent central authority in charge at the fire. When the military arrived the police were in doubt as to their authority, and there was also some question as to the relations between the Red Cross and workers from the Boston Committee on Public Safety. There must be proper integration of all disaster agencies, otherwise resultant confusion may well cause a breakdown of fire fighting and rescue work at such disasters."

The situation here can hardly be said to have gone as far as that, but evidently there is the same tendency to overlapping of regular and voluntary activities.

(65) I believe that we have clearly traced the principal place of origin and the disastrous course of the fire; but we have not, so far, discovered who set it. I am of opinion, though I cannot prove it at present, that it was of incendiary origin; for these reasons:

- (a) The small cupboard, full of cartons, with limited floor space free, and dark, because an electric bulb was lacking, was not a place, to which people who might be careless with matches or cigarettes would be likely to resort.



- (b) I doubt if a match or cigarette dropped outside the cartons would have ignited them.
- (c) The inflammable points were the one (or possibly two) cartons broached and in use. I judge from description that a light would have had to be inserted sidewise in these; it could hardly fall into them. They were not face up or near the floor, but on their sides some distance up in a pile.
- (d) No grounds are to be found for supposing that either spontaneous combustion or ignition from electrical wiring took place in the cupboard. The point has been considered.
- (e) A single witness on the evening of the fire saw the twin cupboard to this which was outside the dormitory in the passage. Its door was open. Some rolls of toilet paper, or possibly of towels, were on a shelf and the ends of the paper had been pulled out and trailed down, an unnatural and suspicious state of affairs. This story was told before the public heard of what is mentioned in paragraph (f) below.
- (f) A few weeks after this fire toilet paper disposed extensively and in a very suspicious manner was found in the loft over the Y.M.C.A. Hostel in St. John's, a building similar in origin, construction and use to the K. of C. Hut. The toilet paper connection is instructive; a criminal often repeats a method which has been successful.
- (g) Since this enquiry began, the Old Colony Club in a suburb of St. John's, a private building of wood and wall-board construction, has been burnt with the loss of four lives. The fire took place in the early morning. Those who lost their lives were resident maids. The building was much resorted to by the Forces, and on the night before many of the Air Officers in St. John's would have been there but for the postponement, caused by bad weather, of an intended party.
- (h) Since this enquiry began a small fire has occurred in the U.S.O. building in St. John's. It was in a place where one would not have expected to find it. Fortunately it was discovered and extinguished.
- (i) There has recently been what looks like an attempt on the K. of C. Hostel in Halifax, N.S. A person was apprehended putting a lighted cigarette into a letter-box at eleven p.m. while a movie show was in progress. I gather from the press that he has been convicted.

These coincidences are at least remarkable. We may exclude financial motives for arson, owing to the nature and ownership of the buildings. At first sight one cannot help suspecting a concerted design against buildings frequented by the armed forces, and personnel who may be in them at the time; but a connection with the Halifax affair is somewhat doubtful; and if we attend only to the St. John's incidents the presence of a pyromaniac becomes a possible explanation. Taking into account the whole situation, as well as some incidents known to the police which it would not be expedient to discuss here, I am of opinion as stated, though the guilty person is not known and the motive is doubtful.

I think that all persons controlling buildings of consequence, especially those frequented by the armed forces, would do well to assume that attempts may be made on their buildings, and to exercise great care and watchfulness accordingly. This observation applies specially to hostels for the



Forces and to moving-picture theatres. I suggest also, that closed packages brought into these buildings be opened and examined before being stored away. Frequent patrolling and inspection is an obvious precaution. If it is a case of sabotage, any further attempt will probably be by some method different from that already employed. If it is a case of pyromania, this may not be the case.

(66) In my opinion the following lessons are to be drawn from this disaster:

- (a) All lofts or other large void spaces high up which may serve as accumulators of combustible and explosive gases should be fully ventilated to the outside air. I think the speed of this fire, which caused the loss of life, was directly due to this lack of ventilation. I think also that such large void spaces should have partitions or bulkheads from place to place, of fire-retarding material, to delay the movement of gases and the spread of fire; and living spaces should have doors, not merely doorless openings. Even a wooden door delays the movement of fire for a substantial time.
- (b) The main exit from any auditorium should lead by a short and direct route to the open air. It will normally be attempted by the people before recourse is had to emergency exits. In this case it led across a restaurant littered with loose chairs and tables. This is dangerous once the lights go out and the people begin to fall over the furniture. Actually in this case the nature of the exit was probably responsible for but little loss of life. The furniture may have slowed the rush to the front door a little; but the rush of flame and gases turned most of the people back from that avenue of escape at an early stage.
- (c) No doors in a public building, not even screen doors, should open inwards. This is actually unlawful to-day. (Egress from Churches and Public Buildings Act, 1925). Precious time was lost at almost all exits in breaking these down. A minute more or less may have made the difference between life and death to a considerable number of people. No matter how light a door is, it is difficult to break down when men who would break it down are pressed upon by a crowd so that they have no room to work.
- (d) Mortice locks on exit doors are absolutely inadmissible. If panic bolts, opened by the pressure of the crowd, are unobtainable, there are substitutes. Spring bolts, for example, can be used, withdrawn by pulling a chain. No matter how closely a man is pressed to the door he can operate these if he can get one hand up. Even a Yale latch would be better than the mortice lock, provided it could be seen. A bolt with a lever for quick operation by hand is easy to devise and construct.
- (e) The blacking out of windows with neatly-fitting plywood shutters is dangerous. Plywood is too strong, and a neatly fitted shutter is hard to find in the dark. Adequate light and some sort of quickly detachable fastening would do something to get over this difficulty. In this case exploding gases might have found an easier vent upstairs by blowing out glass, if there had not been plywood shutters; and damage downstairs might have been less rapid. This, however, is a mere hypothesis.



- (f) A separate emergency lighting system is absolutely essential. In the K. of C. auditorium there were lights at the emergency exits, but they worked from the same panel as the auditorium lights. This was in the projection booth. When fire came into the booth and melted fuses or burnt the panel, all lights went off together.
- (g) The City should have building regulations, should insist on receiving full plans and specifications (as the law requires), and should have a City Architect to pass on the safety of the proposed structure, and building inspectors to see that his recommendations are carried out. I feel sure that any competent architect would have criticised the lack of ventilation in the lofts, and the indirect and obstructed main exit from the auditorium; and any system of inspection which carried out the law would have prevented the installation of the inward-swinging screen doors, rendered all the more dangerous by the presence of plywood blackout screens on some of them.
- (h) There should also be an inspector of electrical installations; not a handy-man but a college-trained and qualified man with experience of fire underwriters' requirements in Canada and U.S.A. Information gained in this enquiry causes me to raise the point, though I do not know of anything against the installation at the K. of C. Hut.

(67) A system of emergency and exit lights which will remain in operation until the last moment is, next to clear exits, the main essential. I suggest, as an amateur, that it would be easy to provide every public building with a separate circuit carrying exit lights, and an emergency light or two in all places where the public assemble. This circuit should be brought in from the Company's mains independently at a point as far as possible from the point of entry of the main circuit; it should have no connection with the main circuit; its wiring and panels should be placed as far away from those of the main circuit as the nature of the building will allow; it should have no provision for being turned on or off except as a whole, from one switch at the point of entry; it should carry tell-tale lights of a distinctive appearance in places where the public cannot fail to see them; and there should be a sign with each tell-tale light, also in a place where the public cannot fail to see it continually, saying *Emergency Lighting System: Penalty if not lit \$50; anyone may sue for and receive this penalty* or words to that effect. The law should then require that this emergency system be on at all times when there is an audience in the building, since cinemas, etc., darken their rooms in day-time. Thus a fire in either end of the building would leave the circuit coming from the other end undestroyed until the last. Such a system, being serviced by the electric supply company in the ordinary way, would be more or less fool-proof, and would offer the public and the police a prize for constant vigilance. Any system not so protected, and any system whereby battery or other lights are turned on automatically if main lights go off, is all very well if it works, but it could be depended on only in some such place as a warship where constant attention is guaranteed. In a civilian establishment it would probably turn out to have been forgotten for years and to be out of order when the emergency at last came. I gather that some buildings have a manually operated emergency system. This in my view is not good enough. The person who should switch it on may be absent, injured or dead; everybody's business



is nobody's business; the position of the switch may be unknown to more than a few; or access to the switch may be cut off by the fire.

(68) These precautions against fire in public buildings are doubly necessary now when the risk of enemy action is added to the ordinary risks of accident.

(69) If I were asked for suggestions I would suggest also that some permanent notices reading, "*Where is the nearest fire alarm box?*" be obtained, and that the law require that one of these be kept affixed in every building where the public or school children assemble, in the office, staff room, church vestry or other place where those in charge of or working about the building cannot fail constantly to see it. We all see fire alarm boxes but do not notice them. The telephone cannot be relied on for the necessary speed. In this case Mr. St. John tried to telephone an alarm, but failed. In any case I imagine that churches, at any rate, do not always have telephones in their vestries. Much could happen in any burning building while a person sent out for that purpose was scouring the neighbouring streets in a state of excitement looking for an alarm box. In the blackout, particularly, he might never find it. With this standing reminder staff and persons in charge would presently find themselves noting the position of the nearest alarm box.

(70) One other aspect remains to be mentioned. The danger of death brings out in human nature both the worst and the best; and no cloud of disaster such as this is without its silver lining of deeds of gallantry and honour. Some, as always, hastened to save themselves; but many, to whom the circumstances gave time and opportunity, did not forget the traditions of their race and service. Of the audience of 350 to 400 in the auditorium it is estimated that about one third were women and girls. Only nine or ten of these perished, and two or three in other parts of the building, in all twelve, whereas there died in all parts of the building eighty-seven men. These facts speak for themselves. A number of specific instances of personal gallantry have come to my notice in the course of the evidence. An effort has been made in each case to obtain that corroboration of personal stories which is usually, at any rate in the case of the military forces, a prerequisite of recognition. This has not always been achieved, and in some cases may not be possible, but further efforts are being made, by cross checking, and with the aid of the police, to verify the stories heard. It does not seem advisable to delay this report, which is awaited by the public; but I shall endeavour to make a supplementary report to Your Excellency on the matter when these efforts have been exhausted, and shall be glad to place the available evidence at the disposal of any naval or military authority who may desire to see it.

(71) I think it would be right to say that one cannot lay a great deal of blame upon the K. of C. organization concerned with operating the Hut. It is definitely to blame for one thing: the presence of doors opening inward, contrary to law. Here, as elsewhere, the provisions of Acts tend to be forgotten if they are not kept constantly before the public by public authority. Very likely the managers had never heard of the Act of 1925. Even if they had, the danger of fire, which always seems so remote, tends to be forgotten; while the inconveniences arising from the endeavor to control the public



without locking doors are always present. The reporter of the Coconut Grove fire notes this same point. The danger arising from the presence of the unventilated lofts was one which would have occurred only to a person familiar with the action of fires or armed with codes or information built on a broad basis of experience; and fires could have occurred in many places in the building without bringing these fatal potentialities into operation. Once the danger had arisen, the staff seem to have done what they could. The Manager says he ran at once by way of Exit (7) to open the auditorium exits. I have no reason to disbelieve him. He was seen taking a direction which would lead him to Exit (7). The outer door of Exit (3) was open; and a witness, Mr. Fogerty, says he saw the light of the external fires through the wire of both screen doors, and saw a person outside. The outer door of Exit (2) was open; and a civilian was seen here with a key in his hand. Quinn says this door was open before he got there, and people coming out. He says he opened the outer door of Exit (1). A witness says the screen door when broken fell outwards, and that he walked over it in getting out. This would indicate that the outer door was open; some witnesses deny it, but there is much contradiction everywhere, as it natural by reason of the confusion. John J. St. John, the clerk of the Hut, did all he could. He went and ascertained the position of the fire, then hastened to convey the alarm, then went to his office and tried to telephone, doubtless to the Fire Department, but perished before he got his call through. We cannot trace G. Corbett, the maintenance man. Few members of the Forces know the staff by name. But at any rate he perished with his building. Evidence indicates that someone tried to use the hose which was just outside his bedroom door. This may well have been Corbett; probably no one else would have known so well where it was. The only desire of the organization was to give service: and this it did to the best of its ability.

(72) For purposes of record I append a list, compiled by the police, of those who lost their lives, including three who died in hospital.

(73) I desire to express my sense of indebtedness to Mr. H. P. Carter, K.C., Public Prosecutor, and Mr. J. A. Gibbs, Counsel for the Knights of Columbus. These two gentlemen, who attended every session and followed up every point in detail, contributed greatly to the investigation.

I have the honour to be,

Sir,

Your obedient servant,

(Sgd.) BRIAN DUNFIELD, J.

Concur:

(Sgd.) J. W. Beretta, Lt. Col. C.E., U.S. Army.

Dated February 18th, 1943.



## APPENDIX

## LIST OF FATAL CASUALITIES

*R. C. A. F.*

- (1) R 51846—Sgt. Ibbetson, W.
- (2) R 61971—Cpl. Corner, R. H.
- (3) R135419—LAC. Bellerive, G. C.
- (4) R164314—AC2 Callery, V.
- (5) R173157—AC2 Chapman, B. R.
- (6) R138923—AC2 Cusack, J. E.
- (7) R165509—AC1 Burton, F.
- (8) R156592—LAC. Hoggard. L.E.
- (9) R148569—AC1 Langley, F. A.
- (10) R153061—LAC. Lawrence, J. A.
- (11) R135403—LAC. Legris, J. A.
- (12) R140750—AC1 Lepine, G. A.
- (13) R 56333—AC1 Murray, S. C.
- (14) R 55778—LAC. Ouellette, J. F.
- (15) R122973—AC1 Sawada, F. J.
- (16) R173155—AC1 Sturgeon. J. G.

*Newfoundland Militia*

- (1) 974—Pte. Hicks, C.
- (2) 955—Pte. Baker, B.
- (3) 962—Pte. Snook, L.
- (4) 641—Pte. Sexton, N.
- (5) 1035—Pte. White, G.
- (6) 1044—Pte. Healey, T.
- (7) 563—Pte. Ryan, J.
- (8) 583—Pte. Smith, E.
- (9) 1057—Pte. Osmond, N.
- (10) 1081—Pte. Jestican, J.
- (11) 995—Pte. Lambert, G.
- (12) 889—Gnr. Hart.
- (13) 1037—Pte. Blanchard, W.
- (14) 985—Pte. George, C.
- (15) 816—Pte. Snook, R.
- (16) 1043—Pte. White, F.
- (17) 813—Pte. Ross, A.
- (18) 861—Pte. Benson, H.
- (19) 495—Pte. Duggan, A.
- (20) Body buried known as Newfoundland Militia personnel but identity unestablished.
- (21) Body buried known as Newfoundland Militia personnel but identity unestablished.
- (22) Body buried known as Newfoundland Militia personnel but identity unestablished.



*R.C.N.V.R. and R.N.*

- (1) A.4173—P.O. Alfred Abbott.
- (2) V.9681—Ldg. S.A. Charles Adie.
- (3) V.4708—O.Sm'n. G. R. Egan.
- (4) V.27311—O.Sm'n. R. Giles.
- (5) V.30924—Sto. II George Goodwin.
- (6) X.41099—P.O. Cks. Reginald A. Hughes.
- (7) V.23466—O.Sm'n. A. Larocque.
- (8) V.24847—S.B.A. D. R. MacMillan.
- (9) V.1136—A.B. James A. McLean.
- (10) V.9804—Sig. W. Richmond.
- (11) 40653—S.A. Francis Quinlan.
- (12) V.23287—S.B.A. George Rogerson.
- (13) 3027—A/Yeo. S. A. Spikesley.
- (14) V.23432—A.B. Irving Epstein.
- (15) V.7462—S.P.O. Wm. Kerr Owens.
- (16) V.22685—Coder James Martin.
- (17) Body known as naval personnel but identity unestablished.

*Canadian Army*

- (1) Gunner Carl Willett.
- (2) Sgn. Michael St. John.
- (3) Pte. Ernest Dyball.
- (4) Sgt. John Steele.
- (5) Driver Thomas Thibault.
- (6) Pte. Walter Petrovich.
- (7) Pte. Albert McMillan.

*U. S. Army*

- (1) 3385162—Pte. I.cl. Edward B. Ford.
- (2) 32045072—Tech. 5th Grade Henry L. Kennedy.
- (3) 35037030—Pte. Frank M. Yirga.

*Civilians*

- (1) Gerald Corbett, Allandale Road, St. John's.
- (2) George Lawson, Monkstown Road, St. John's.
- (3) J. J. St. John, St. John's.
- (4) Joseph Reardigan, Bannerman Street, St. John's.
- (5) Fred Scurry, Monroe Street, St. John's.
- (6) James Rodgers. Renews.
- (7) Barbara Byrne, Keels, B.B.
- (8) Patricia Cumby, Heart's Content.
- (9) Margaret Hunt, Catalina.
- (10) Theresa Trainor, Fermeuse.
- (11) Frances Dawe, Upper Gullies.
- (12) Elizabeth Hogan, St. Brendan's, B.B.
- (13) Emma Hickman, Grand Bank.
- (14) Nellie Noonan, Bay de Verde.
- (15) Harry Walsh, Allandale Road, St. John's.
- (16) Rose Thorne, Grand Bank.



- (17) Mary Travers, Bruley, P.B.
- (18) Dulcie Brown, Pool's Cove, F.B.
- (19) Chloe Sheppard, Campbellton, B.B.

*Merchant Navy*

- (1) Finley Wemyss. Inverness, Scotland.
- (2) William Wright, Kent, England.
- (3) Robert Henry Lazenby, Hull, England.
- (4) Alexander T. Hay, Gateshead-on-Tyne, England.
- (5) Han Mon Fong, Chinese seaman.

*Missing and Presumed Dead*

- (1) Pte. Arthur Bell, Canadian Army.
- (2) Wong Fay Choo, Chinese merchant seaman.
- (3) 40784 Ldg. Wtr. Rodrigue Bernier, R.C.N.V.R.
- (4) O.S.K. Broad, R.C.N.V.R.
- (5) A.B. S. G. Dixon, R.C.N.V.R.
- (6) Sto. Robert Greer, R.C.N. V.R.
- (7) O.Sm'n. G. Leonard, R.C.N.V.R.
- (8) Pr. S.B.A. F. Vaillancourt, R.C.N.V.R,
- (9) O.Smn. W. Wallace, R.C.N.V.R.
- (10) O. Sig. Hector Woolley, R.C.N.V.R.

This makes a total of 89 bodies recovered and identified; 10 persons still missing and presumed dead. Of the latter, 9 unidentified bodies were buried, making 1 body or one person still unaccounted for.



