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NATIONAL RESEARCH COUNCIL OF CANADA
DIVISION OF BUILDING RESEARCH

FIRE FATALITIES IN THE PROVINCE OF ONTARIO
INVESTIGATED BY THE FIRE SECTION
IN 1957 AND 1958

by

C.G. Burnett

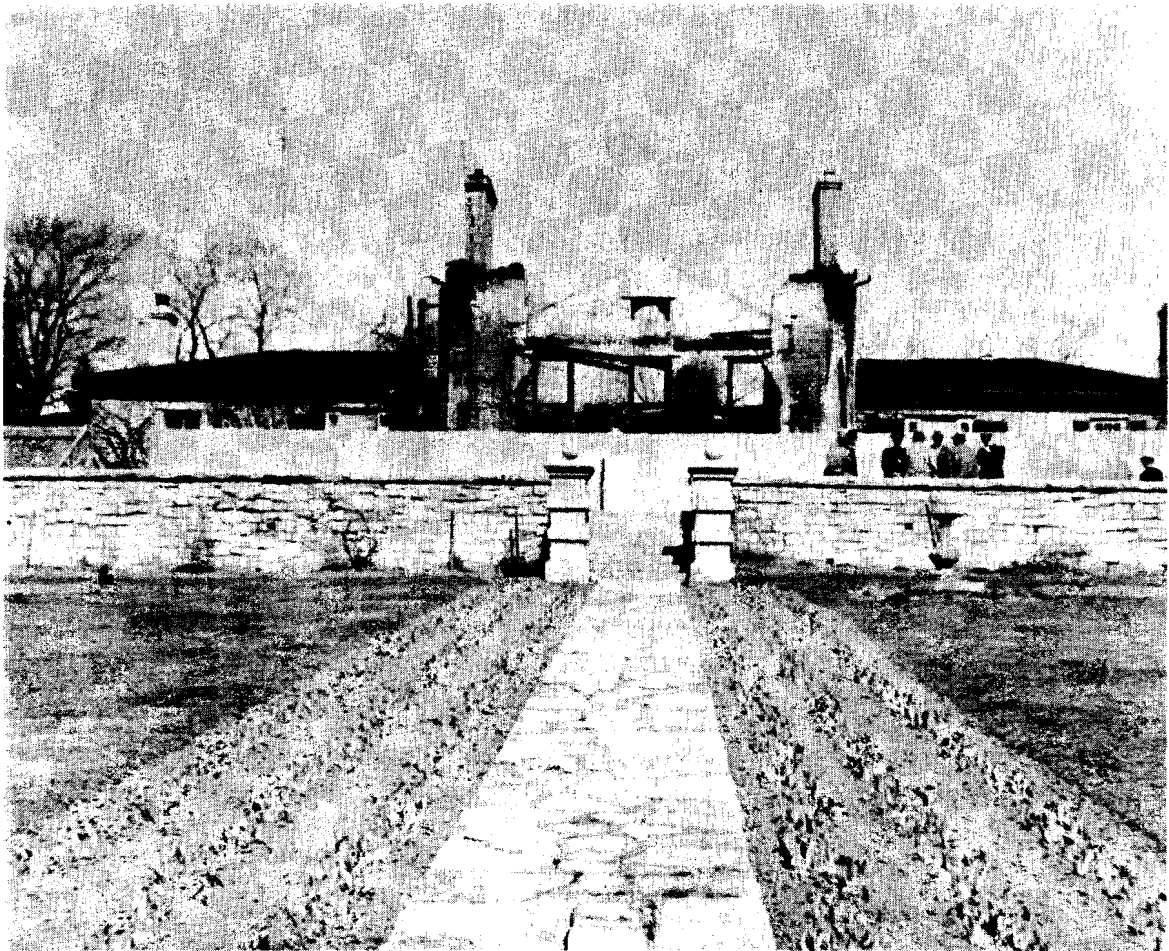
ANALYZED

Report No. 176

Division of Building Research

Ottawa

May 1959



Front view of an historical residence
where two people died from fire.

FIRE FATALITIES IN THE PROVINCE OF ONTARIO
INVESTIGATED BY THE FIRE SECTION
IN 1957 AND 1958

by

C.G. Burnett

The Fire Section of the Division of Building Research has been conducting a Fire Fatality Survey in the Province of Ontario each year since 1954. In order to supplement the information received on the N.R.C. fatality forms which are forwarded either to the provincial or municipal fire officials in the community where the fatality occurred, a limited number of field investigations have been carried out. Since the start of the Fire Fatality Survey approximately 12,500 miles have been travelled in various sections of Ontario to investigate 45 fatal fires which were responsible for the loss of 124 lives.

While these field investigations are made as a result of a fire occurring in which a fatality has resulted, they have also provided an opportunity to the members of the Fire Section to meet directly with the members of the fire service and discuss not only the problems of the specific fire but conditions which are responsible for the rapid spread of fire in buildings. This personal link has proven very valuable as evidenced by the continued co-operation extended to the Fire Section by the fire officials in the Province, and it is only fitting that once again we would like to pay tribute to these officials for the assistance they have given in this survey.

This report is not intended as a detailed analysis of the fires investigated but rather to present concise summaries of the fires and the factors which appear to be responsible for loss of life. The field investigations carried out since 1954 are described in DBR Reports Nos. 71, 90 and 127, and as in previous years a companion report giving a statistical analysis of all fire deaths in the Province of Ontario will be prepared.

FIRE FATALITIES IN 1957

FIRE FATALITY STUDY No. 1/57

Location: Ottawa, Carleton County

Date of fire: 10 April 1957

Occupancy: Trailer

Time of fire: 4.15 a.m.

Dead: 1 male, age 46 years.

Members of the Fire Section visited the scene of this fire on 10 April 1957.

1. Structure. - This fatality occurred in an unoccupied one-room stationary house trailer, approximately 20 ft in length and 8 ft in width, located on the property of the victim adjacent to his dwelling (Fig. 1). The trailer was constructed of aluminum with plywood interior finish that had recently been painted and varnished in preparation for new occupants. The victim entered the trailer to examine the oil heating unit that had been left burning when an explosion occurred blowing off the entrance door and igniting the interior.
2. Occupancy. - The trailer had previously been occupied by the owner and his wife while awaiting completion of their new dwelling.
3. Heating. - The trailer contained two stoves, an oil-burning space heater providing the heat and a gas propane stove used for cooking. Both stoves were located near the entrance door (Fig. 2).
4. Summary. - The exact source of ignition could not be determined due to complete destruction of the trailer by fire and explosion. However, continued low operation of the oil burner without cleaning and removal of the carbon deposits would inevitably result in clogging the burner orifice and when this happens the flame goes out. The closed room of this trailer could also have contained flammable vapours from the redecorating. It is assumed that this condition existed at the time when the owner attempted to re-light the fire thereby causing the explosion and getting trapped in the interior.
5. Remarks. - Crowded conditions existed in this trailer dwelling which had only one exit. The most serious aspect of this situation is not property loss but the loss of life and the potential danger of greatest concern in this type of dwelling is the lack of safety to life.

5. Remarks. - Crowded living conditions and poor housekeeping existed in this convalescent home which housed many infirm inmates (Fig. 10). Many homes similar to this one are operated in buildings originally built as private dwellings and the conversion of these older buildings poses many problems with respect to safety to life from fire. The use of highly combustible interior wall and ceiling finishes, open stairways, insufficient exit facilities, the lack of automatic alarm systems and the shortage of trained and experienced staff have been responsible for heavy loss of life in this class of dwelling. The situation might have had a different outcome had a sprinkler system been installed in the building.

FIRE FATALITY STUDY No. 3/57

Location: Galt, Waterloo County

Date of fire: 22 July 1957

Occupancy: Dwelling

Time of fire: 4.00 a.m.

Dead: 1 male, age 5 years;
1 female, age 7 years.

Members of the Fire Section visited the scene of this fire on 23 July 1957.

1. Structure. - The wood-frame dwelling in which this fire occurred was approximately 30 ft in width, 50 ft in length and two stories in height, with a basement. The pitched roof was covered with wood shingles. The exterior walls were finished with imitation brick siding. A one-story wood-frame building was attached at the rear of the dwelling to provide additional living quarters (Fig. 11). The interior walls, ceiling and partitions, in the front section of the dwelling were finished with lath and plaster. The interior finish of the rooms in the rear section, where the fire occurred, were combustible board and pressed paper (Fig. 12).
2. Occupancy. - The dwelling accommodated two families, and at the time of the fire eleven occupants were asleep in their beds on the second floor.
3. Heating. - A coal-burning hot-air furnace located in the basement provided heat for the dwelling.
4. Summary. - The fire originated in the living quarters on the first floor in the rear section of the dwelling and spread rapidly over the combustible interior finish on the walls and ceiling. Lack of fire stops in the partitions permitted the fire to advance to the second floor before being detected (Fig. 13). Many of the occupants were rescued from second story windows as smoke and hot gases extended up the open staircase (Fig. 14) and asphyxiated the two victims who were sleeping in a front bedroom on the second floor.
5. Remarks. - One-family residences converted to accommodate increased occupancy create additional fire hazards and many fires occur where cheap construction has been used. Fire experience has clearly indicated that a large percentage of loss of life and property occurs in buildings which are badly constructed and every municipality should prepare for future building programs by adopting a modern building code. A fire occurred recently in the same area in a similar type of converted residence and four young children lost their lives.

FIRE FATALITIES IN 1958

FIRE FATALITY STUDY No. 4/58

Location: Kingston, Frontenac County

Date of fire: 30 March 1958

Occupancy: Residence

Time of fire: 2.30 a.m.

Dead: 2 males, ages 27
years and 18 months.

Members of the Fire Section visited the scene of this fire on 1 April 1958.

1. Structure. - The solid masonry building was approximately 110 ft in length, 40 ft in width and two stories in height, with a basement (Frontispiece). The dwelling contained three sections separated by two-foot masonry walls pierced only by doorway openings leading to the east and west wings. The fire was largely confined to the centre section (Fig. 15). The pitched roof was constructed of wood joist sheathed with rough lumber and covered with wood shingles. The interior finish of the masonry walls was lath and plaster over wood furring. Room ceilings and partitions were wood joist sheathed with combustible board. The floors were hardwood on wood joists.
2. Occupancy. - The centre section of the dwelling contained a large living room on the first floor with an open staircase at the rear leading to the second floor bedroom (Fig. 16). The east and west wings of the dwelling contained bedrooms, kitchen, and dining room. At the time of the fire four people were asleep in the centre section and two in the west wing.
3. Heating. - An oil-heating hot-water unit, located in the basement of the centre section, supplied the heat for the dwelling.
4. Summary. - This fire occurred in a building of historical significance which was situated on the bank of Lake Ontario near the entrance to the St. Lawrence River and was once occupied by the first Governor General of Canada (Fig. 17). The fire was first noticed at 2.30 a.m. by members of the police department in a patrol car but it had already gained considerable headway in the centre section. Two of the occupants had jumped from second story windows at the front of the dwelling and had been severely injured. Unsuccessful attempts were made to rescue the two remaining occupants in a rear bedroom. Cause of the fire could not definitely be determined due to complete destruction of the main section.

5. Remarks. - The delay in detection of this fire permitted its rapid spread in the combustible interior finish of the dwelling and contents of the living room. The open stairway at the rear of the living room provided an ideal path for the upward travel of smoke, heated gases, and flame and cut off possible escape by this route. Probably the two occupants were asphyxiated in the rear bedroom on the second floor before the fire was discovered. The solid masonry wall extending above the roof prevented the fire from spreading to the east and west sections of the building, but the large french windows provided little support and the front wall and portico were completely destroyed (Fig. 18).

FIRE FATALITY STUDY No. 5/58

Location: Eastview, Carleton County

Date of fire: 7 April 1958

Occupancy: Apartment

Time of fire: 9.50 a.m.

Dead: 2 females, ages 22
and 2 years.

Members of the Fire Section visited the scene of this fire on 8 April 1958.

-
1. Structure. - The wood-frame building was constructed on a masonry foundation approximately 90 ft in length, 40 ft in width and two stories in height. The roof was flat, covered with rolled roofing, tar, and gravel (Fig. 19). The interior finish of the walls, ceilings and partitions was mainly of combustible materials (Fig. 20).
 2. Occupancy. - The nine-apartment building provided accommodation for a large number of people. The three-roomed apartment in which the fire occurred accommodated five people, four of whom were in the apartment when the fire started.
 3. Heating. - The apartments were heated separately with oil-burning appliances (Fig. 21).
 4. Summary. - The fire originated in the kitchen of the apartment on the second floor of the building. While an occupant of an adjoining apartment was attempting to extinguish the fire, the mother led her two children to safety and returned to try to rescue the third child but was overcome by toxic gases. The delay in calling the fire department permitted the fire to make rapid progress in the combustible interior finish and partitions and also made rescue operations difficult (Fig. 22). Cause of the fire was attributed to children playing with matches and igniting papers.
 5. Remarks. - Crowded living conditions existed in all the apartments of this building (part of which had formerly been a garage). This occurrence emphasizes the need for properly enforced fire prevention and building codes. Delay in calling the fire department on discovery of fire has been responsible for many serious fires and loss of life.

FIRE FATALITY STUDY No. 6/58

Location: Pembroke, Renfrew County

Date of fire: 6 June 1958

Occupancy: Residence

Time of fire: 7.00 a.m.

Dead: 4 females, ages 49, 17,
 15 and 14 years; 1 male,
 age 3 years.

Members of the Fire Section visited the scene of this fire on 9 June 1958.

-
1. Structure. - The two-story dwelling was constructed of masonry blocks and was approximately 20 ft in width and 24 ft in length, with a basement. The roof was pitched with wood joists sheathed with rough lumber and covered with tin sheeting. A one-story wood-constructed addition with a shed roof sheathed with rough lumber and rolled roofing was attached at the rear of the dwelling and used as a kitchen (Fig. 23). Interior finish of the walls and ceilings in the masonry section of the dwelling was lath and plaster, papered and painted. The wood-constructed addition at the rear was finished in the interior with V-joint and combustible board, painted and varnished.
 2. Occupancy. - Eight persons normally occupied the six-room dwelling at the time of the fire. The mother and four children were asleep in the bedrooms on the second floor.
 3. Heating. - The dwelling was heated with an oil-burning furnace located in the basement of the masonry section.
 4. Summary. - Reports received indicate that the owner and a roomer left the dwelling shortly before the fire was noticed by a neighbour, who called the fire department. The fire originated in the kitchen which was located in the wood constructed addition at the rear of the dwelling, and spread rapidly in the interior combustible finish (Fig. 24). Smoke and hot gases released from the burning materials entered the downstairs rooms through the open doorway (Fig. 25) and extended to the second floor bedrooms by way of the front staircase, thereby cutting off escape of occupants by this route (Fig. 26). On arrival of the fire department it was reported that the first floor was completely involved in smoke and flame and that there were no visible signs of life. Cause of the fire was not definitely determined due to the extensive burning in the kitchen area.

5. Remarks. - Carelessness, in one form or another, is responsible for the majority of all fires. While the combustible materials used for the interior finish of the walls and ceiling of this kitchen created a rapid fire spread when ignited, the fire could have been confined had a door been installed, and closed, on the entrance to the masonry section (Fig. 25). The greatest danger in a fire is not the fire itself but the lethal gases which build up, and mushroom through the building killing quickly, often without warning. No doubt panic prevailed at the discovery of this fire as all the occupants were found assembled in the front bedroom (Fig. 26) at the top of the staircase where no fire was visible. Their inability to completely close the bedroom door, due to hanging clothes, and their failure to open the window in the bedroom caused them to be asphyxiated by hot gases.

FIRE FATALITY STUDY No. 7/58

Location: Ottawa, Carleton County

Date of fire: 22 June 1958

Occupancy: Residence

Time of fire: 9.59 p.m.

Dead: 1 male, age 66 years.

Members of the Fire Section visited the scene of this fire on 23 June 1958.

1. Structure. - The four-door tenement row was approximately 75 ft in length, 25 ft in width and 2 1/2 stories in height, with no basement. The building was constructed of wood frame with clapboard sheathing on the exterior walls. The roof was pitched and covered with wood shingles (Fig. 27). One-story wood-frame sheds were constructed at the rear of the dwellings. The interior walls, ceilings and partitions were finished with mixed materials but mostly of combustible board.
2. Occupancy. - The dwellings were occupied by roomers and contained three rooms on each floor. An open staircase extended from the dining room to the top floor (Fig. 28). An emergency exit was provided from the rear windows on the third floor of the building to an exterior fire escape leading to ground level.
3. Heating. - The dwellings were heated with wood and oil stoves. Various electrical appliances in the bedrooms were used for cooking.
4. Summary. - An occupant of the building discovered the fire burning in the wood-frame shed at the rear of the east end dwelling (Fig. 29). A delay in transmitting the call to the fire department permitted the fire to spread into the interior of the dwelling and attack the combustible finish on the walls and ceilings (Fig. 30). The open staircase leading from the dining room on the first floor provided a passageway for lethal gases to reach the second and third floor rooms. Some of the occupants escaped out of rear windows while the one victim was found asphyxiated beside the exit of his third floor bedroom.
5. Remarks. - While poor housekeeping and combustible material were evident in these dwellings, deliberate setting of the fire was determined at a later date when additional fires were discovered in adjacent dwellings. Open stairways, always a source of danger when fire occurs, permitted a passageway for toxic gases to penetrate upper floors and cause the loss of life.

FIRE FATALITY STUDY No. 8/58

Location: Ottawa, Carleton County

Date of fire: 13 September 1958

Occupancy: Apartment

Time of fire: 2.35 p.m.

Dead: 1 male, age 57 years;
6 females, ages 32, 11,
9, and 4 years, and
twins 23 months.

Members of the Fire Section visited the scene of this fire on 15 September 1958.

1. Structure. - The brick-veneer building, constructed on a masonry foundation, is three stories in height with a basement. The exterior dimensions were approximately 27 ft by 30 ft. The roof is flat, covered with tar and gravel (Fig. 31). A two-story wood-frame addition with a flat roof and the exterior walls covered with tin sheeting was constructed at the rear and provided additional living quarters (Fig. 32). The interior finish of the walls and ceilings in the front section of the building was lath and plaster with V-joint partitions (Fig. 33), the rooms in the rear section were finished with V-joint and combustible board (Fig. 34).
2. Occupancy. - The building contained small apartments and rented rooms on each floor; five of the seven victims of the fire were children located in an apartment on the third floor at the front of the building, the remaining two victims were severely burnt while trying to escape from the second floor front balcony (Fig. 31).
3. Heating. - The building was heated with an oil-burning furnace in the basement and additional oil-heating units on upper floors (Fig. 35).
4. Summary. - The fire originated in the apartment on the first floor occupied by the owner of the building (Fig. 34) and was discovered by a neighbour when smoke and flame were noticed coming from the rear windows. The fire seemed to spread very quickly in the interior of the first floor and staircase which led to the upper floors (Fig. 36) where flame and hot gases cut off the escape of the occupants. Cause of the fire was incendiary.

5. Remarks. - Delay in discovery of the fire due to the absence of many of the occupants was the main factor in the loss of life in this fire. Occupants on the second floor and unattended children on the third floor were not aware of the danger until trapped by fire and smoke. Emergency egress from the third floor was provided through rear bedroom windows (Fig. 37) to a wooden staircase leading to ground level (Fig. 38), but this route was very difficult for children. To aid in the saving of life the quick sounding of an alarm is of vital importance and more attention should be paid to the potential life hazard that exists in most of these old converted dwellings.

FIRE FATALITY STUDY No. 9/58

Location: Petawawa Township, Renfrew County

Date of fire: 18 October 1958

Occupancy: Dwelling

Time of fire: 1.30 a.m.

Dead: 2 males, 47 and 18
years;
2 females, 27 and 3
years.

Members of the Fire Section visited the scene of this fire on 18 October 1958.

-
1. Structure. - This one-story log cabin was constructed on a wood-plank foundation. The pitched roof was supported with wood joist covered with rough boards and sheathed with rolled roofing. Exterior dimensions of the building were approximately 20 ft by 15 ft. Interior walls and ceiling were finished with combustible board and paper. The cabin was wired for electricity but did not contain plumbing facilities (Fig. 39).
 2. Occupancy. - The cabin was occupied by a family of three and one roomer. At the time of the fire all the occupants were sleeping.
 3. Heating. - Heating and cooking facilities were provided by a coal and wood stove located at the south wall of the cabin (Fig. 40).
 4. Summary. - The fire seemed to have originated around the stove where, it was reported, a large quantity of wood and paper were stored for fuel. The delay in discovering the fire, and the time taken in securing fire fighting equipment from the nearby municipalities, permitted the fire to spread rapidly in the combustible interior finish of the walls and ceiling. The four occupants were asphyxiated. Location of the victims when found indicated that they had attempted to reach the doorway (Fig. 41).
 5. Remarks. - Crowded living conditions and poor housekeeping conditions were evident in this one-room substandard dwelling. The only exit door was located adjacent to the stove where the fire occurred and a smouldering fire in the interior asphyxiated the occupants while they were asleep. Many rural areas permit this type of construction but this fire illustrates the need of properly enforced building and fire prevention codes.

APPENDIX A

Fire Fatality Investigation Forms:

- I. Report on Fatal Fire
- II. Report on Fire Victim

National Research Council

Division of Building Research

Fire Research Section

Fire Fatality Investigation Form (I)REPORT ON FATAL FIRE

Full address of fire (number, street, municipality, and county or district) -----

Date of fire ----- A.M./P.M.*

Time of outbreak ----- A.M.* P.M.* Time alarm received ----- EST/EDST *

Occupancy (e.g. hotel, clothing factory, etc.) If dwelling, state whether for one family or more, and whether apartment, double, duplex, separate house, etc. If "mixed occupancy", e.g. part dwelling, part stores, state occupancy for each storey.

Area On a separate sheet, please give, if you can, an outline sketch plan of each storey of the building, with approximate measurements. Show point where fire started and where bodies were found.

	Width	Length
(Basement/cellar: _____)	_____ ft.	_____ ft.
(Ground floor: _____)	_____	_____
(Higher storeys: _____)	_____	_____

How many storeys? (excluding basement) ----- How many people normally resided in the building? -----

Was basement used as living quarters? Yes/No/No basement existed/Don't know *

Construction of exterior walls (clapboard, brick veneer, solid brick, etc.) -----

Interior finish of room where fire started (wallpapered lath and plaster; painted gypsum wallboard, etc.) -----

(i) Walls ----- (ii) Ceiling -----

Where did fire start, and on which storey? -----

How did the fire start? -----

(a) Source of ignition (lamp, range, etc.) -----

(b) What fuel (if any) did it use? (oil, gas, elec.) -----

(c) What first ignited? (curtains, bedding, etc.) -----

(d) and why? (lamp knocked over, playing with matches, etc.) -----

Was the fire confined to: Room of origin/Storey of origin/Building of origin/* or did it extend to other building(s)?

Did any fire department attend this fire? (If yes, state which fire department.) -----

How many deaths from this fire? ----- Was there, or will there be, an inquest? Yes/No *

Any further remarks (Reverse side or separate sheet may be used also) -----

Please send any available photographs, and state what payment is required. They will be returned if not needed.

PLEASE ALSO COMPLETE BLUE FORM; ONE COPY FOR EACH FATALITY

* - Cross out whichever does not apply

Signature ----- Rank or position -----
Date ----- Department -----

National Research Council

Fire Research Section

Division of Building Research

Fire Fatality Investigation Form (II)REPORT ON FIRE VICTIM

(Please complete one form for each fatality)

Name of victim _____ Age _____ Sex _____

1. BUILDING FIREWhereabouts in the building did the victim obtain his injuries?
(mention which storey) _____Why was the victim trapped or otherwise unable to escape? _____2. CLOTHING FIRE If the fatality was due to the victim's clothing becoming ignited:-
How did this happen? _____What did the victim and others present do about it? _____What was the type of garment first ignited? (shirt, skirt, etc.) _____Fabric: state main constituent (cotton, wool, etc.)
If available, please send an unburnt piece of the ignited garment,
if possible a square foot or more. _____3. INFANT If the victim was a child less than seven years old:-Who was the person in charge of or responsible for the child?
(e.g. parent, babysitter, etc.) _____How old was this person? _____Was the responsible person with the child: in the same room? _____
same storey? _____ same building _____; if not, how
far away was he/she? _____If the responsible person was not in the same building as the child at
the time of the fire, how long had he/she been away? _____If the responsible person was there, why was he/she unable to safeguard
the infant? _____4. If the questions above do not fit the circumstances, please give your own
account on another sheet, or on the back of this one.

PLEASE ALSO COMPLETE FORM (I) REPORT ON FATAL FIRE

Signature _____ Rank or position _____Date _____ Department _____

FIRE FATALITY STUDY NO. 1/57

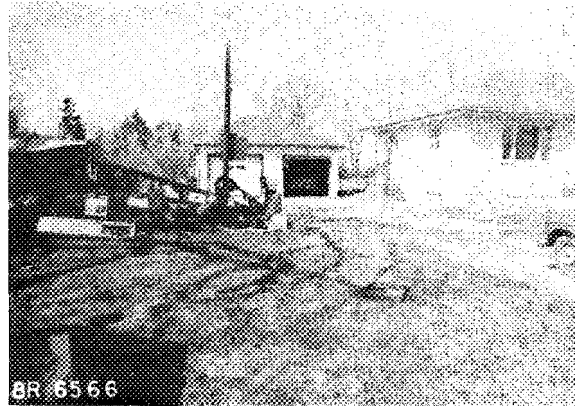


Fig. 1 View of remains of trailer adjacent to new residence of victim.

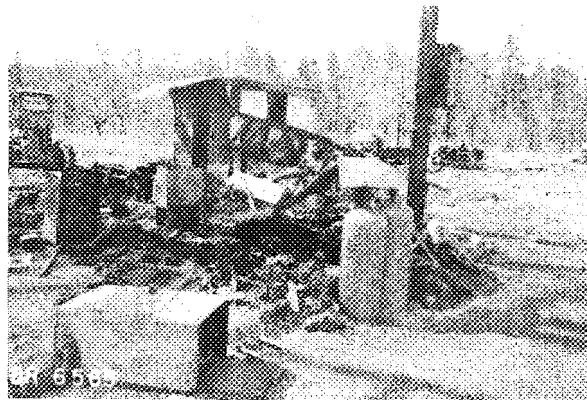


Fig. 2 Showing location of stoves used.

FIRE FATALITY STUDY NO. 2/57



Fig. 3 View of convalescent home.



Fig. 4 Showing interior of woodframe additions.

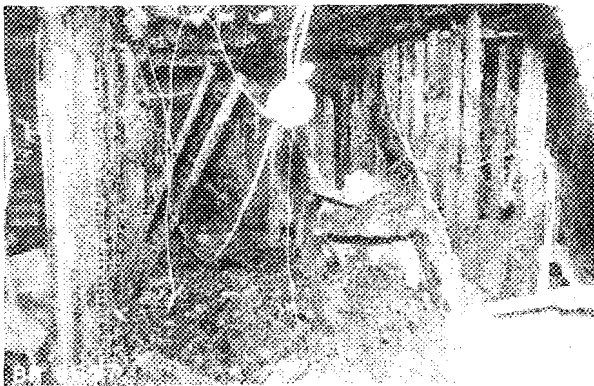


Fig. 5 View of interior showing combustible board partitions.



Fig. 6 Showing one of the oil-burning heating units.

FIRE FATALITY STUDY NO. 2/57

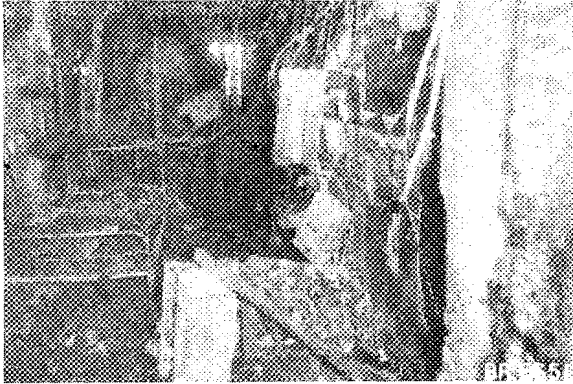


Fig. 7 Room where fire first noticed.

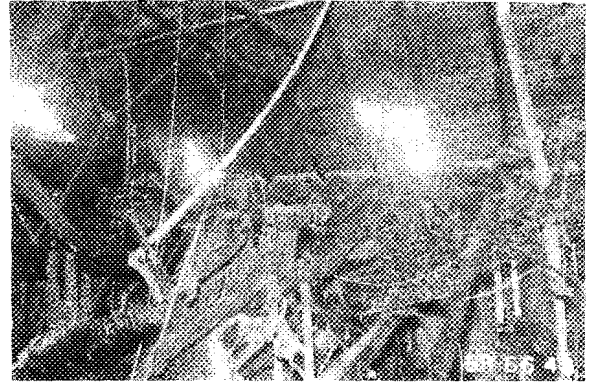


Fig. 8 Interior view of second floor.



Fig. 9 One of the electric power line poles ignited from overheated wiring.

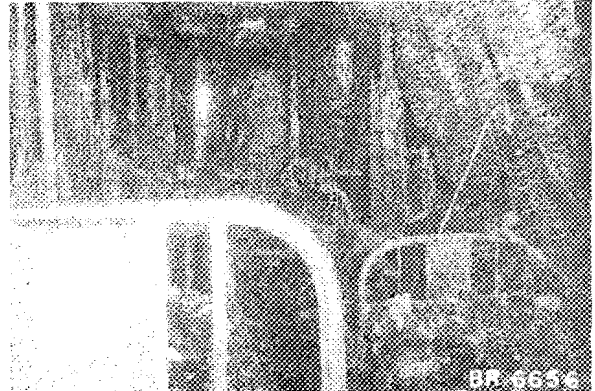


Fig. 10 Section of first floor sleeping quarters.

FIRE FATALITY STUDY NO. 3/57

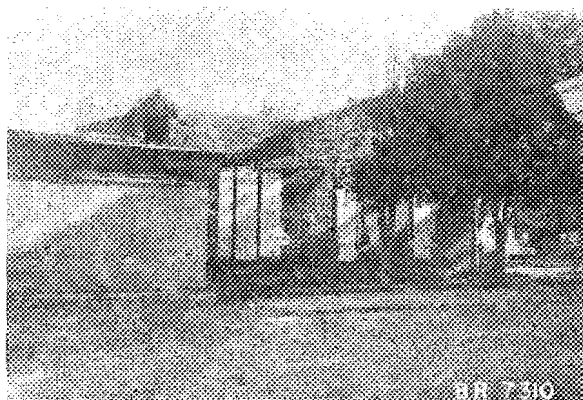


Fig. 11 View of dwelling showing frame addition at the rear.

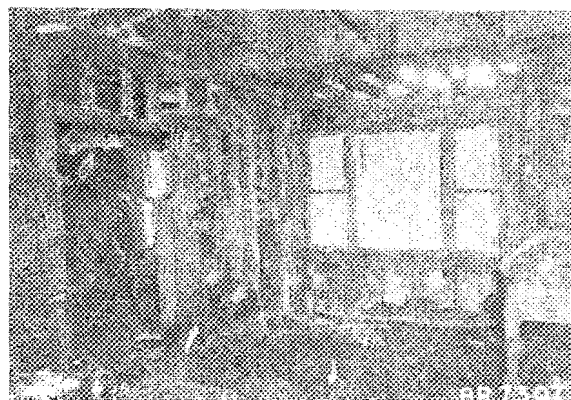


Fig. 12 View of interior showing where fire spread on combustible finish.

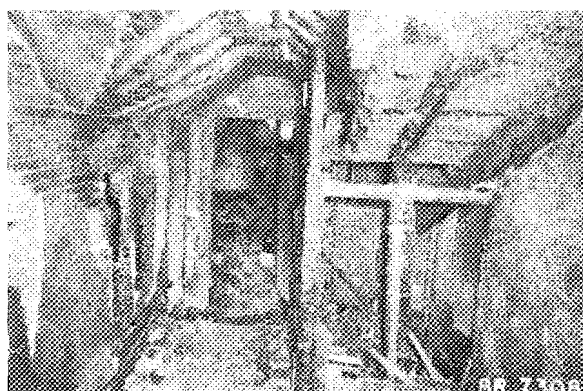


Fig. 13 Showing how fire spread to second floor through concealed space.



Fig. 14 Open front staircase where heat and gases extended to second floor.

FIRE FATALITY STUDY NO. 4/58



Fig. 15 Interior of centre section where fire occurred.

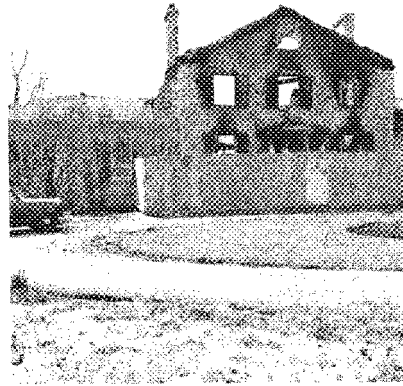


Fig. 16 View at rear of dwelling where victims were sleeping on second floor.

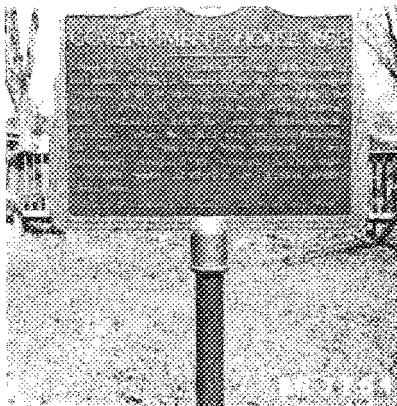


Fig. 17 Showing plaque on grounds.

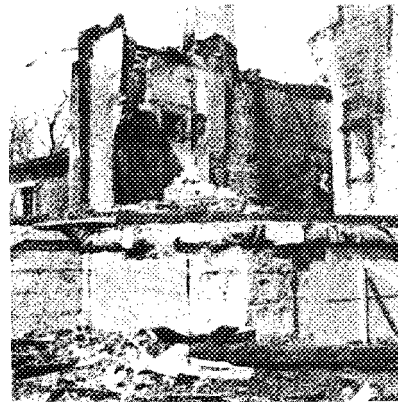


Fig. 18 View of front wall construction.

FIRE FATALITY STUDY NO. 5/58



Fig. 19 View of stores and apartment.

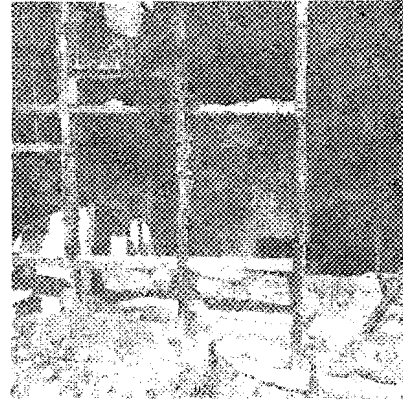


Fig. 20 View showing interior construction.



Fig. 21 Kitchen where the fire occurred.

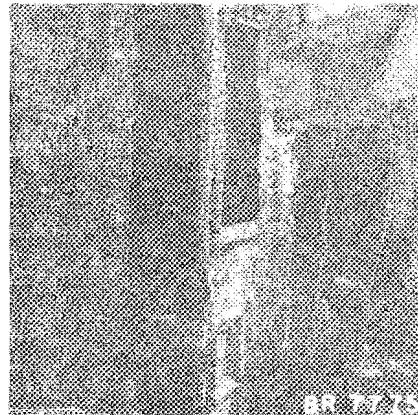


Fig. 22 Entrance to apartment where fire extended.

FIRE FATALITY STUDY NO. 6/58

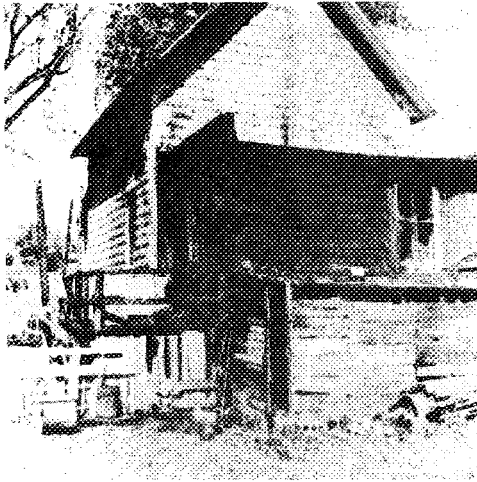


Fig. 23 Wood-frame kitchen at rear of residence where fire occurred.

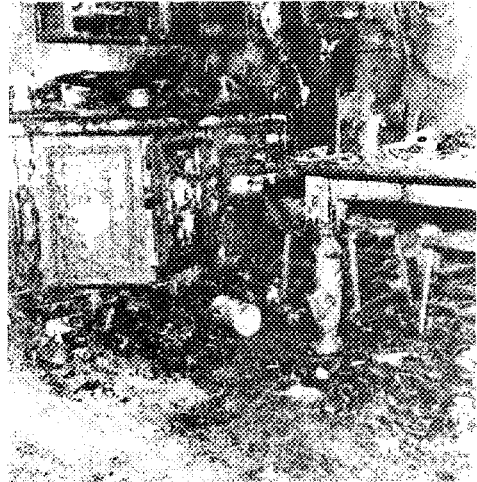


Fig. 24 Interior of kitchen.



Fig. 25 Showing where fire extended to dining room in masonry section.

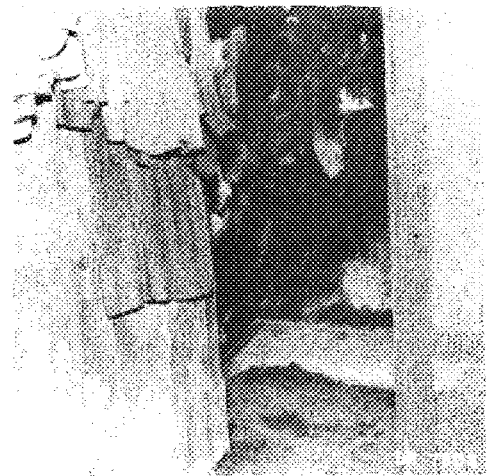


Fig. 26 Door into bedroom where victims found at top of stairs. Clothes on the door which prevented proper closing.

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Fig. 27 Front view of tenement.



Fig. 28 View showing open staircase leading from first floor.

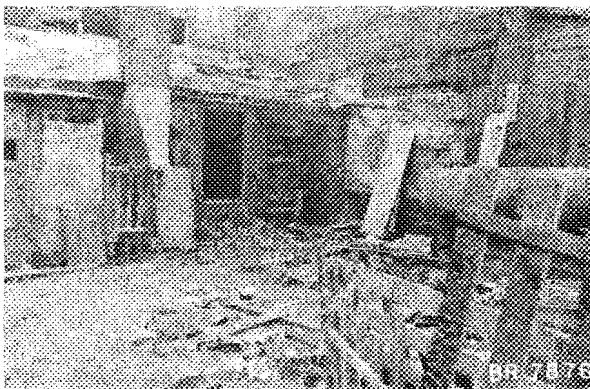


Fig. 29 Rear view of building showing wood shed destroyed and where fire extended to rear kitchen.

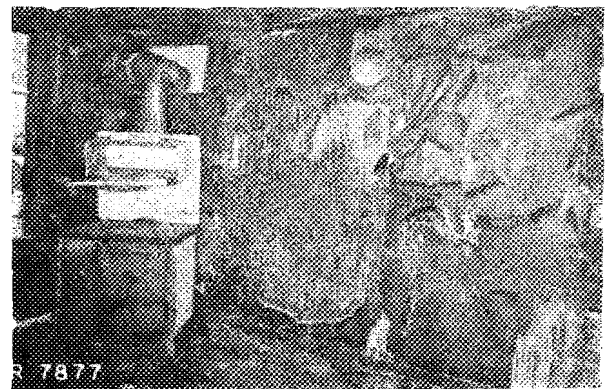


Fig. 30 Interior of kitchen where fire spread; note combustible wall finish.

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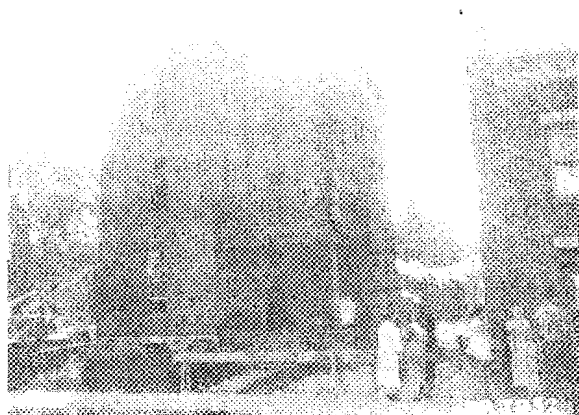


Fig. 31 Front view of building.

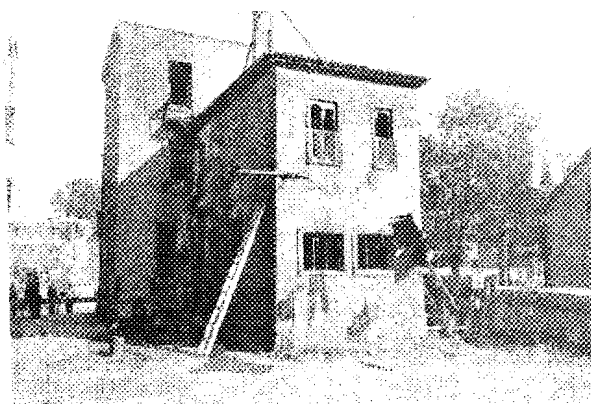


Fig. 32 Rear view of building,
where fire occurred.

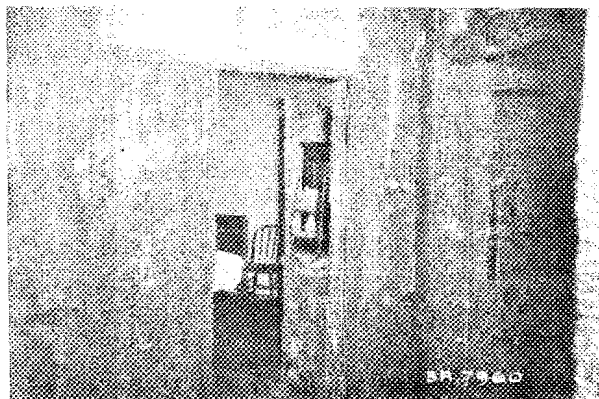


Fig. 33 Interior view of
ground floor where
fire spread.

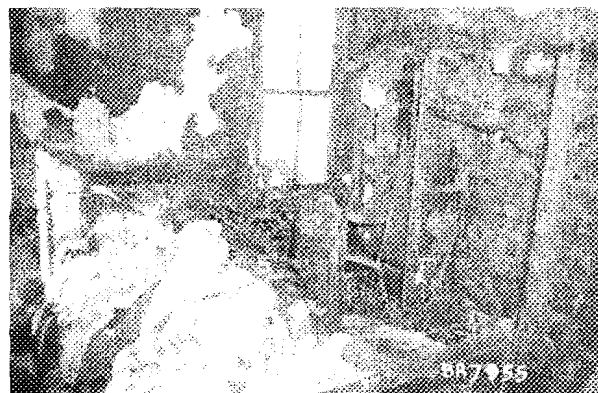


Fig. 34 Room on rear ground
floor where fire
occurred.

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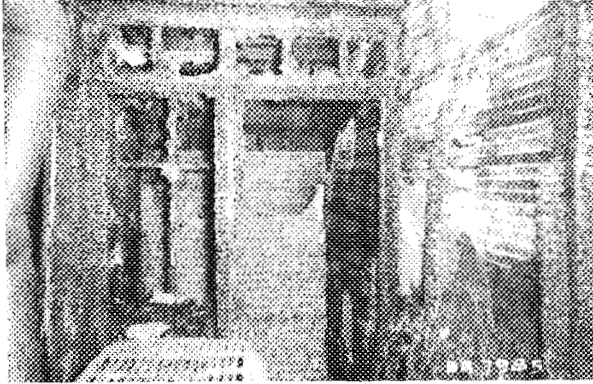


Fig. 35 View of oil burning unit and entrance to third floor.

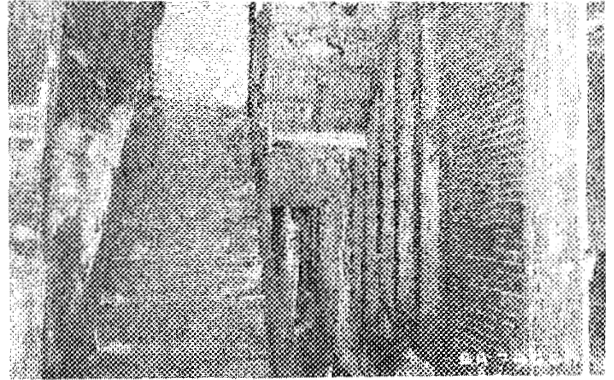


Fig. 36 Open front staircase leading to upper floors.

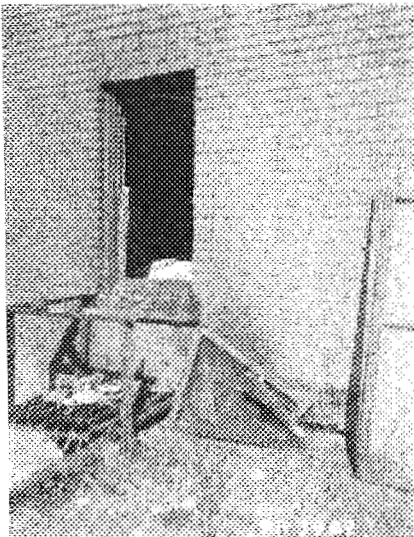


Fig. 37 Exit from third floor window leading to wood staircase. Note the wooden platform at the window and the screen.

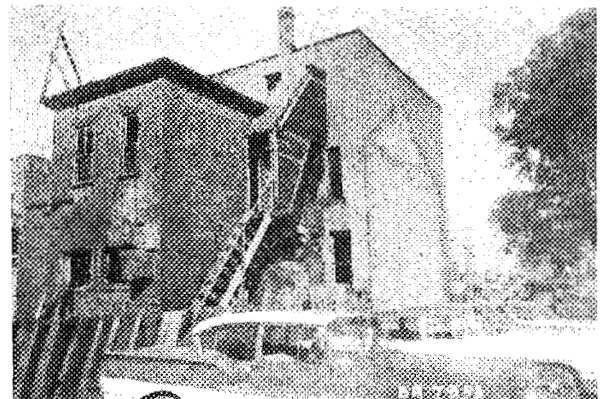


Fig. 38 View showing rear exit from second and third floors.

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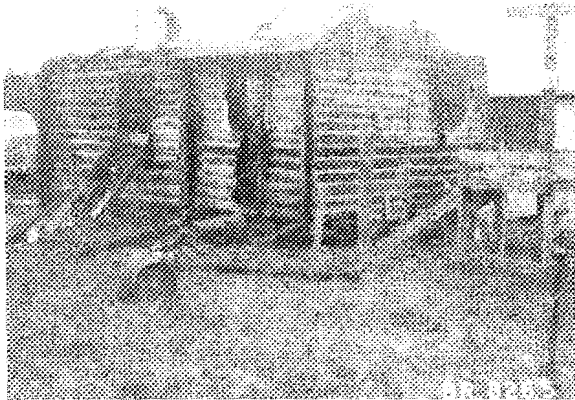


Fig. 39 View of the log cabin.

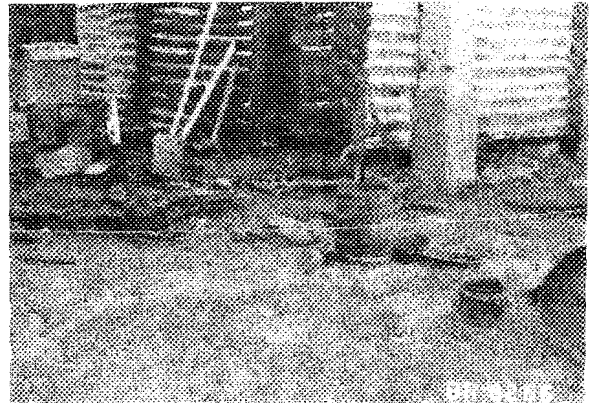


Fig. 40 View showing stove and entrance.

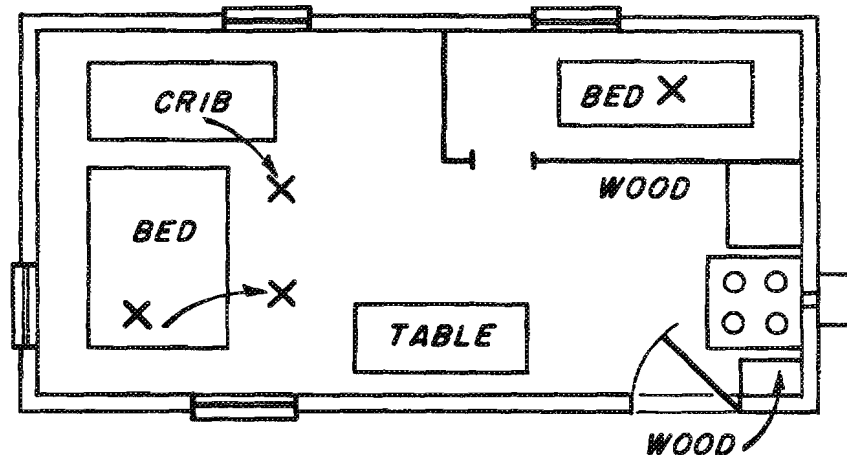


Fig. 41 Floor plan which indicates the location of the four victims when they were found.