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PURSuing HIGHER EDUCATION: GOING TO SECONDARY SCHOOL IN ONTARIO 1800-1930

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Widespread access to post-primary-level education is a relatively recent phenomenon in Canada. While we consider at least some high-school training to be an essential part of the education of youth, comparatively few students before 1900 were able to take advantage of such facilities. In 1978, for example, almost 40% of the pupils in the publicly supported educational system attended high schools and collegiate institutes; fifty years earlier, however, the figure was below 10%. Half a century before that, in 1877, less than 2% of the pupils enrolled in public schools in the province attended these upper-level institutions; before 1855, their numbers were so insignificant that no separate statistics on them were provided in the superintendent of education's annual report.¹ The elitist and urban quality of the high schools persisted until at least the 1890s; as one minister of education, Adam Crooks, put it, these schools were simply "intended to furnish higher education to a very limited number of our population."²

It is ironic to note, therefore, that Ontario's earliest educational legislation dealt almost entirely with the high (or grammar) schools. In 1798 the government was authorized to set aside over half a million acres of crown lands for the support of an upper-level school in each district in the province; in 1807 the legislature approved annual state support for these grammar schools. Early primary-level education was thought to be the private responsibility of parents; itinerant teachers and voluntary associations of parents could cope with the minimal need for primary education, and it was not until 1816 that the legislature attempted to provide similar state support for the common or primary-level schools.

These early grammar schools were fee-paying institutions (indeed, fees were abolished in the province's high schools only in 1921), largely run by clergymen and conducted in quasi-domestic surroundings. The first, and one of the best known, was the Eastern District School in Cornwall, staffed from its founding in 1803 until 1812 by a noted early educator, the Rev. John Strachan. For three years, school was taught in Strachan's house, but in 1806 a simple frame building was erected. "This building," a principal later noted, "was a cold, bare Room, void of paint, Windows six feet above the floor, filled up with long Desks, at each of which eight or ten boys sat -- the Seats being common Benches, without backs."³ It was unusually well-equipped, for Strachan had convinced the government to provide £400 to purchase apparatus in Scotland for the school in 1806. By 1808 he had obtained the following: a balance, pendulums, thermometer, portable barometer, prisms, lenses, a magic lantern and slides (an early version of a projector), telescope, microscope, quadrants, globes, an electrical machine and an orrery (a clock-like machine which illustrated the movement of planets around the sun).⁴ The curriculum, too, was unusually broad, for Strachan taught "almost every branch of Academical study" from sciences to classical languages, English literature, mathematics, civil history, geography, elocution and bookkeeping.



Few districts could do so well, either in the provision of a building or in the quality of the instruction. The Home District School in York (Toronto) was opened in 1807, by the Rev. George O'Kill Stuart, in a simple stone addition attached to his frame house (Fig. 1). It was replaced in 1816 by a formal school building, two storeys high, of frame construction, clapboarded and painted blue, measuring 40 by 70 feet. It was surrounded by a six-acre fenced playground, and because of its distinctive colouration was quickly dubbed "the Old Blue School" (Fig. 2). The interior was simple: the entry opened into a small lobby, with a stairway to the upper apartment. A door provided access to the lower schoolroom, which measured 60 by 40 feet and was plastered and painted white and furnished with benches and desks facing the side walls, and a set of double desks towards the centre of the room, facing a stove placed in the middle of the floor.⁵ Early grammar schools in the western parts of the province were also decidedly primitive in appearance. The first grammar school in London was built in the 1830s and served as a temporary court house as well as a school (Fig. 3).

The grammar schools grew slowly; by 1827 there were only 11 schools serving a scant 329 pupils in a population of over 150,000. In contrast, there were 364 common schools with almost 10,000 students.⁶ Twelve years later the population had climbed to 450,000 and there were 800 common schools serving 24,000 students -- but there were still only 13 grammar schools with an attendance of about 300.⁷ Until 1850, in fact, these schools were few in number and, except for the provision of a grant of £100 per annum towards the salary of the teaching master, largely unregulated by the government. The curriculum was avowedly classical in nature, modelled on the English public schools like Eton: English literature and grammar, Greek, Latin, the various branches of higher mathematics, with some science and occasionally book-keeping. This programme of studies provided access to university or to apprenticeship in professions such as law or medicine.

The pre-1850 grammar schools were therefore small-scale institutions very much like the primary schools of the province in their physical facilities. In fact, even in their curriculum they resembled the primary schools, for it was estimated that 56% of the new students enrolled in grammar schools could not even write and barely one-sixth of the pupils took classical languages, which had been at the core of grammar-school education in England. Provincial authorities were discouraged by the lack of progress. They responded with the Grammar School Act of 1853 which, for the first time, placed these schools under the control of government officials, who were empowered to regulate the course of study and the use of textbooks. Provincially appointed inspectors were required to report annually on the condition of the schools and on the manner in which they were conducted.⁸

Few of these early grammar schools survive, and none exists in an unmodified form. Two buildings are illustrated as examples. The first is the former Belleville Grammar School (Fig. 4), constructed in 1829 and used as a school until demolished in the 1920s. It is a two-room, storey-and-a-half stone building of modest pretensions. Another rare survivor, still used as a school, was also one of the best of the pioneer grammar schools, the County Grammar School in Kingston (Fig. 5). Constructed in 1853, it was a distinguished successor to one of the province's oldest educational institutions, the Midland District Grammar School founded in 1792. Until 1849 the earlier school had been housed in a very primitive frame structure, "a rickety, tumble-down concern" which had been condemned as early as 1824 as unsatisfactory for school purposes. The 1853 structure, in contrast, was a two-storey stone building which ranked with the city's other fine public buildings. Its architect is unidentified in the school records (visual evidence would suggest the Kingston architect John Power designed it), but its fine proportions and Gothic Revival detailing indicates a professional hand of considerable ability. For teaching purposes, it was divided into two rooms, the upper flat seating 150 students and the lower apartment 100. Five teachers shared the two rooms. The building's heating and ventilating systems were

said to be of the most up-to-date character, while its two-acre site provided ample space for recreation and expansion. Damaged by fire, it was rebuilt, with an addition to the rear, in 1876. Increasingly considered inadequate for the advanced curriculum of the late 19th century, it was abandoned for collegiate purposes in 1892, was later gutted and now serves as a public school. Though much modified inside, the Kingston Grammar School appears to be one of the better examples of early grammar-school architecture in Ontario.⁹

Few of the early high schools came up to the standard set by the 1853 Kingston Grammar School. A survey of these institutions in 1855 found a depressing state of affairs. There were 57 buildings, but few qualified as acceptable for grammar-school purposes, reported one inspector:

In most cases the premises present a dull, unthrifty and unattractive aspect, destitute alike of ornament and convenience, without fence, shed or well, tree, shrub or flower, while within, an entire lack of maps, charts and apparatus is, with too few exceptions, the general rule.... Very many of them are inferior to the common schools.

Only 15 of the 57 structures were acceptable, 16 were marginal, eight were considered bad, nine "totally unfit" and one "could scarcely be considered habitable."¹⁰

The problem, as always, was financing. A central tenet in the evolution of the educational system in Ontario before 1930 was the decentralized character of educational administration, and the consequent dependence upon local sources for financing schools. The superintendent of education (1844-76), Egerton Ryerson, proudly noted

The schools are emphatically the schools of the people, in their establishment and support, as well as in their objects; and whatever progress is made in the schools redounds both to the honour and advantage of the people in their several school divisions and municipalities.¹¹

This decentralized character was, of course, an advantage in that it placed the schools in close contact with its clientele, but it also made them dependent upon local perceptions of civic priorities, and changing economic conditions, for their well-being. The province made modest grants towards the salaries of grammar-school teachers, but the total costs of construction and maintenance of high schools, and the vast majority of other expenses, had to be borne by the local taxpayer and the parents of users. Property taxes and (until they were abolished in 1921) fees were the basis of grammar-school support. Popular resistance to property taxation for education limited what school trustees could do, and the efforts of the superintendent of education to upgrade facilities often came to naught in the absence of external funding. Until well into the 20th century, however, the provincial legislature was unwilling to allocate funds towards the construction of secondary-level schools.

Provincial authorities were not, however, entirely powerless in attempting to upgrade the grammar schools. Through their publication, the Journal of Education for Upper Canada, they presented standard plans and approved designs for both common and grammar schools (Fig. 6), and articles on subjects as diverse as proper ventilation of schoolrooms, the construction of blackboards, the use of scientific apparatus and the availability of proper manufactured desks and seats. These articles, supplemented with some Canadian examples, were collected and published in the province's first study of school design, John George Hodgkin's The Schoolhouse: Its Architecture, Internal and External Arrangements. While the grammar schools received comparatively minor attention vis-à-vis the common schools, the former were already as a special building type, posing problems different in kind from the standard common school.

What, then, was the department's notion of an "ideal" grammar school in 1857?

The examples illustrated presented a large-scale, architecturally ornate structure of either two or three storeys, in stone or brick. Grammar schools were urban schools -- the first rural high school in Ontario was constructed in 1919 -- so siting and location were crucial considerations. The school should be placed on a spacious site, of at least an acre, in a non-industrial and non-commercial district of town. The building should be surrounded by a fenced, formally planted yard with playgrounds to the rear; the architect should align the school so that the principal façade was placed to the south, and the classroom windows to the north, for the best light. Proper school equipment -- in heating, ventilating, interior furnishings and scientific apparatus -- was a requisite for the effective teaching of the pupil. Classrooms were of two types: since girls and boys were to be taught separately, small classrooms, seating no more than 60 pupils and often designed for fewer, were a basic requirement of all but the largest urban grammar schools. Because some classes, such as English grammar, were taught to large groups, and because class recitations and memorization were often the accepted methods of teaching, these small classrooms should be supplemented by a lecture hall or recitation room, which might hold as many as 150 students.

The publication of Hodgins' The School provided trustees and architects alike with reliable and up-to-date, largely American information on the department's standards in grammar-school design. The manual had, reported the inspector of grammar schools, some effect:

A most marked and gratifying improvement is made every year in the accommodations and conveniences supplied to the schools; old houses are repaired and refitted, or new ones built of a superior character as respects material, style, accommodation and external surroundings. Not a few houses are now enclosed by a neat, well-painted fence; wells, sheds, water closets and playgrounds were provided and the grounds tastefully laid out and planted with shrubs, flowers and trees, or neatly covered with green sod, all forming a striking and pleasing contrast with the lone "bleak house" on the hill, unsheltered, unprotected and unadorned, which was formerly so ruefully common, and in some places sufficiently common still. Nor is the change for the better less obvious within: rooms large and lofty, walls covered with blackboards, maps, charts, and object lessons -- seats and desks firm, clean and comfortable -- are now taking the places of the narrow, low, crowded apartment with its long, high desks. In some cases still, however, there is much need of immediate improvement, the houses are unsuitable, inconvenient, and ill-adapted to the purposes to which they are applied, and a few of the schools are kept in rented premises temporarily fitted up. It is much to be regretted that such places as Ottawa, Brockville, Port Hope, Toronto, London and Goderich, have either no school house at all or one in a state of deplorable dilapidation and dangerous decay.¹²

Why had so many urban areas been so slow to establish adequate grammar schools? The cause of this relative disinterest in higher education resulted in large part from the peculiar role that the grammar schools had come to play: they were fee-paying institutions and therefore open only to the higher classes who could afford them. The general public shunned them. As the Superintendent of Education noted in 1870, "the Grammar Schools have never occupied the position they ought to have done...." Designed as classically oriented schools open to anyone interested in advanced education, "they were made the Schools of certain classes, rather than Classical Schools ... wholly doing Common [primary level] School work" for the upper

class. Inevitably, this class bias meant that "it has therefore been extremely difficult to get any considerable support for them from the local sources."¹³ Meaningful change could only come if provincial policies relating to grants and curriculum were modified.

Reform of the province's 101 grammar schools took place in 1871, with the School Law Improvement Act. Two of its aims were to establish a separate curriculum for a new type of educational institution, the high schools, and establish another type of post-primary education, the collegiate institutes, to carry on the work of the grammar schools. In effect, the high schools were to have a curriculum which distinguished them from both the common (or primary) schools and the old grammar school; they were to be coeducational institutions of higher learning, providing the pupil with a practical rather than a classical education "so as to fit them at once for practical work in the Counting-house and other departments of mercantile life"; the collegiate institutes, on the other hand, were to be élitist schools which taught a classically oriented course of study necessary for a career in law, medicine and other professions.

The act of 1871 therefore attempted to bring post-primary education to a larger number of urban students, and a number of buildings were constructed to accommodate the expected influx. Of greater importance to the development of school architecture was the fact that the act also permitted the Department of Education to establish and enforce, for the first time, minimum levels of acceptable accommodation for both the common and the secondary-level schools. Officials considered the upgrading of the common schools of greater importance, but the secondary schools also received attention from inspectors and trustees alike. The requirement that provincial inspectors evaluate the quality of school accommodations, and report on matters such as playgrounds, provision of apparatus, ventilation and heating -- and the power given to the province to withhold grants in the case of trustees who provided inadequate facilities -- forced local officials to upgrade the former grammar schools, and build new schools according to the more stringent standards of the Department. These regulations reflected the standards set forward in Hodgins' 1857 planbook: the high school was to be placed on a one-acre site, apart from commercial and industrial areas, surrounded by a fenced playground with well and two privies. Separation of the sexes was absolute. The building itself was to be divided into rooms seating no more than 50 pupils, each student having a minimum of nine square feet and 100 cubic feet of space. Proper heating (with a temperature between 66 and 70 degrees F.), and adequate natural lighting and proper ventilation were required as well. Manufactured desks and seats, blackboards, maps, a library, cloakrooms and scientific apparatus -- all were considered essential to the proper running of a high school. Because the collegiate institutes were more prestigious, they required more elaborate and imposing buildings which were better equipped than the high schools. Over time, additional requirements were added; after 1885, for example, all collegiate institutes were required to have an indoor gymnasium for physical education. Overall, the objective was to establish a hierarchy of schools, in both functional and design terms, for which the Department of Education would provide the standards.¹⁴

The need for these standards emphasized the generally inadequate quality of the secondary schools in the 1870s. It was, Ryerson admitted, a hopeful sign that 14 new structures -- some of which were of "a very costly and elaborate description" -- were being built in the wake of the 1871 reforms. The general conditions in the high schools had improved little: of the existing buildings, only 20 were judged as excellent, 21 were thought fair, 22 passable and a further 29 in bad condition. Only seven of the 92 buildings surveyed in 1874 possessed adequate playground space. The majority of the buildings, the chief superintendent lamented, were dusty, dirty, ill-kept structures, inadequate to the needs of the students they housed. There was a too-prevalent view that higher education, like its common-school counterpart, could

take place successfully within any reasonably comfortable enclosed space and that a good teacher and an attentive pupil were the only essential elements to education.¹⁵

High-School Design 1875-1900

Between 1875 and 1900 the secondary schools of Ontario wrestled with the curriculum problems posed by the reforms of 1871-73. Though the Department of Education insisted on a strict division between the high school and collegiate institute, and between these institutions and the common schools which fed them, the independence of local school trustees, coupled with the lack of enforcement power for the department, meant that much diversity continued to exist in terms of accommodations and curriculum in the secondary-level schools of the province. Changes in curriculum and teaching method, as well as the influx of larger numbers of students, caused major changes in school architecture during this period; in a fundamental sense, however, this was a period of transition, between the earlier time when ideal standards were established, and the post-1900 period, when fundamental changes in high school architecture actually occurred.

While departmental pressure may be seen as the major factor in the growth of both the high schools and the new collegiate institutes, other elements affected the design of secondary schools during this period as well. Number, for example, changed the nature and scale of the high-school building. As the number of pupils grew, the standard one- and two-room grammar school located above the common school became less satisfactory in urban areas (though the arrangement remained popular in small towns and villages in the form of "continuation schools" until the 1930s). Buildings increased in scale, and interiors were increasingly sub-divided into more smaller classrooms, as the Department of Education wished. By the mid-1870s the study of English language and literature, mathematics and classical languages -- the staples of the old grammar-school curriculum -- had been supplemented by such subjects as history, the sciences, German, French, geography and bookkeeping. Some of these required specially designed space (for example, the sciences) while this proliferation of subjects required the construction of more and smaller classrooms. One important curricular change affecting the collegiate institutes was the introduction of physical education.¹⁶

Changes in teaching method, however, had the greatest impact on school design. The older grammar schools depended to a large extent on rote learning and memorization. During the late Victorian era, however, teachers increasingly oriented their work towards practical demonstrations (in the case of the sciences), in a clear understanding of the principles of a subject (for example, in the several branches of mathematics), and in the group study of literature rather than the rules of grammar. These shifts in pedagogical approach required somewhat smaller classrooms and a lesser dependence on large, banked recitation rooms. As interest in the more practical education offered in the high schools increased throughout the province, smaller but equivalent facilities grew up in cities and towns which had never before had access to higher-level schooling. A single exceptional teacher or especially fine facilities could establish a town high school as a leader in its field. Though located in a small town, the Strathroy High School was one of the province's most renowned institutions during the 1880s and 1890s, evidence of the quality of its principal, James Wetherell. When Thomas Kirkconnell resigned from Port Hope High School, his son reported later, "the parents and pupils in half of Durham county transferred their allegiance ... to his new school at Lindsay."¹⁷ With a greater tendency for rural parents to send their brightest son to attend the nearest town's high school (and, indeed, there is some evidence that quality of education and not distance determined where rural students might go), high schools competed in terms of accommodation and facilities. Institutions such as Galt Collegiate, the Strathroy High School and St.

Catharines Collegiate achieved province-wide reputations for the quality of their programmes, and trustees felt this standing ought to be enhanced by buildings of some architectural pretensions.

Few of these 19th-century buildings have come down to us, none in its original configuration. "Modernity" in education is a 20th-century fetish, so that these older structures were usually the subject of continuous renovation and eventually demolition during the decades of secondary-school growth, the 1920s, the 1950s and the 1960s. Two buildings are illustrated, the high schools in Cayuga (Fig. 7) and Almonte (Fig. 8). The latter is one of the relatively few surviving relics of the late Victorian period, though it has been extensively modified (Fig. 9). It was originally a two-storey, hip-roofed stone building of four rooms, constructed in 1875. Its centre-hallway design, sparse use of windows, and fenced playground made it a typical, or perhaps better than average, large-scale high-school building. The Cayuga High School was constructed in 1872 and demolished after a successor was built in the 1920s. Since this was the county grammar school, the Cayuga High School was probably larger in scale than those of equivalent small towns, but it seems to represent the small-scale, two-room buildings commonly erected in towns and small cities during this period.¹⁸ Other examples were reported to the CIHB; please see figures 10 to 21.

By 1900, however, change was in the winds. Some progress had been made -- buildings were increasing in scale, to house an ever-growing number of students, and more and smaller rooms had become standard. Space requirements and the adoption of advanced mechanical systems for heating, and occasionally for ventilating, had also become the norm under pressure from provincial inspectors. In terms of facilities, these buildings increasingly included an auditorium which could be used for drill and calisthenics. A well-documented example, for which we have no illustration, is the 1890 Sarnia Collegiate Institute. This was a two-and-one-half-storey brick building with tile gables, which resembled a public library or a large-scale residence of the period. Designed by the Toronto architect S.H. Townshend and erected at a cost of \$25,000, it contained five classrooms on the first floor, with cloakrooms attached, and mechanical equipment and two playrooms in the basement. The upper storey was "an assembly hall, with panelled walls and open timbered roof, and fitted up with dressing rooms and stage." Demolished when another was constructed in 1922, the Sarnia Collegiate Institute was similar in general terms to the best of the urban public schools of the same period with the exception of the inclusion of an auditorium.¹⁹

Secondary-School Design 1900-1930

In spite of serious attempts by provincial authorities at reform, the high schools and collegiate institutes continued to be seen basically as élitist institutions available to the few. Though provincial regulations intended otherwise, many of the new high schools continued to be nothing more than senior public schools; often the primary and high school shared the same building and staff. Though there were a number of significant exceptions, the high school had, by 1900, failed to live up to the expectations of the legislation of the 1870s. By 1930, however, much had changed and the modern high school had emerged.

Why did such relatively rapid change take place at this time? The answers are as complex as the society which engendered them. Ontario was undergoing a period of industrialization and urbanization, and the secondary schools in particular reflected these modifications. In additions, the influence of provincial regulations affected in a more profound manner the character of high-school buildings, for as curriculum and teaching methods changed, the design of new schools were gradually modified to meld with these new realities.

Perhaps the easiest way to see these changes is by choosing a series of representative examples between 1900 and 1930. Reference has already been made to the 1890 Sarnia Collegiate Institute. Some change is already noticeable by 1902, when the town of Cobourg erected a new collegiate institute (Fig. 22). Designed by the Kingston architectural firm of John Power and Son, it was a two-storey brick building of substantial proportions, prominently sited on the town's main street. Like the Sarnia school, the majority of space was devoted to classrooms and an assembly room; in the Cobourg building, the assembly room was placed on the second floor along with three of the building's six classrooms. But the Cobourg school was in advance of the earlier building in providing not only more rooms, but a specially designed laboratory, a gymnasium and a library, all of which were becoming necessary fixtures in a truly "up-to-date" secondary school. But this was only the beginning. Between 1902 and 1930, however, much more changed in the nature of the secondary school. In the case of the Cobourg school, increases in student numbers, and particularly in the range of subjects offered, required a major addition in 1928. A separate building beside the original high school was purchased and converted for use as a commercial room, domestic-science complex and for a grade 13.²⁰ In the case of Sarnia, the transformation was even more striking: trustees demolished the former collegiate institute in 1922 and replaced it with "the most completely developed composite school in Canada." Designed by the province's leading school architects, the Toronto firm of S.B. Coon and Son, the new Sarnia Collegiate could not have been a more cogent expression of the changes which were occurring in the Ontario high school. The new building was a 21-room structure, with an elaborate range of facilities including a gymnasium, galleried auditorium, library and swimming pool.²¹ Other communities built similar complex buildings. Perhaps an ideal example of curricular change affecting a building is the Peterborough Collegiate and Vocational Institute (Fig. 23). Originally constructed in 1907 to plans by Peterborough architect J.E. Belcher, this school contained 14 classrooms and an assembly hall. It appeared to be everything a city could ask for in terms of modern school facilities, and more. But an extensive survey in 1920 reported that Peterborough's post-primary educational system did not cater to the needs of all of its adolescents; the city included more than 1,500 children between the ages of 14 and 18 who were not attending school. The result was the construction of a quarter-million-dollar vocational wing which included such "innovations" (comparative to earlier schools) as a machine and electrical shop, a drafting room and additional specialized science laboratories.²²

The origins of this radical transformation lie in the growing dissatisfaction on the part of employers with the strictly academic orientation of post-primary education after 1900. Led by the Canadian Manufacturers Association, proponents of a more "practical" high-school education advocated a greater range of options of a commercial, agricultural and technical nature. Admittedly, some moves had been made in this direction before 1900. The province's first purely technical high school, for example, was opened in Toronto in 1891, significantly not by the high-school board but privately, by a coalition of industrialists and businessmen.²³ Without explicit support from the Department of Education, however, little was likely to be accomplished in the face of opposition from the province's teachers. Revised regulations in 1904 signalled the department's willingness to see a major shift away from a purely academic secondary school. These new regulations authorized grants for seven, rather than the previous two, distinct secondary-school programmes. Not only would trustees be given funding for the usual general academic programme, and for classically oriented curricula leading to university and normal-school entrance, but credit would also be given for programmes of study in commerce, manual training, household science and agriculture. Under the Industrial Education Training Act of 1911, the province went further: it provided a two-year programme of technical education for the early school leaver, and grants in support of technical

high schools. Of crucial importance, generous provincial support was made available for the funding of all types of vocational training, commercial, technical and agricultural. Initially these new and more specialized facilities were limited to cities and large towns, but gradually some aspect of vocational training became a part of virtually every high school in the province. By 1928, more than a quarter of the province's secondary-school students were enrolled in vocational courses.²⁴

The shift to vocational training profoundly affected the design of schools across the province. The academic high school had been, in general terms, a building which consisted largely of ever-increasing numbers of standard-sized rooms designed to meet departmental specifications regarding space, lighting, ventilation and heating. Vocational training, on the other hand, required specially designed space for subjects such as domestic science (including sewing rooms, model apartments and cooking rooms), typing, drafting and agriculture, as well as electrical, plumbing, metalwork and woodworking shops. Such facilities did not fit into the neat, standardized rooms which had been the staple of secondary-school architects. Because students increasingly did what the 19th-century student never did and moved from room to room, the provision of adequate corridor space was a clear necessity; relatively new considerations such as noise and the venting of noxious materials from both vocational areas and scientific laboratories became matters of urgent interest to school architects.

But interest in vocational training was only a part of the reason for the marked growth in secondary education between 1900 and 1930. In 1921 the province passed controversial legislation requiring trustees to enforce previous regulations requiring children between the ages of 6 and 14 to attend schools; in 1922, the school leaving age was increased to 16. As a result of this all schools, and particularly the high schools, were required to accommodate an increasing number of students, at a time when the number of students attending high school was already at an all-time high. Furthermore, class sizes were decreasing, as teachers insisted on smaller pupil/teacher ratios in line with a more pupil-intensive and individualized method of teaching. The pupil/teacher ratio in 1877 was a modest 33 to 1, but as numbers grew, it rose to 44 to 1 in 1887. At this point it began to fall, as teachers clamoured for professional status and lighter loads. Ratios of 42 to 1 and 40 to 1 were reported in 1897 and 1907 respectively; by 1917 it had dropped to 28 to 1, only to rise slightly to 32 to 1 in 1927.²⁵ The result of all these measures was to cause a minor revolution in post-primary education, including an increase in the scale of urban high schools, and the arrival of secondary education in a sophisticated form to small towns and even villages.

The result was a series of buildings, especially in the 1920s, very different in function and scale from earlier structures. The illustrations attached (Figs. 23 to 28) show a number of examples which have been reported to us. A few of these 20th-century examples might usefully be examined in some detail.

The largest and most sophisticated examples of this type of school were erected in the province's largest cities, Toronto and Hamilton. Among a large number of Toronto secondary schools, attention should be drawn to two outstanding examples, Jarvis Collegiate (Fig. 29) and the Western Technical and Commercial School. Jarvis Collegiate was built between 1923 and 1924 to designs by the Board's chief architect, Cyril E.C. Dyson, and was a dramatic contrast to earlier schools on the same site (Fig. 30). The 1924 school provided 32 rooms for roughly 1,300 day students in a four storey brick building of impressive dimensions. It was considered "old-fashioned" because no steel framing was used in its construction, the brick walls being load-bearing. Its cross-axial corridor system provided efficient traffic control, but a long and somewhat boring institutional façade. Special facilities -- by now standard in such large urban schools -- included fully equipped chemistry and physics laboratories, shops, domestic-science room, auditorium, conservatory, library, gymnasium, art room, cafeteria, and swimming pool. Three coal-fired boilers provided heat and

hot water, while fans supplied 40,000 cubic feet of filtered fresh air per minute to all rooms in the building. The chemistry laboratories, lavatories and kitchens each were provided -- as had now become standard -- with separate air-circulation systems. To aid in maintenance, a comprehensive central vacuum-cleaning system was installed. As one journal noted, Jarvis Collegiate "is probably unexcelled by any institution of its kind in Canada...."²⁶

Toronto's Western Technical and Commercial School was constructed at a cost of over \$1 million between 1927 and 1928 to serve the vocational needs of students in the city's west end. Designed in what had become the norm for such buildings, a collegiate Gothic style by Cyril E.C. Dyson, it represents how far collegiate and vocational architecture had progressed in a relatively short time. "In reality," the architects noted, "it is two schools under one roof, having an auditorium, gymnasium, swimming pools and cafeteria common to both." This fact dictated much of the character of the final layout of space. These expensive common elements had to be accessible from both the commercial and vocational wings of the building; hence the architects adopted a U-plan, with common elements in the centre. Furthermore, commercial subjects required much different accommodations from vocation courses, while the vast increase in demand for this type of training required a school of some scale. Western Collegiate was designed for 2,200 day students -- another 1,600 were enrolled in night courses in the first year of operation -- and contained 166 rooms on three floors, 89 in the school of commerce, 70 in the technical section and seven for administration. In an innovation, some shops were constructed in a one-storey section to the north of the main building to separate the noisiest and most dangerous activities from the rest of the school. The range of facilities was all-encompassing; the technical school included 2 print rooms, 9 shops, 17 classrooms, 4 laboratories, a lunch room, 7 rooms for domestic science, 5 art and drafting rooms and a library, in addition to the standard washrooms, maintenance rooms and the like, while the high school of commerce included 28 classrooms, 3 typing rooms, an art room, 2 lunch rooms, 2 laboratories, library and museum. The building was, noted the journal Construction, a sign of "Toronto's progressive spirit in keeping pace with her growth in population and the accompanying need of providing for the training of her youth...." In less than a generation, a new type of school had evolved.²⁷

Toronto was by no means alone in constructing such large and wide-ranging facilities. Hamilton's spectacular Delta Collegiate (1924-25, Hutton and Souter, architects, no illustration available) was praised for the high standards of its exterior ornamentation as well as its completeness in "meet[ing] every requirement demanded of secondary schools". The same city's Westdale Collegiate (1930-31, Prack and Prack, architects, no illustration available) provided three functions -- a collegiate, a vocational and a commercial school -- within a single structure; the journal Construction considered it "the very last word in educational buildings." Smaller cities constructed smaller or similarly scaled buildings of scarcely lesser pretensions. Belleville Collegiate Institute (1926, Thompson and Johnson, architects, Fig. 31) was a 35-room secondary school constructed at a cost of nearly half a million dollars; its cornerstone was laid in an elaborate ceremony symbolic of the new role for high schools by the Anglican Bishop of Ontario. Large towns also followed suit, with somewhat smaller buildings often designed to equally exacting standards, usually by prominent Toronto architects. An example is the original Fergus (now Central Wellington District) High School, an 11-room building erected between 1927 and 1928 to plans by the Toronto firm of S.B. Coon and Sons (Fig. 32).²⁸

The provision of higher education in rural areas and in villages was an enduring problem, for numbers initially did not permit the construction of a separate high-school building. Makeshift alternatives were the order of the day. Before 1900, only one solution was generally available: boarding in a nearby town or city, and paying non-resident fees while attending an urban high school. But this solution was clearly impossible for the vast majority of rural students, who were thereby effectively cut

off from upper-level educational opportunities. To provide a measure of help, the province initiated "Fifth Book" (the equivalent to grades 9 and 10) classes in rural public schools in 1896. Such an arrangement offered some of the benefits of secondary education without the attendant costs of a separate building or expensive apparatus. By 1906 the province, initially wary, was encouraging such schools by paying special grants to "Continuation Schools," as these new institutions were called. By 1923, 189 such schools had been authorized -- more than the number of high schools and collegiate institutes combined -- but because each taught fewer than 100 pupils (and often far fewer than that), the total number of students enrolled was small. They reached their apex in 1930, when there were 220 schools with over 6,600 students.²⁹

In form these continuation schools were simply larger-scale rural public schools, and are in no way similar to urban high schools of the same period (for examples, see Figs. 33 and 34). Modest provincial grants, lack of numbers of students, and rural priorities precluded the kind of specialized rooms and apparatus which had become standard in the city and town high school. The Woodville Public and Continuation School, for which no illustration was available, was constructed in 1923; its four rooms housed classes in Books One through Five (currently grades one to ten) in a building which was identical in design and facilities to a four-room public school of the period. Other places simply added more classrooms to existing public schools. In Merrickville, for example, a two-room section was added in 1908 to a two-room public school which had been erected in 1873, while in Ridgeway, a two-room wing was added to the 1869 public school (Fig. 35).³⁰

In some villages this alternative simply wasn't good enough. "Every high school building," noted one prominent architect, "ought, in addition to regular classrooms, to contain laboratories for the sciences, rooms for manual training, drawing, art, library, office and especially an assembly hall." The truly modern high school, no matter where, ought also to contain "a room for cooking and serving lunches, bathrooms and gymnasium".³¹ The small-scale Continuation School could offer no such range of facilities. In some villages a new combined public and high school attempted to provide what the Continuation School could not. An example is provided by Brighton's Union School (now the town hall), which was erected between 1916 and 1917 to designs by the prominent Toronto architectural firm of Ellis and Ellis. Assembly room, gymnasium and library were shared by both sections of the school, while the rest of the building was designed so that students in each school were entirely separated. Six rooms were set aside for the public school, and four (including a multi-purpose laboratory) for the high school. The basement was divided into four playrooms, one for each sex in each division part of the school.³²

Other villages united with surrounding rural areas to construct a small-scale but complete high school. Two Niagara Peninsula examples may be cited. The Beamsville and District High School (Fig. 36) was constructed in 1917 to designs by W. W. Lachance. The original design included only two general-use classrooms, but added a wide range of special rooms: a gymnasium, a small library, assembly hall and rooms set aside for agriculture, commerce, typing and household science. Additional facilities were planned for later additions.

Even unincorporated hamlets eventually followed the frenzy to establish some better form of advanced education. The Ridgeway Continuation School, cited earlier, did not last long; it was replaced in 1927 by a 12-room high school designed by the province's leading school architects, the Toronto firm of S.B. Coon and Son (Fig. 37). Erected between 1927 and 1928 at (in local terms) the enormous cost of \$115,000, the new structure offered a vast advance over its predecessor: eight classrooms, two well-equipped laboratories, and both a gymnasium and an assembly hall were included. Admittedly, such buildings offered lesser facilities than urban examples of the same period; the Ridgeway building, for example, did not include a library or rooms for domestic science and manual training. Even so, they signalled the

commitment on the part of the province to offering equal opportunity in secondary education in rural areas, and the acceptance by rural trustees that higher-level education was a necessary part of country life.³³

Conclusion

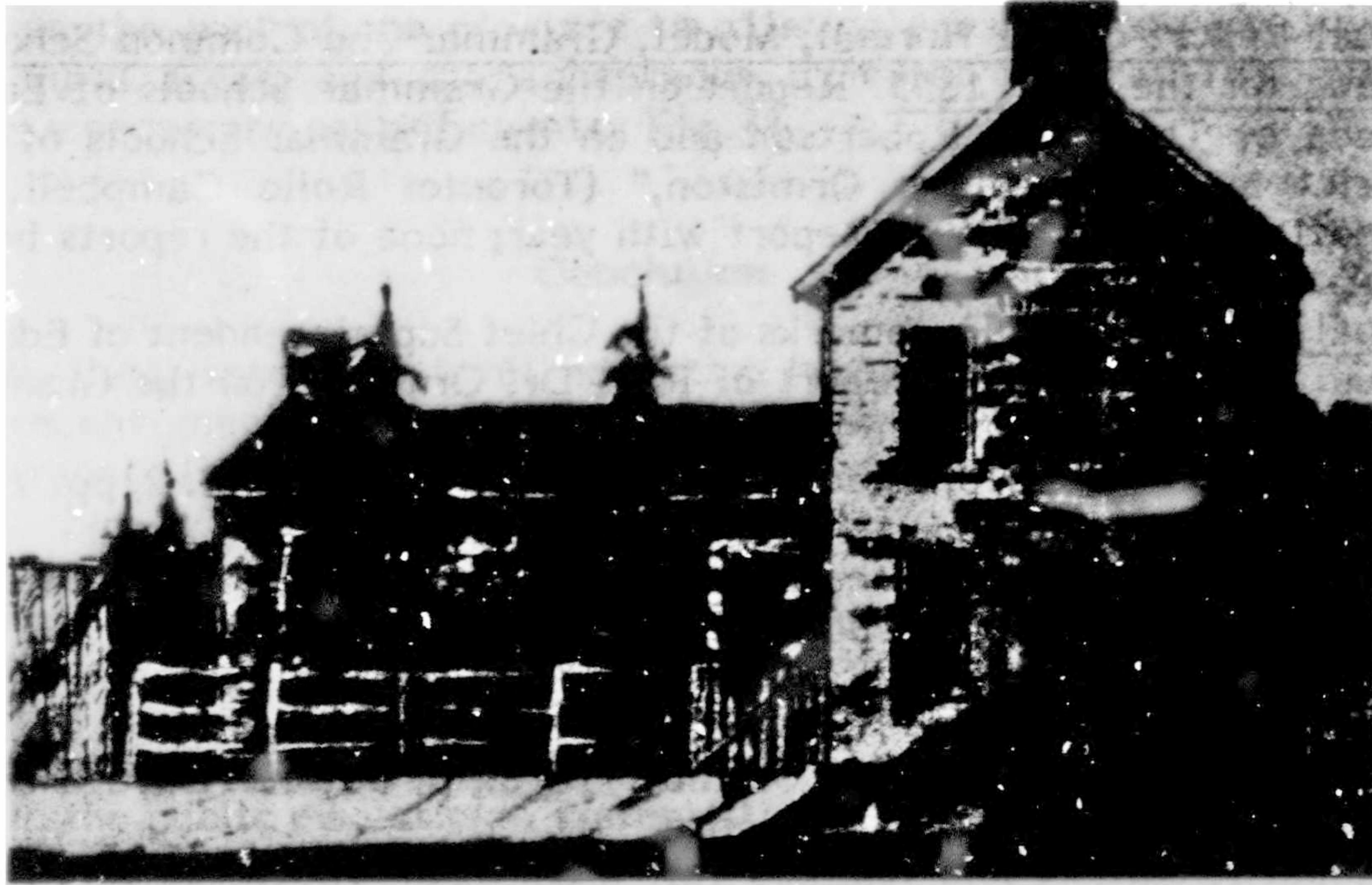
By 1930, then, secondary-level education had undergone massive change. It had, within recent memory, been a classically oriented élitist system geared to university entrance, limited to a relatively few students in the province's cities and larger towns. But by 1930 it had become available to virtually anyone who wished advanced training in a wide variety of disciplines. Central authorities did everything in their power to encourage later high-school leaving, and to make post-primary-level education both relevant to the demands of modern life and widely available to those who sought it. Barriers to attendance in high school were increasingly social and economic, rather than geographical and curricular; even so, by 1930 fewer than 10% of the pupils in the public educational system attended secondary schools.

This revolution in educational opportunity and curriculum is reflected in the design of high school buildings. The former classically oriented form of education required little more than classroom space designed to standard specifications determined by the Department of Education. Hence the architecture of the former grammar schools and of specialized high schools before 1900 differed little from that of contemporary primary schools. The emergence of new subjects of study and the demands of ever-increasing numbers produced a significantly different kind of building after 1900; the rise of vocational training at the high-school level dramatically affected both the scale and the design of what was, in fact, a new building type. By 1930 the modern consolidated secondary school had been born.

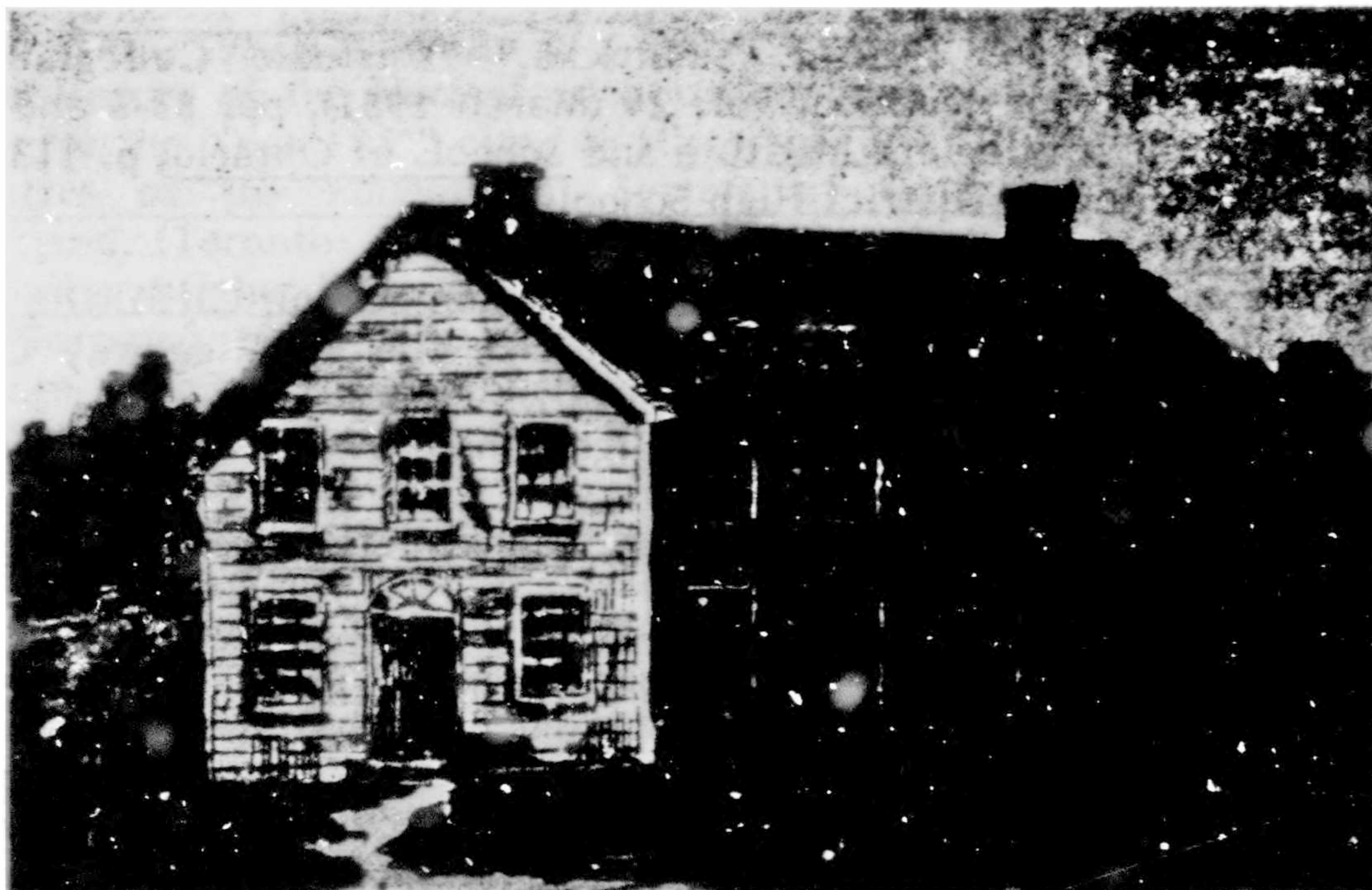
Notes

- 1 Robert M. Stamp, The Schools of Ontario, 1876-1976 (Toronto: University of Toronto Press, 1982), appendix 3, p. 280 (hereafter cited as Schools of Ontario); "Annual Report of the Normal, Model, Grammar and Common School in Upper Canada for the Year 1855" cited in Historical and Other Papers and Documents Illustrative of the Educational System of Ontario, 1842-1861, J. George Hodgins, ed. (Toronto: L.K. Cameron, 1912), vol. 5, p. 185 (hereafter cited as Historical and Other Papers).
- 2 Globe (Toronto), 19 January 1877, cited in Schools of Ontario, p. 42.
- 3 J. George Hodgins, The Establishment of Schools and Colleges in Ontario 1792-1910 (Toronto: L.K. Cameron, 1910), vol. 1, p. 202. See also George W. Spragge, "The Cornwall Grammar School Under John Strachan, 1803-1812," in Ontario Historical Society, Papers and Records, vol. 34 (1942), pp. 63-84.
- 4 Spragge, *ibid.*, p. 79n.
- 5 J. George Hodgins, Documentary History of Education in Upper Canada (Toronto: Warwick Brothers and Rutter, 1894), vol. 1, pp. 105-6; *ibid.*, vol. 3, pp. 210-11 (hereafter cited as Documentary History).
- 6 Documentary History, vol. 1, p. 229.
- 7 Documentary History, vol. 3, p. 254.
- 8 J. Donald Wilson, Robert M. Stamp and Louis-Phillipe Audet, eds. Canadian Education: A History (Scarborough: Prentice-Hall, 1970), pp. 225-6 (hereafter cited as Canadian Education).
- 9 Samuel Woods, "Kingston Collegiate Institute," Historic Kingston, vol. 9 (1960) pp. 57-63, and J.H. Ritchie, "From Pioneer Schoolhouse to KCVI," *ibid.*, vol. 27 (1978), pp. 5-15.

- 10 Annual Report of the Normal, Model, Grammar and Common Schools in Upper Canada for the Year 1855 "Report on the Grammar Schools of Eastern Upper Canada by Thomas J. Robertson and on the Grammar Schools of the Western District by Rev. William Ormiston," (Toronto: Rollo Campbell, 1856), n.p. (hereafter cited as Annual Report with year; none of the reports before 1867 is paginated).
- 11 Annual Report for 1859, remarks of the Chief Superintendent of Education.
- 12 Annual Report for 1862, report of Rev. Dr. Ormiston on the Grammar Schools of Eastern and Southern Ontario.
- 13 Annual Report for 1870, cited in Documentary History, vol. 2, pp. 249-305.
- 14 Ibid., p. 296; Annual Report for 1873, cited ibid., vol. 25, p. 162.
- 15 Annual Report for 1874, cited in Documentary History, vol. 26, pp. 250-51.
- 16 Canadian Education, pp. 321-29; Schools of Ontario, table 3, p. 280.
- 17 Both example are cited by Stamp in Schools of Ontario, p. 41.
- 18 CIHB, file on Almonte High School; the photographs are from Canadian Illustrated News, vol. 14 (18 November 1876), p. 301 for Cayuga and ibid., vol. 19 (4 January 1879), p. 9 for Almonte.
- 19 Canadian Architect and Builder, vol. 8 (October 1895), plate between pp. 120 and 121 and text p. 125.
- 20 CIHB, file on Cobourg Collegiate Institute; see also Contract Record, vol. 13 (June 1902), p. 1.
- 21 Schools of Ontario, p. 113; see also CIHB, file on Sarnia Collegiate Institute.
- 22 CIHB, file on Peterborough Collegiate Institute; Schools of Ontario, p. 113.
- 23 Schools of Ontario, p. 44.
- 24 Schools of Ontario, p. 113.
- 25 Schools of Ontario, app. 3, p. 290.
- 26 "Toronto's Newest and Finest School," Contract Record, vol. 38 (28 May 1924), p. 550; see also "New Schools of the Toronto Board of Education," Construction, vol. 17 (June 1924), pp. 180-91.
- 27 "Western Technical and Commerce School, Toronto, Ontario," Construction, vol. 21 (December 1928), p. 421.
- 28 "Hamilton's Newest Collegiate Institute," Contract Record, vol. 38 (31 December 1924), pp. 1323-4; "Sinaiticus," "Westdale Collegiate Institute, Hamilton, Ont.," Construction, vol. 24 (March 1931), pp. 83-6 and 108; CIHB, file on Belleville Collegiate Institute and Schools of Ontario, p. 113; CIHB, file on Central Wellington District High School.
- 29 Schools of Ontario, pp. 62, 76, 81 and 124-5.
- 30 CIHB, file on Woodville Public and Continuation School; CIHB, file on Merrickville Public and Continuation School; CIHB, file on Ridgeway Continuation School.
- 31 W.W. Lachance in "A Well-Equipped High School at Beamsville," Construction, vol. 10 (July 1917), p. 233.
- 32 "Union High and Public School Building," Construction, vol. 10 (July 1917), pp. 238-9.
- 33 "A Well-Equipped High School at Beamsville," Construction, vol. 10 (July 1917), pp. 233-5; CIHB, file on Ridgeway and Crystal Beach High School and Contract Record, vol. 41 (29 June 1927), p. 50.



1 First Home District Grammar School, 1807. (Metropolitan Toronto Library Board.)



2 "The Old Blue School", 1816. (Metropolitan Toronto Library Board.)



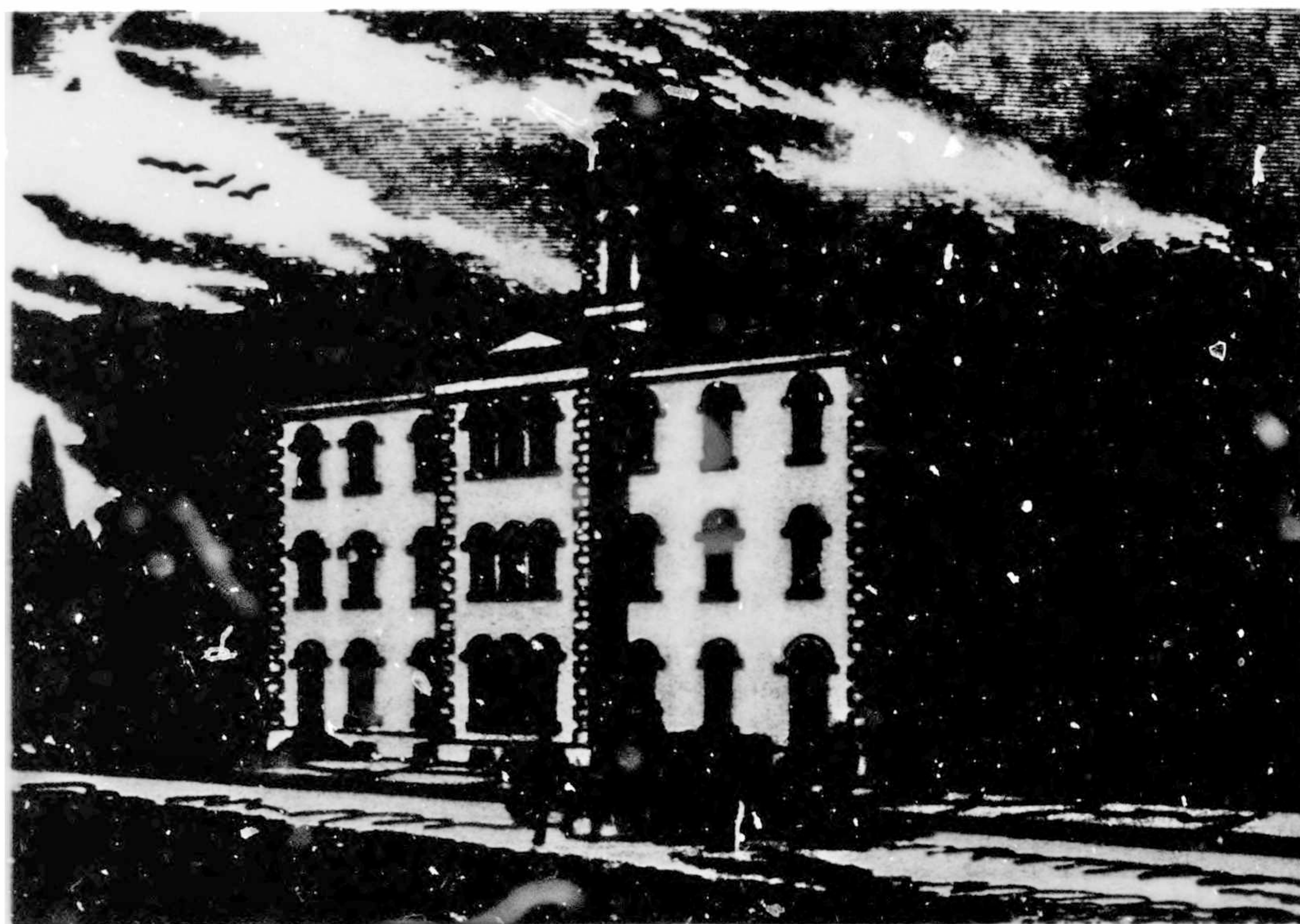
3 Former London District Grammar School, London (demolished). (Ontario Ministry of Education.)



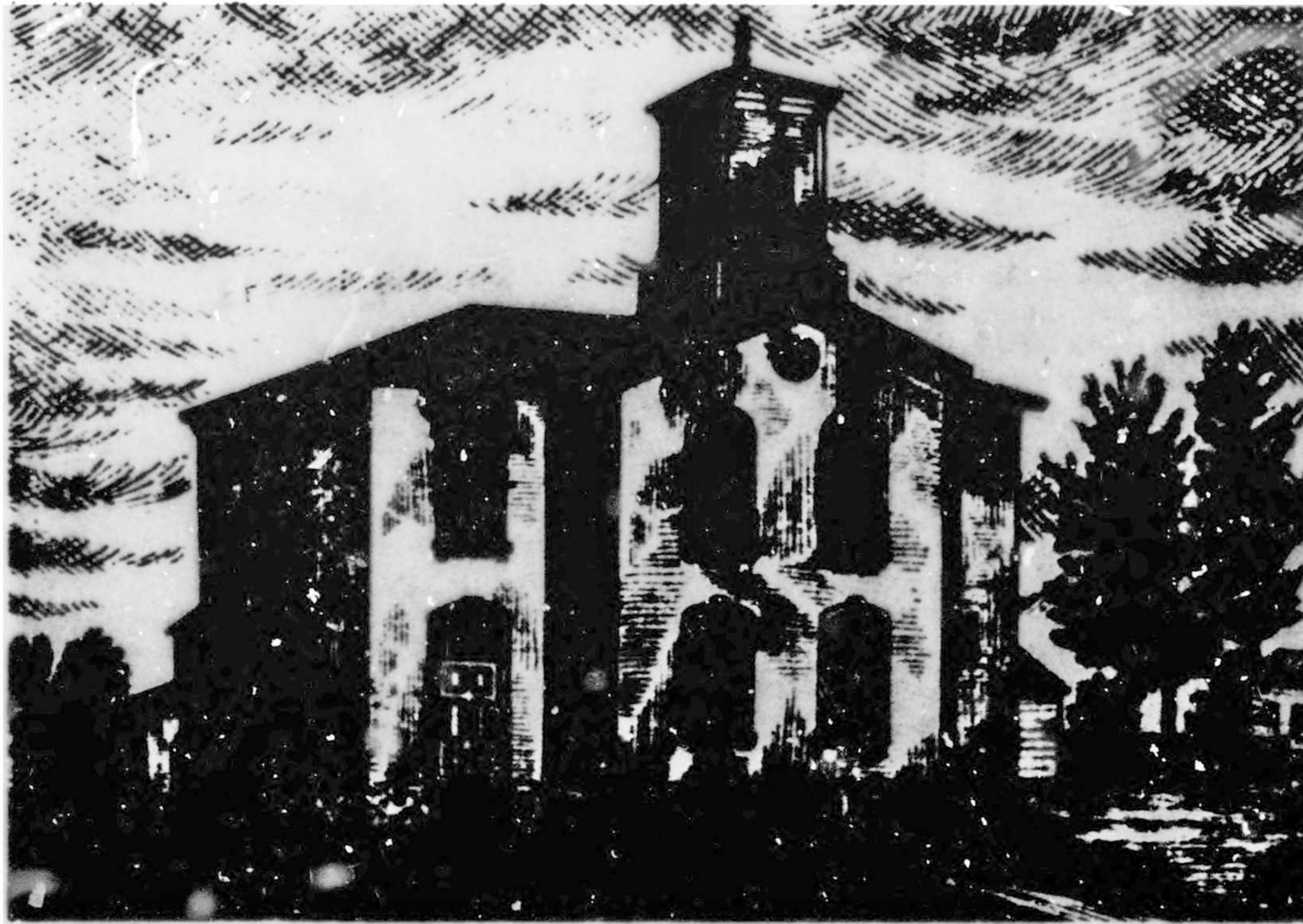
4 Former Grammar School, Belleville, 1829 (demolished). (W. Harold Reid, Don Mills.)



5 Former Midland District Grammar School (now Sydenham Street Public School), Kingston, 1853. (CIHB, D. Johnson.)



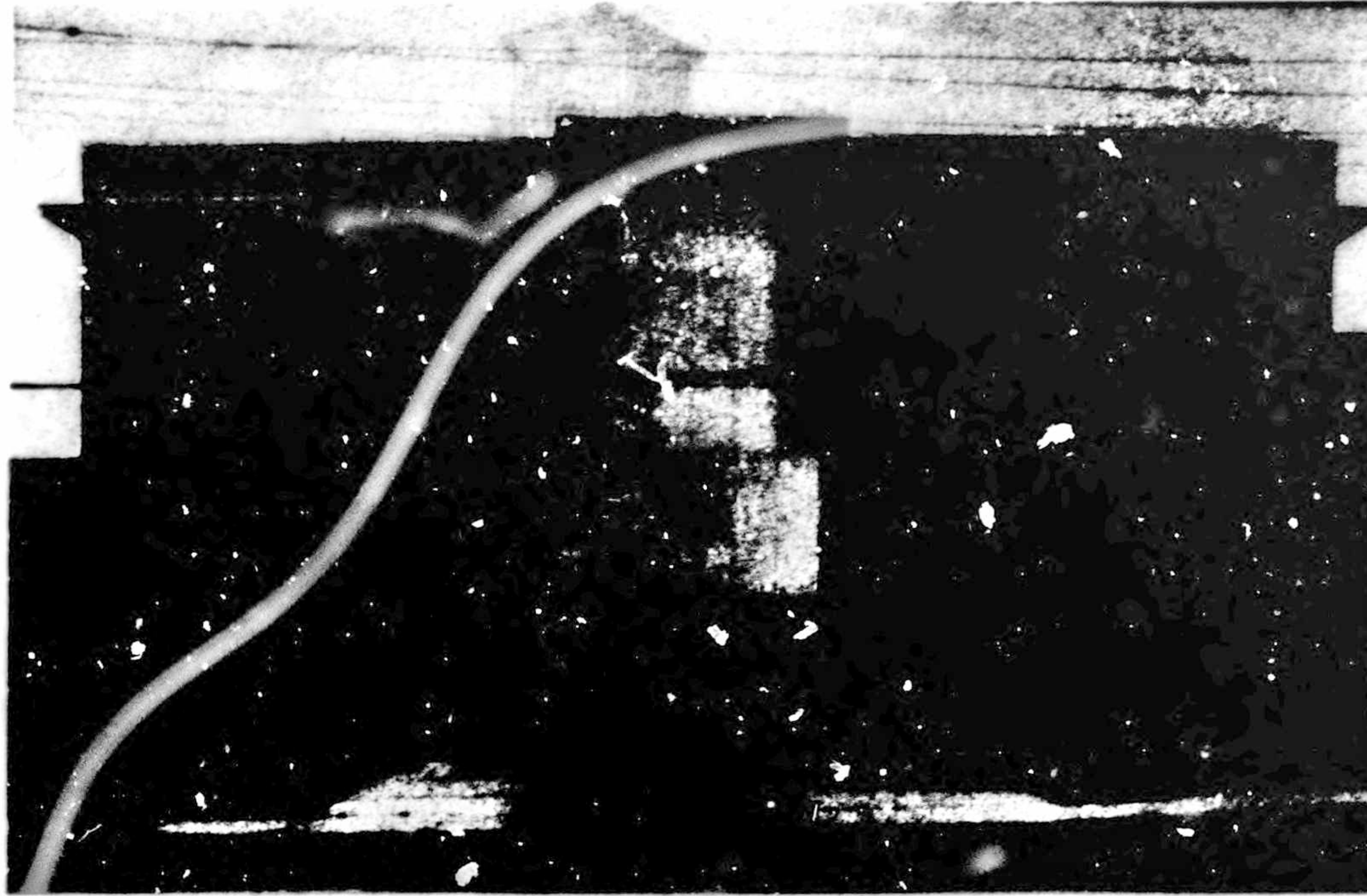
6 Elevation for a Grammar School, 1857. Plans for this structure included rooms seating as many as 228 pupils. (Journal of Education for Upper Canada, Vol. 10 [February 1857], p. 17.)



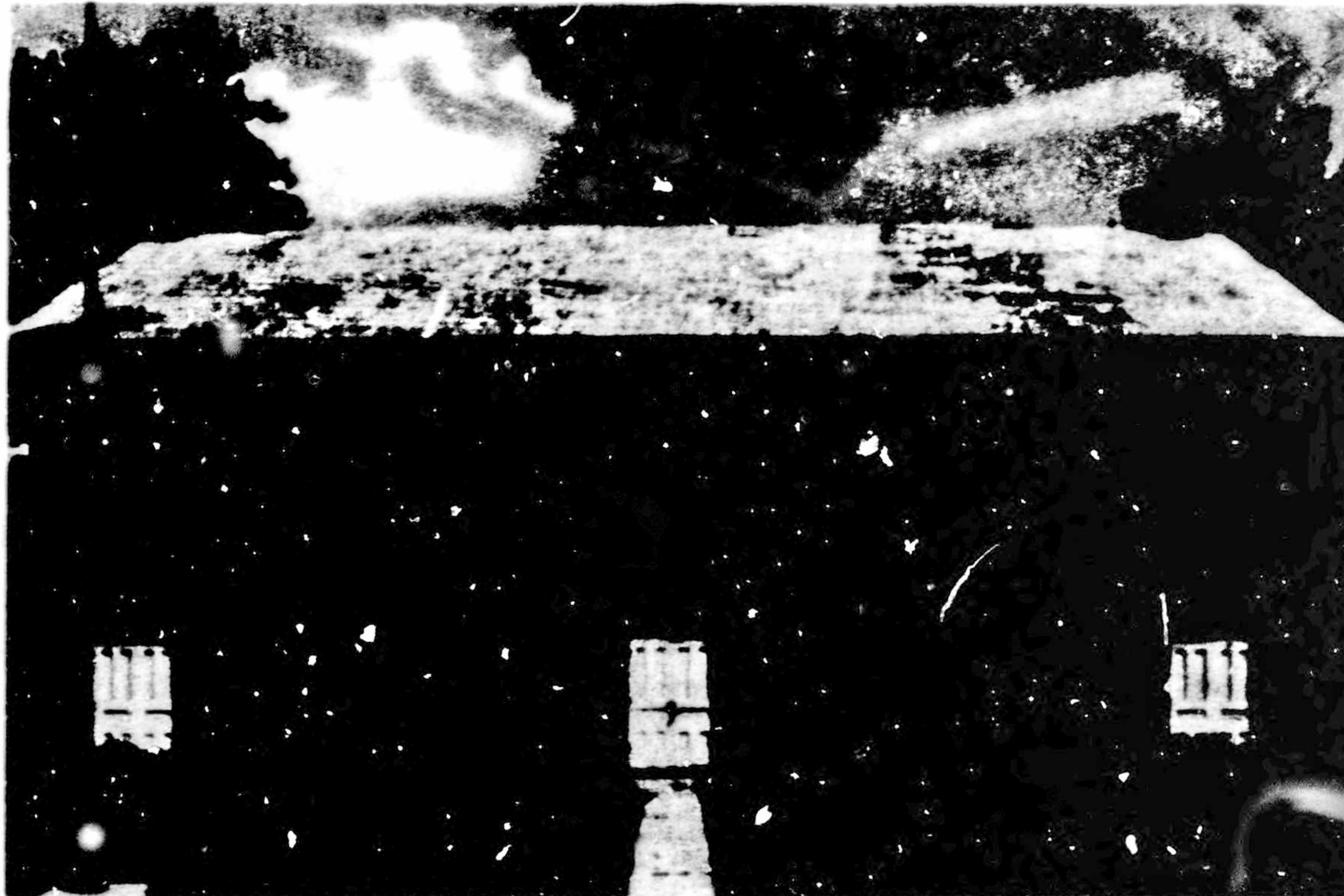
7 Cayuga Grammar School, 1872 (demolished). (Canadian Illustrated News, Vol.14 [18 November 1876], p. 301.)



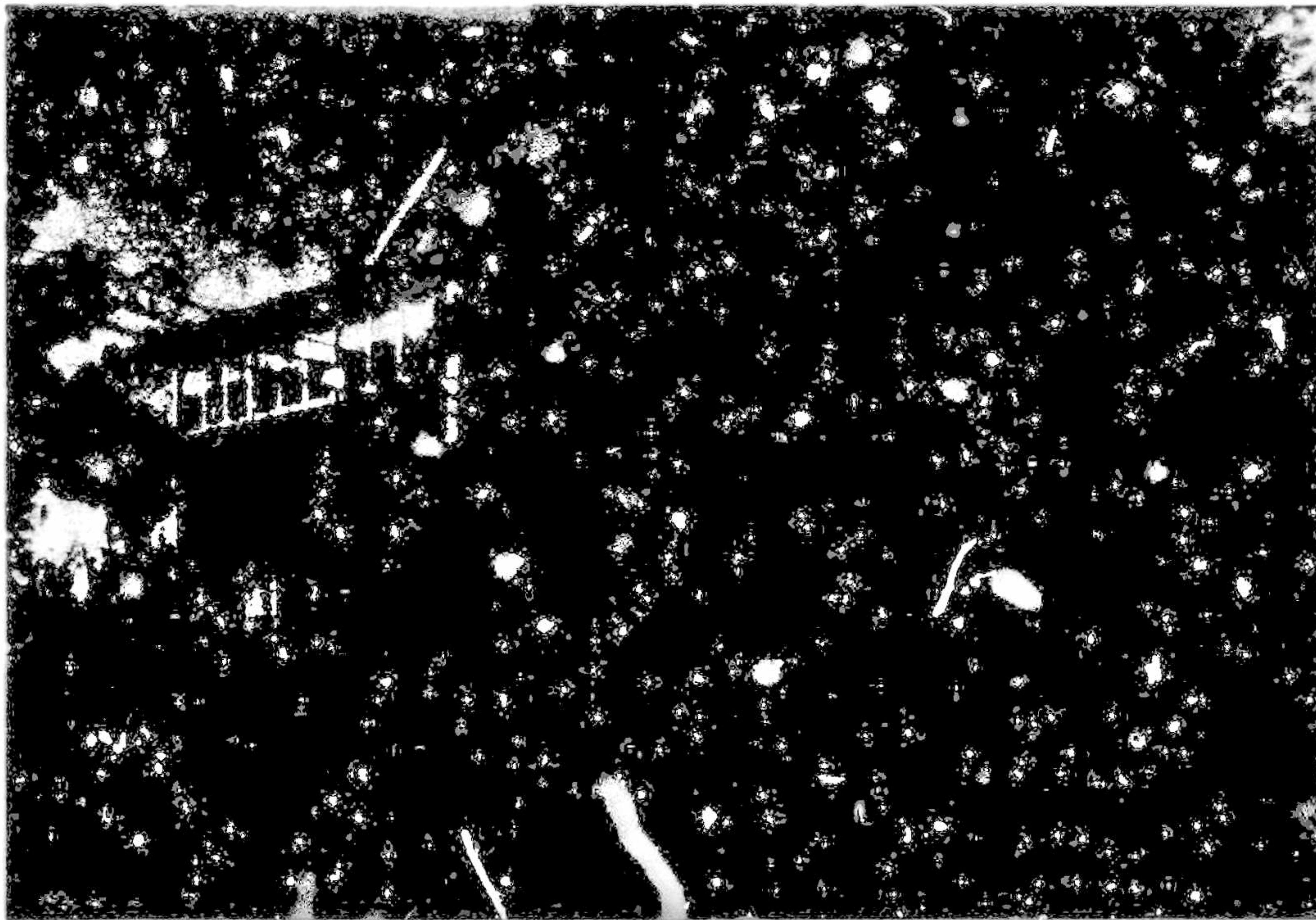
8 Almonte High School, 1875. (Canadian Illustrated News, Vol. 19 [4 January 1879], p. 9.)



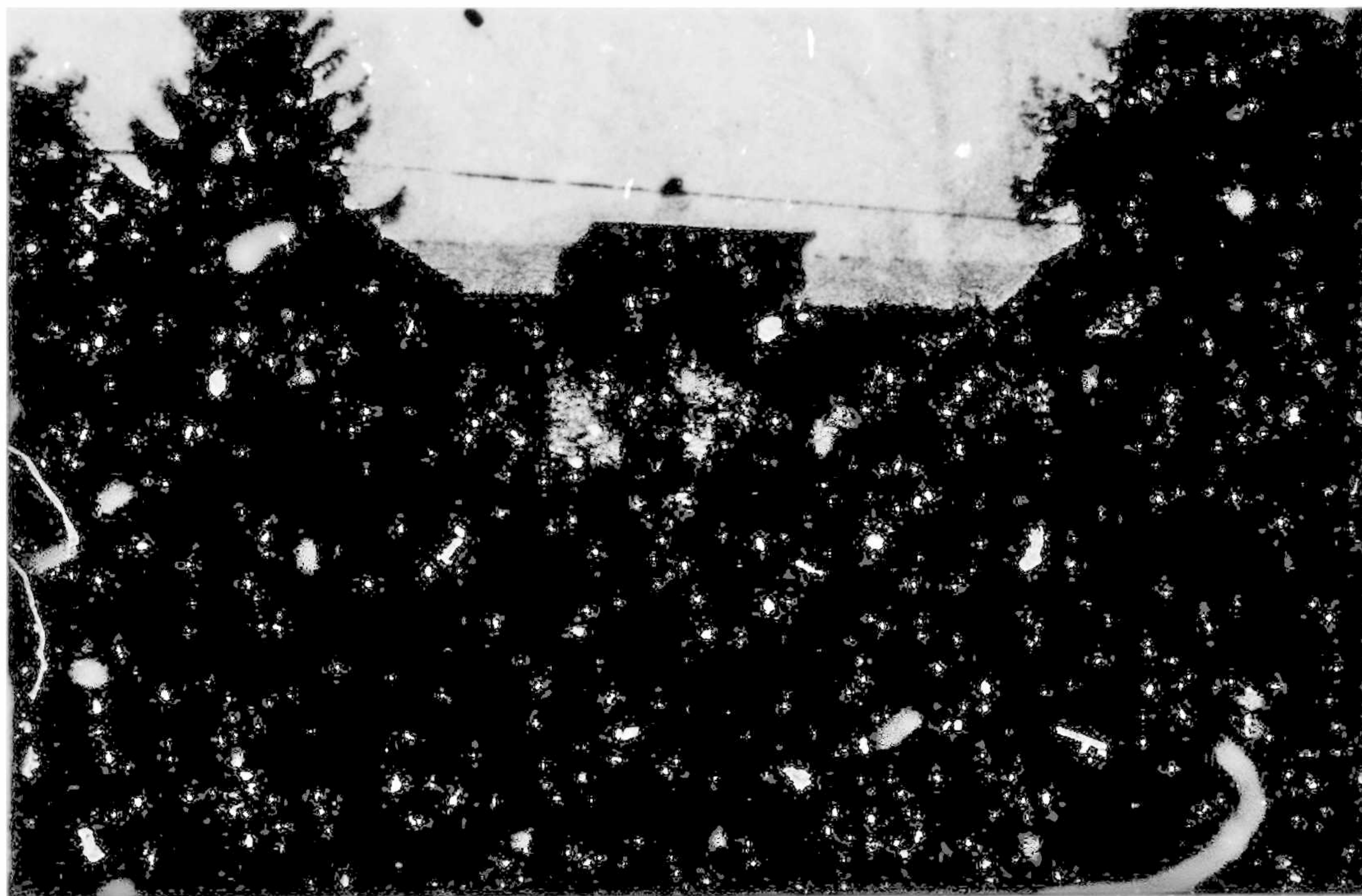
9 Almonte High School in 1978. (National Capital Commission.)



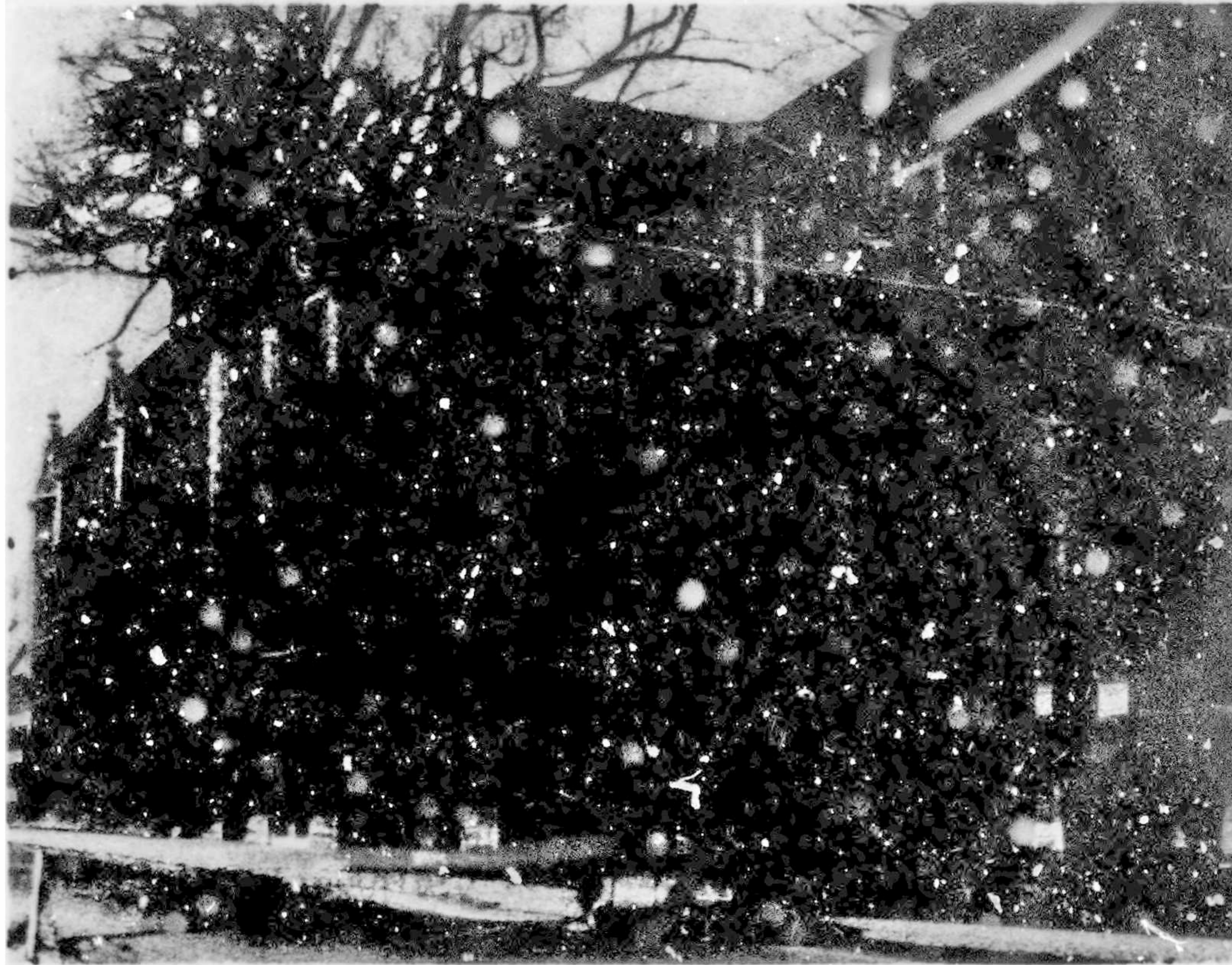
10 Former Williamstown Grammar School, 1861. (Nor-westers' and Loyalist Museum.)



11 Former Grammar School, Pakenham, ca. 1860. (National Capital Commission.)



12 Former Cobourg Collegiate Institute, 1875-1902. (Robert Mikel, Cobourg.)



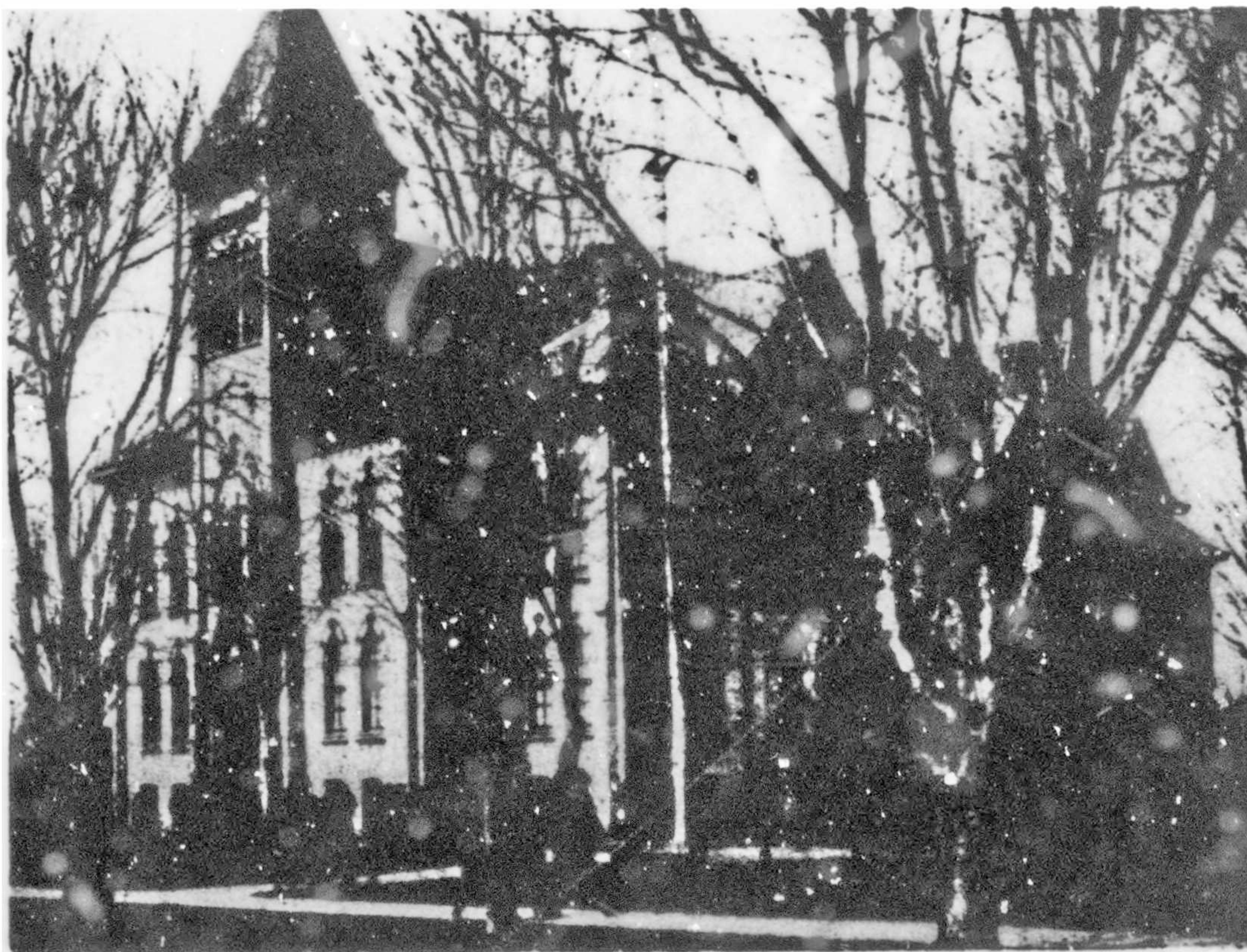
13 Lisgar Collegiate Institute Ottawa, 1874. (National Capital Commission.)



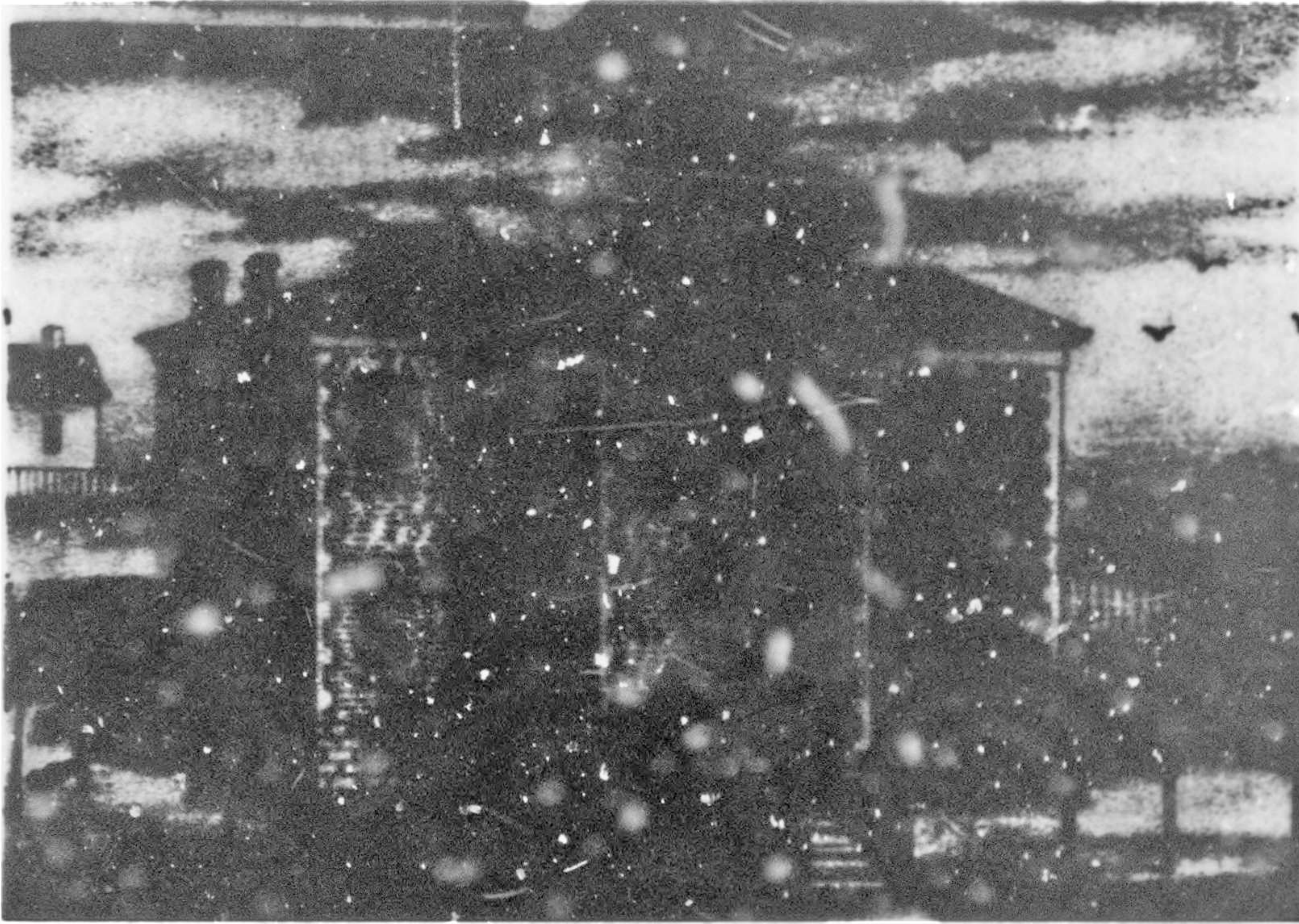
14 Patterson Collegiate Institute, Windsor, 1888. (CIHB)



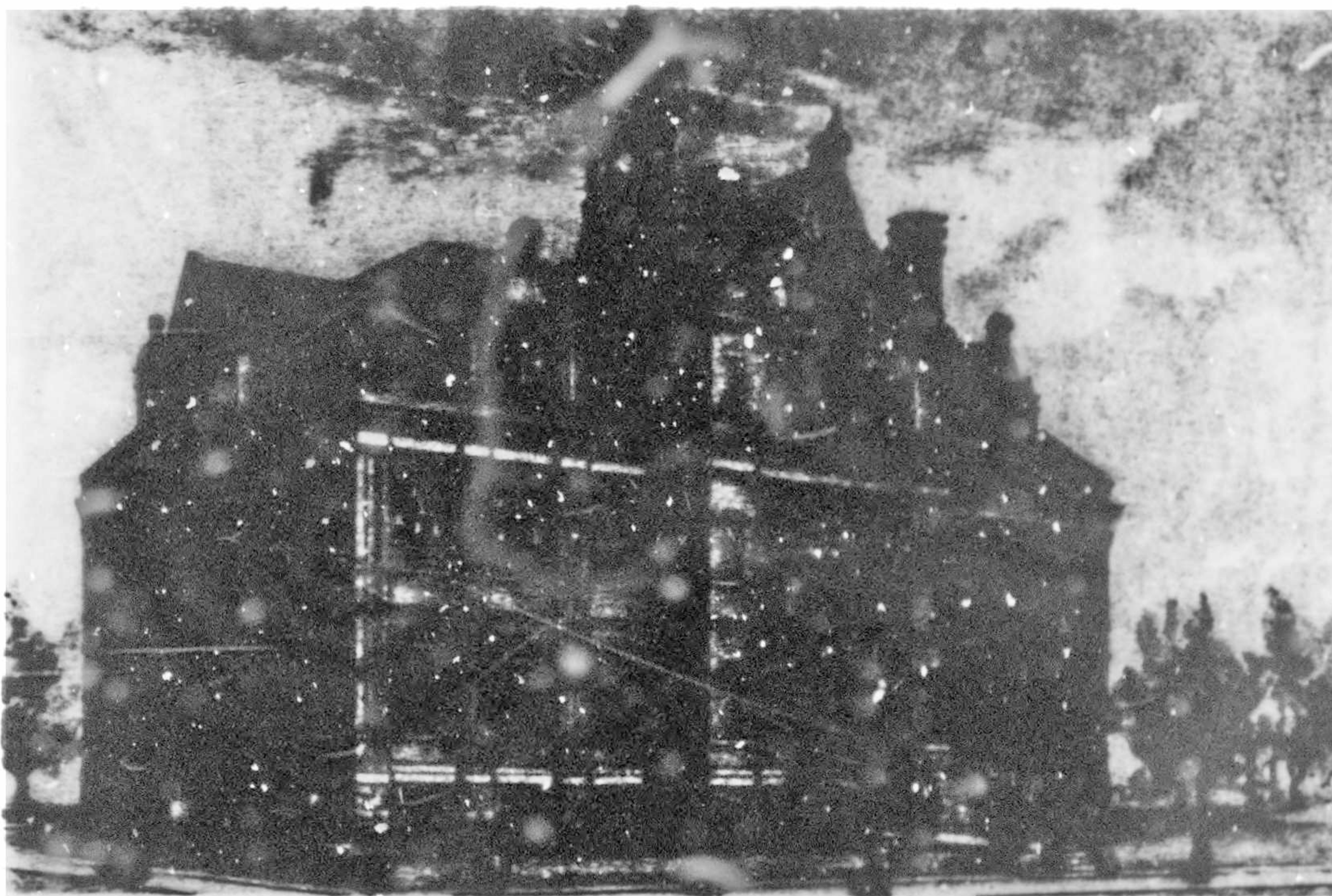
15 Former Alexandria High School, Alexandria, 1892. (CIHB.)



16 Former London Collegiate Institute, 1877-78 (demolished). (Ontario Ministry of Education.)



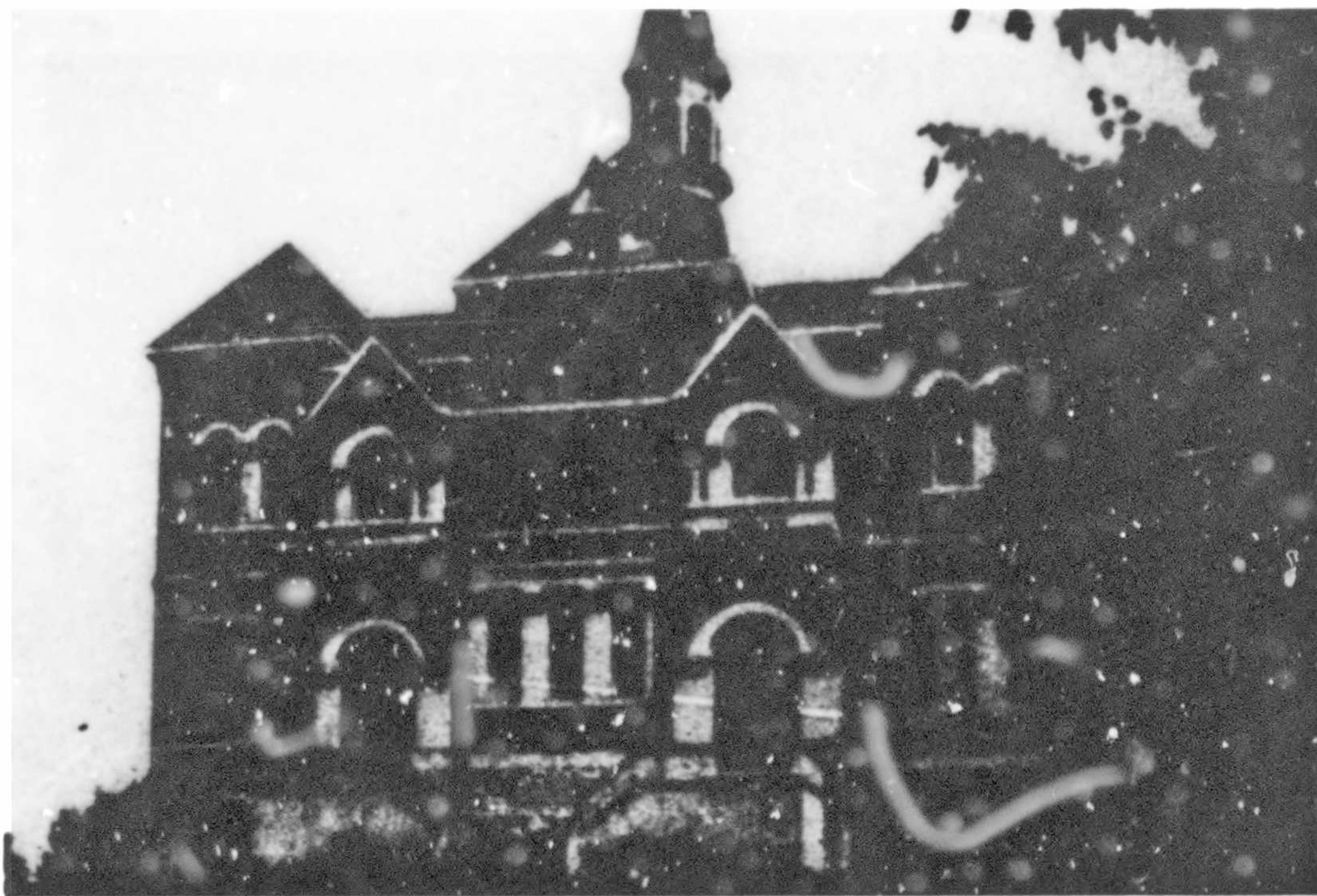
17 Former Cornwall High School, 1876 (demolished). (Illustrated Historical Atlas of the Counties of Dundas, Stormont and Glengarry [Toronto: H. Belden, 1879], p. 1.



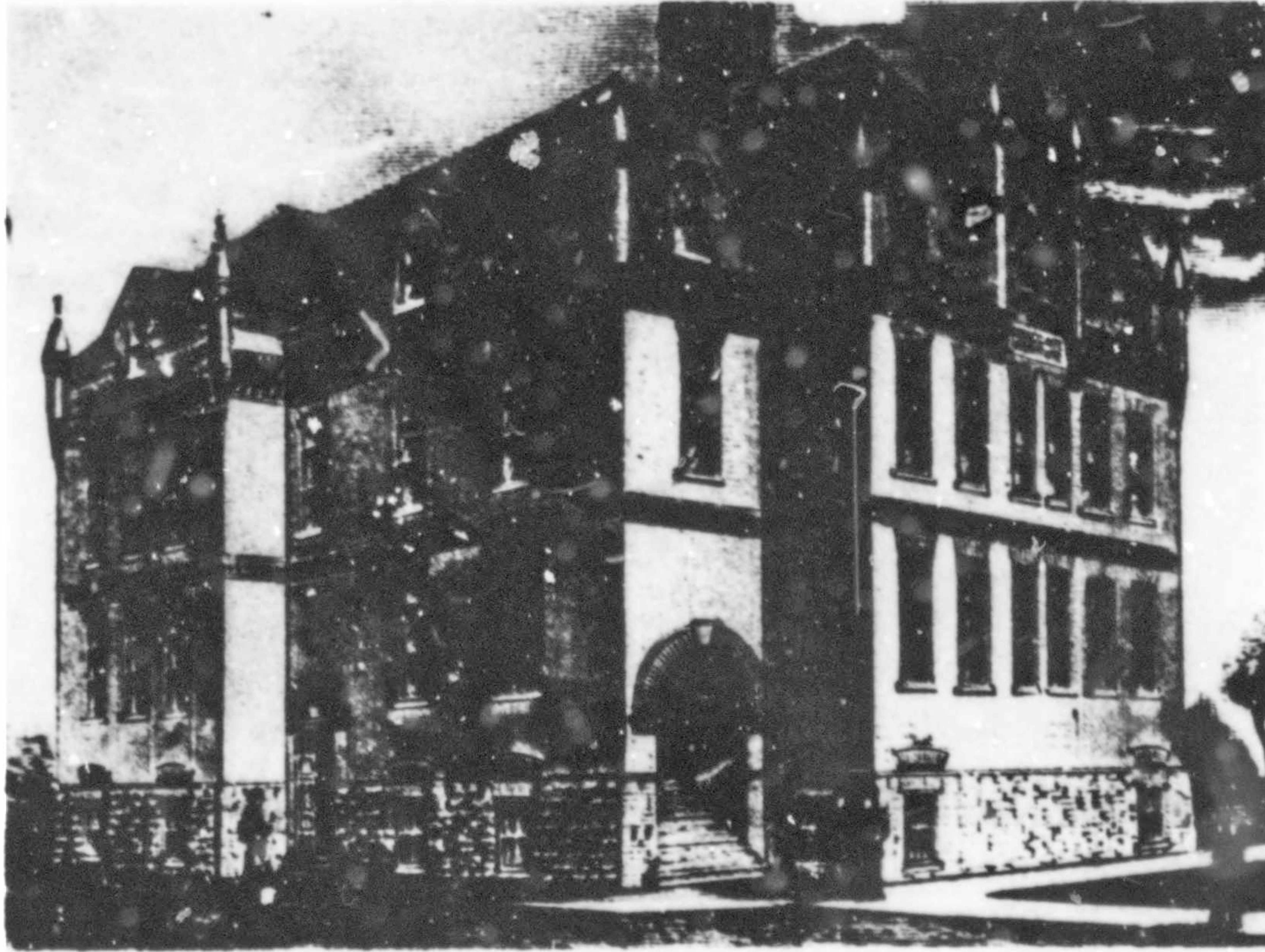
18 Former Kingston Collegiate Institute, 1892 (demolished). (Ontario Ministry of Education.)



19 Harbord Collegiate Institute Toronto, 1892 (demolished). (Ontario Ministry of Education.)



20 Former Campbellford High School, Campbellford, 1885 (demolished). (Ontario Ministry of Education.)



21 Former Collegiate Institute, Napanee, 1890 (demolished). (Ontario Ministry of Education.)



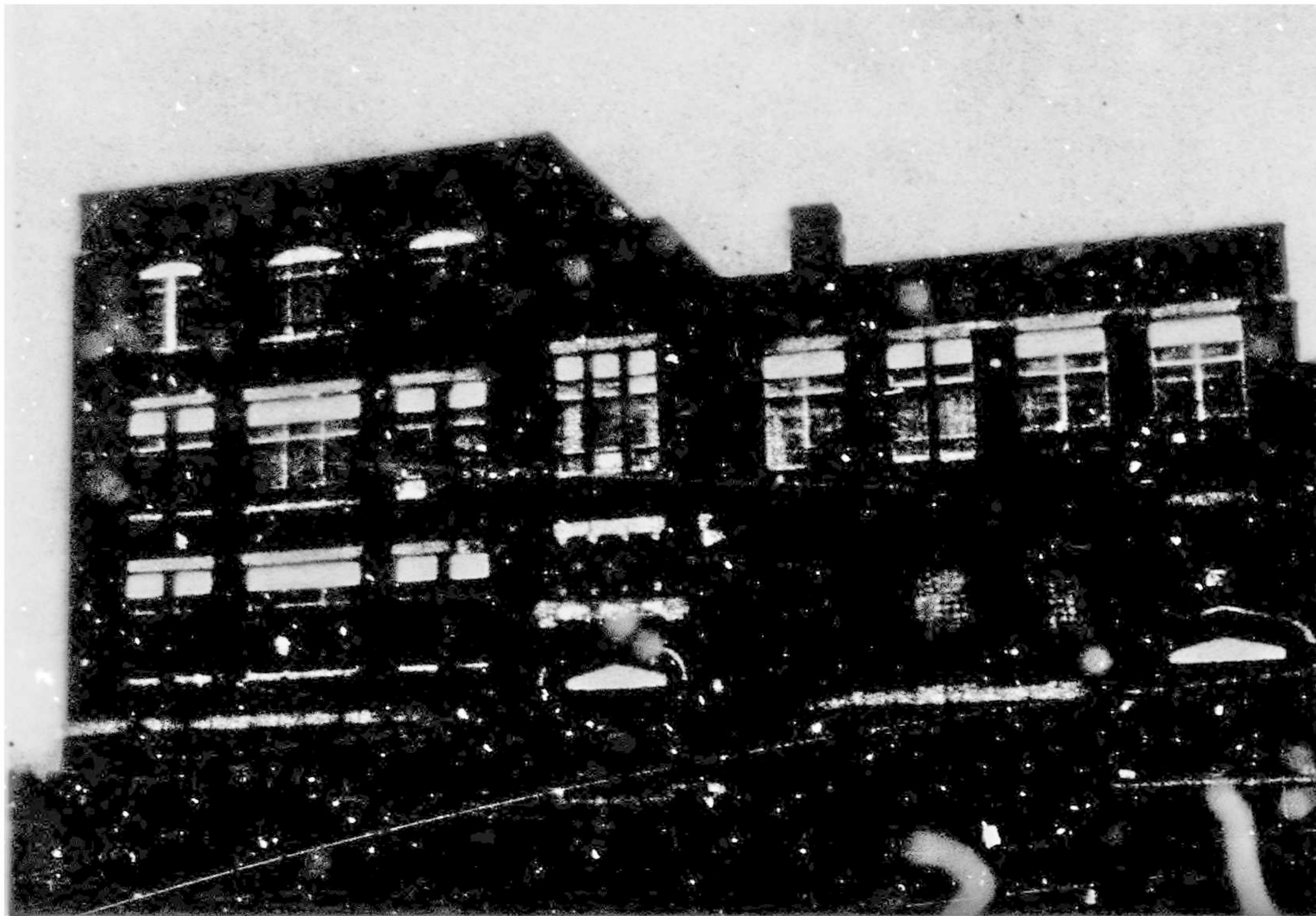
22 Cobourg and District Collegiate Institute, Cobourg, 1902. (Robert Mikel, Cobourg.)



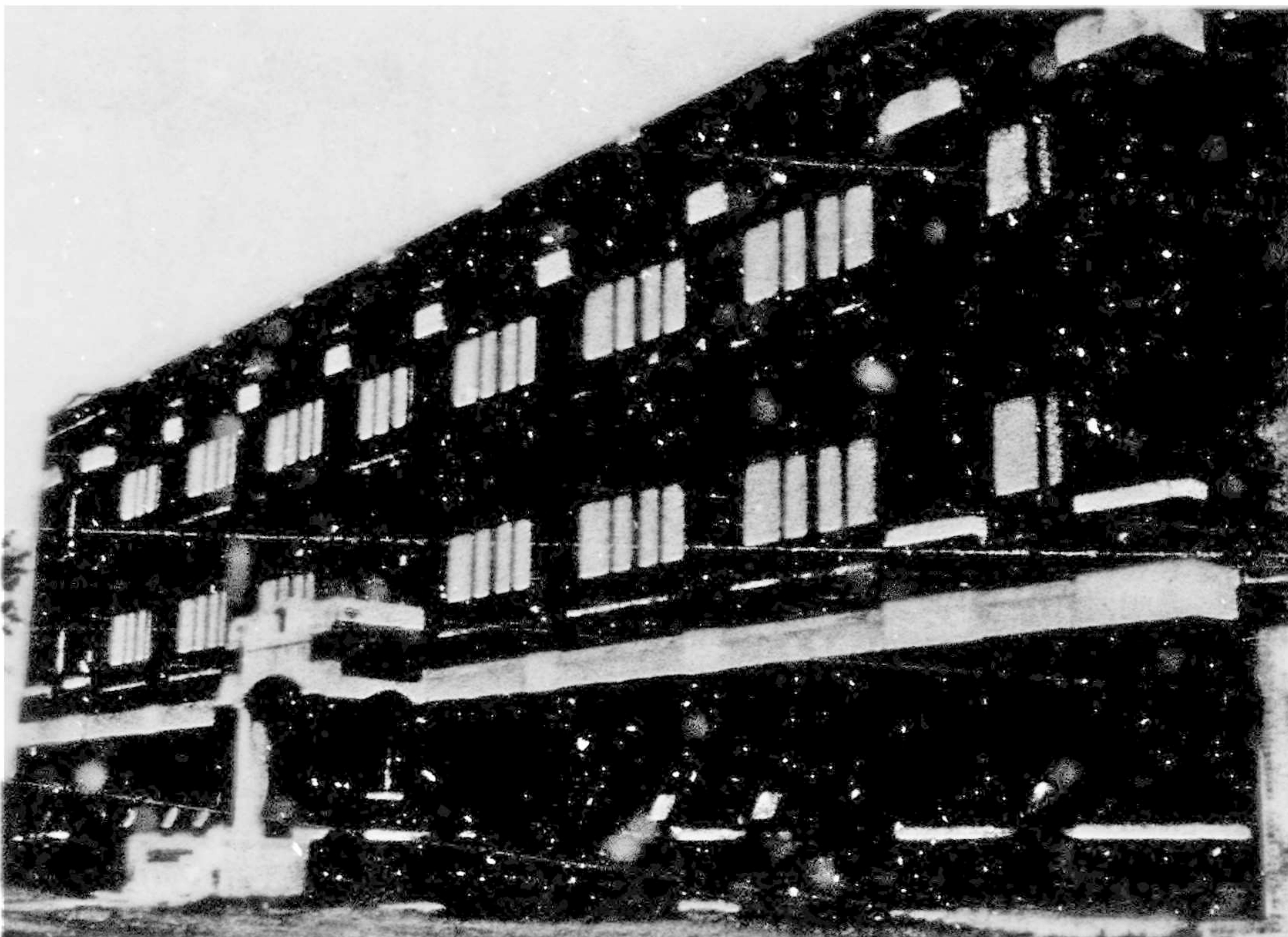
23 Peterborough Collegiate Institute, Peterborough, 1906. (Lloyd Corbett, Peterborough.)



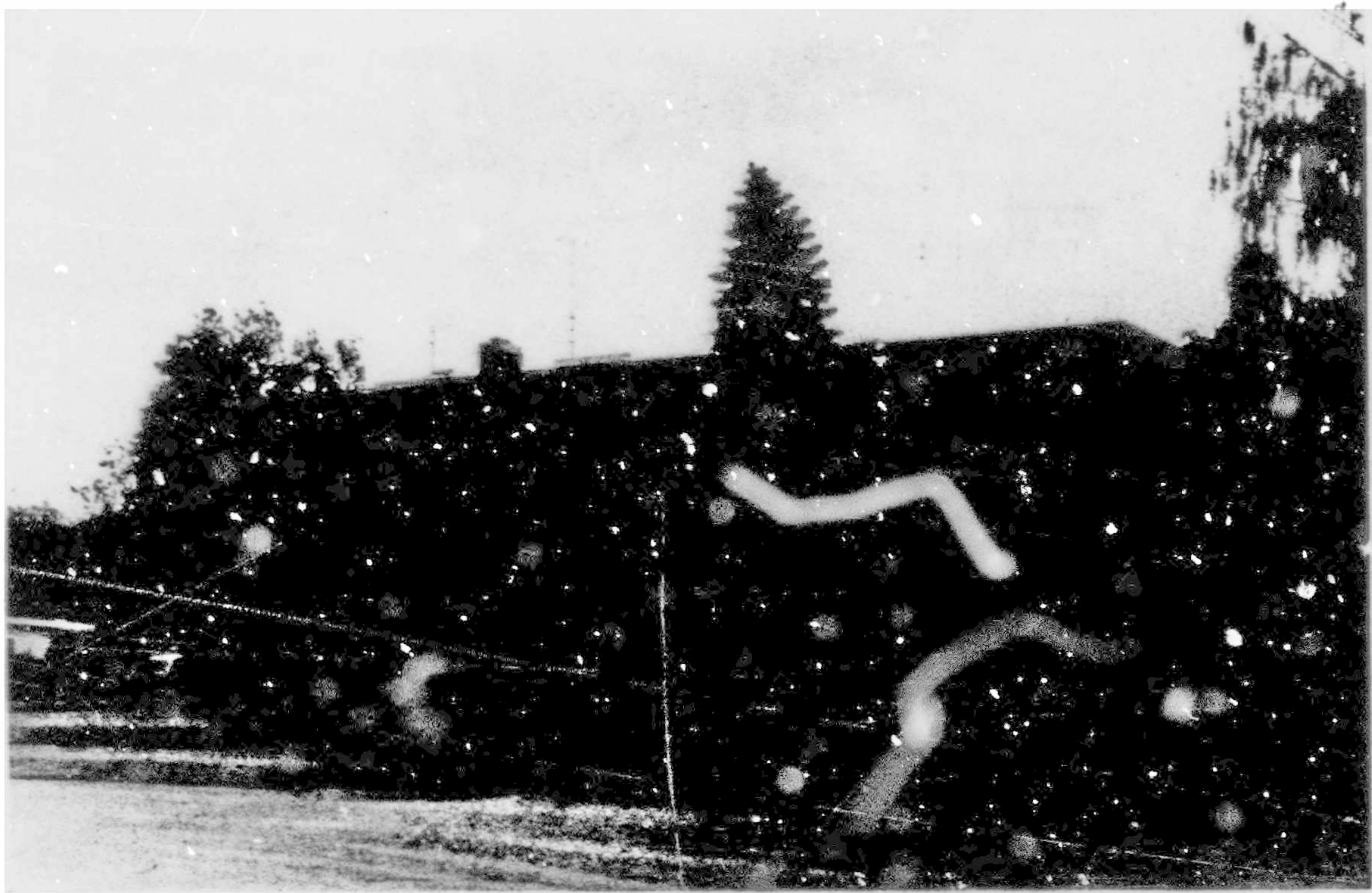
24 Former Port Arthur Collegiate Institute, Thunder Bay, 1909. (CIHB.)



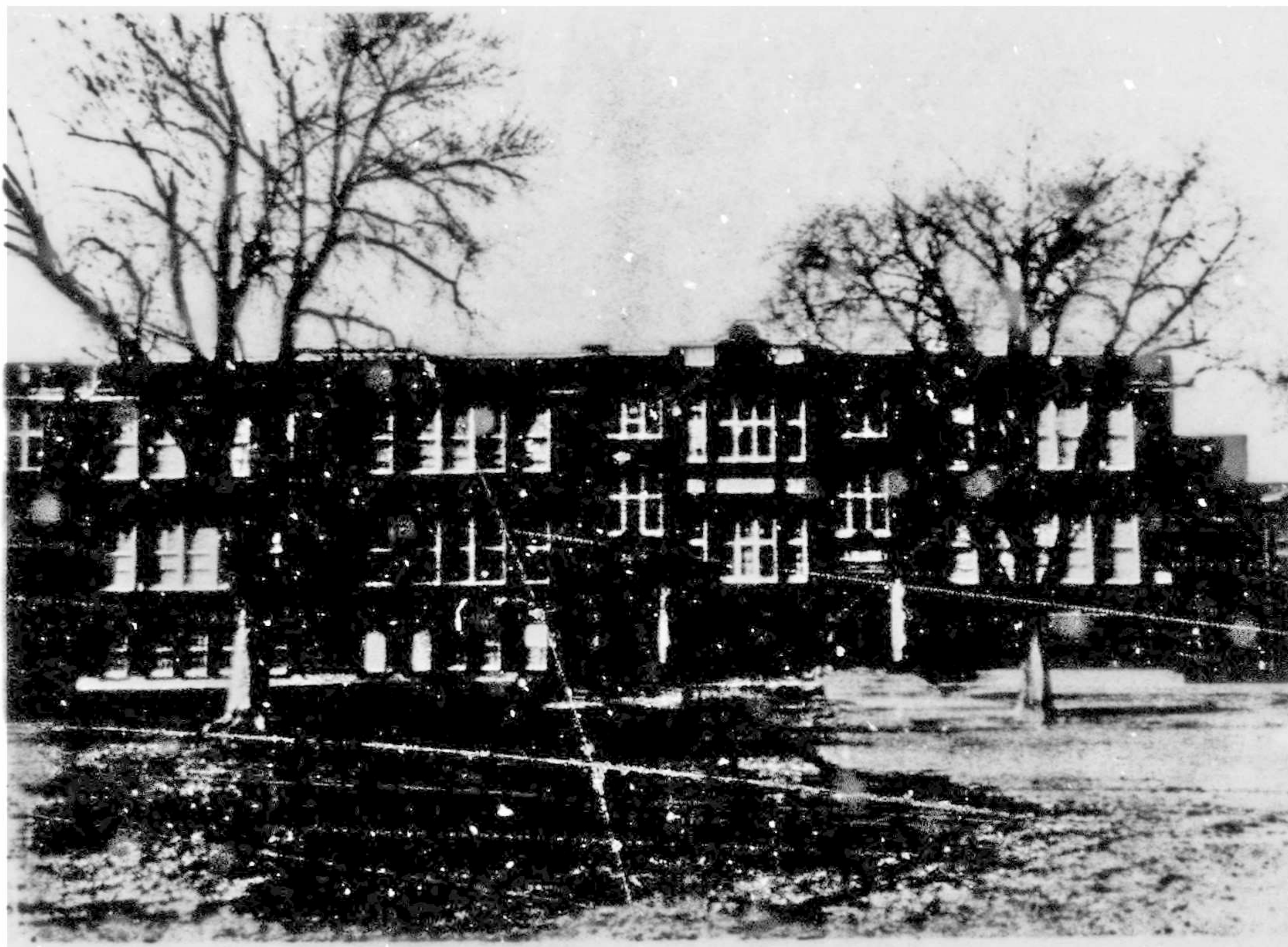
25 Lakeway Collegiate and Vocational School, Sault Ste. Marie, 1922. (Board of Education for the City of Sault Ste. Marie.)



26 Sault Ste. Marie Collegiate Centre, Sault Ste. Marie, 1909. (Board of Education for the City of Sault Ste. Marie.)



27 Caledonia High School, Caledonia, 1924. (Bradley Bell, Caledonia.)



28 Mimico High School, Toronto, 1924. (W. Henderson, Toronto.)



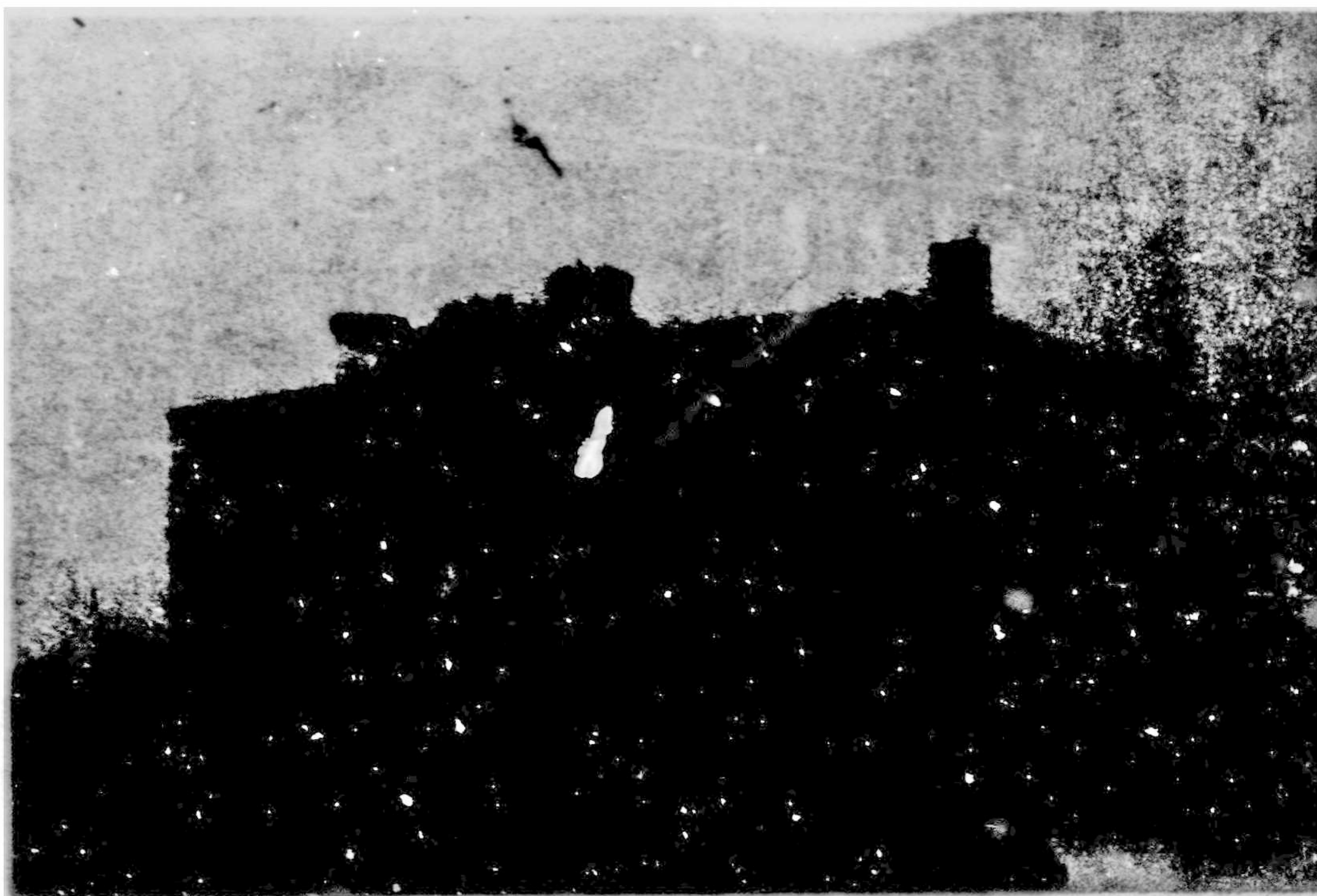
29 Jarvis Collegiate Institute, Toronto, 1923-24. (Metropolitan Toronto Library Board.)



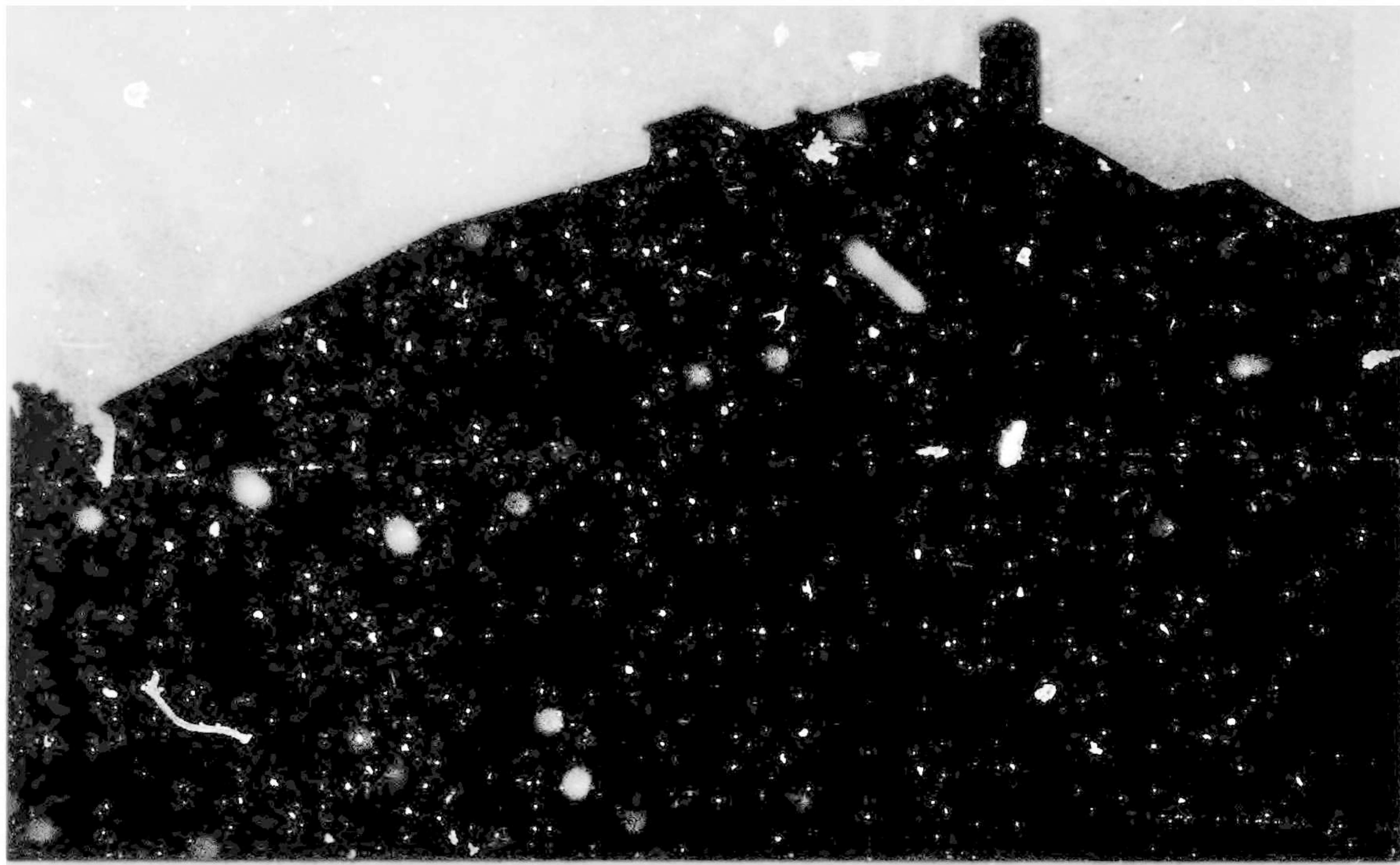
30 Jarvis Collegiate Institute, Toronto, 1871-1924. (Metropolitan Toronto Library Board.)



31 Belleville Collegiate and Vocational Institute, Belleville, 1924. (CIHB, R. Gold-
steen.)



32 Centre Wellington District High School, Fergus, 1927-28. (Metropolitan Toronto
Library.)



33 Millbrook Continuation (now Public) School, Millbrook, 1925. (Al Ross, Millbrook.)



34 Cartwright Continuation (now High) School, Blackstock, 1889 and 1922. (Miss Caroline Carnaghan, Blackstock.)



35 Former Ridgeway Continuation School (now Masonic Hall), Ridgeway, 1869. (CIHB, D. Johnson.)



36 Beamsville and District High School, Beamsville, 1917. (CIHB, D. Johnson.)



37 Ridgeway-Crystal Beach High School, Ridgeway, 1927-28. (CIHB, D. Johnson.)

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