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THEATRES

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BUILDING AT FAMISTON, ONT., EHECTED
IN 1840. FORMLERJY A STOVE STORE AND
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## EARLY ARCHITECTURE IN CANADA.

The quaint structure shown as our frontispiece is located on John street, Hamilton, and has become an integral part of the Gumey Foundry Company. It was built in 1840 by Alexander Carpenter for a stove store and tinshop, afterwards it beoame the office and wareroom in connection with the foundry works of Gurney \& Carpenter. Previous to this, however, the upper storey was used by the Masons as a lodge room, then as a tavern and rooming quarters for travellers. The building, on account of its style, is often referred to as a place where religious services were held, a mistaken idea probably arising from the fact that seventy
years ago a frame structure on the lot adjoining was used by the Presbyterians. There are many interesting structures which demonstrate the artistic temperament prevalent among our early builders and through the hearty co-operation of our readers we hope to show the most worthy examples in the various sections throughout Canada. We would solicit your aid in order that no existing monument of the past worthy of record should fail to become the property of everyone. The struggle for success often robs us of these early gems and will within the next decade remove the vast majority that have not already been destroyed.

## THE MODERN THEATRE.

The theatre is characteristic of the present era, when all our efforts seem to be centering around the whims of pleasure and wealth. There is everywhere evinced a desire upon the part of the people to find temporary relief from the nerve-wrecking experiences of keen competition; from the increased outlay caused through the gradual rise of edibles; from the unnatural struggle along commercial lines, and from the natural results brought about by the terrific warfare in Europe. That the stage is and always has been an expression of the culture and civilization of a nation is undeniable, and present conditions might lead us to pessimistic deductions. However, if the desire for plays of a
lighter vein is growing it should not be condemned indiscriminately, for very often the burden of living is removed by a hearty laugh excited through the foolish antics of a clever comedian. But we must have a care lest this keen relish for light amusement paralyze our tastes for the real things of life. Such an impulse naturally forces the architect to cater to the popular feeling and introduce into his work a spirit less serious than his careful study into past art warrants. It presents an entirely new problem and will put to a test his ability to meet the task and still maintain throughout his work a wholesome and uplifting influence which will be of a lasting character.

## DOMESTIC ARCHITECTURE IN ENGLAND.

The charm of the English home is no longer confined to the knowledge of the artist who wanders through her various counties so richly laden with manor houses and castles. Our own architecture has been influenced so materially by the trained skill of her designers that we are often privileged to see buildings, and even live in them, which only need the touch of an older and more natural setting to fancy ourselves in the Mother Country. Although the Norman keep and the fortified manor were the first germs of our present dwelling, it was not until the fifteenth century that a determined effort was made to obtain a distinct architectural effect to the buildings as a whole. As to the special features like doorways, fireplaces, windows and roofs, a simplicity of treatment was maintained up to the Renaissance period, when a free reign permitted of houses built for comfort and splendor. The chimney-piece, which is felt to be the
cheerful spot in a home, did not come into vogue until the Elizabethan era, the wall fireplace preceding the central hearth. 'Windows and doorways were originally small, due to the necessity for adequate defence, sometimes the light openings being only four inches wide; while the ceiling was only considered as the underside of the floor above, and not until the sixteenth century did they consider it seriously in the way of moulded decorative effect. At this time, however, domestic architecture received its greatest development through the revival of learning when Italy inflamed the world with her new thought in science, religion, learning and art.

From the sixteenth century the asthetic phase of building as well as the practical became an important factor, enriching all countries with examples of architecture which have and will continue to prove a great source of inspiration to the planner of homes.

## $\xrightarrow{\square}$

 (arn
## Loew's Yonge Street Theatre, Toronto

LO(Allal) in the heart of the business section and on the main thoroughfare of the city, this theatre presents one of the greatest sources of pleasure to be found in Toronto. The huilding is unigue in that it provides two complete theatres on the same site, affording accomodations for over thirty-three hundied people. The main entrance leads from Yonge street, the facade conspicuous mostly for the large electric sign above. Passing through the ticket vestibule with its walls in marble, floor in terrazro, and decorative ceiling from which hangs a dull bronze fixture of sixteen lights and central bowl; we enter the long narrow lobby treated in Italian renaissance. Fach side consists of nine large panels separated by artificial Sienna marble columns. Plaster mouldings in each panel act as a suitable framework for the imported red tapestries of floral pattern. Above each division occurs the name of some illustrious person whose work contributed towards the betterment of the stage, such as Goethe, Shakespeare, Wagner, Schiller, Tlosen, etc., while directly opposite are the various phases of theatrical life as comedy, music and tragedy. The floor of panelled terrazzo and ceiling of tinted plaster carry out the wall divisions and lend a proportionate harmony to the tout ensemble.

Petween the theatre propei and the outer lobby is the grand stairway of Tennessee marble treads and risers adjoining which are three exceptionally large elevators, each one furnishing access to the winter garden. To the right of the elevators are stained glass doors leading to the orchestra of the main theatre. This as well as the roof garden is a one balcony house which modern practise and wide experience has proven the most economical and satisfactory type. The main auditorium is one hundred and ten feet from the rear wall to the stage and ninety feet across, providing accommodation for eleven hundred and forty-four. From the twelve foot promenade lead the marble stairs to the balcony directly behind which are enclosed stairs accessible to the roof garden from the street and the grand stairway lobloy. The gen-
eral design of the lower theatre consists of a marble wainscot three feet six inches high above which are red floral tapestries cut into panels by drab borders eight inches in width and narrow gilded mouldings. The carpet is a rich rose Wilton blending with the other decorations.

The boxes are treated in ornamented plaster: with panels of lattice work covered by fruit and flowers in bold relief. The heavy curtain is of embroidered valence made of gold silk velour and finished with a corresponding fringe. All the other curtains are of the same material including the cut draperies, beneath the balcony boxes, while the walls have the same rich silk damask as in the panels of the main auditorium.

The striking feature of both houses is the absence of obstructing columns which are usually a matter of considerable annoyance to the patrons. The main columns supporting the halconies weigh up to two hundred and twentyeight pounds per foot, made necessary in order


OUTSIDE TICK゙ET VESTIBULE.

to carry the heavy transverse truss which spans the entire width of the anditorium and weighs approximately thirty tons. This truss in turn supports the cantilever trusses of the balcony the uplift of which are provided for by the columns and girders in the rear of the seats as well as by wall anchorages. All main members of the trusses are protected by a heavy facing of concrete which render them fireproof and increase the effective sections. The erection was accomplished by means of a single guy derrick placed on the g'round floor level and only one movement was necessary for the entire work
the balcony as well as the main ceiling, is covered by a wire lattice supporting the foliage, which consists of five thousand real beech branches dipped in a chemical preparation that renders them absolutely fireproof. The whole effect is greatly enhanced by the myriad of small wrought iron lanterns of vari-colored glass scattered throughout the foliage of the ceiling. In order to furnish the proper acoustical effect that portion of the roof which forms the sounding board is constructed of metal lath and plaster and in order to make it harmonize with the balance of the decorations it has been

when it was raised to the main roof level. The derrick had an eighty foot mast, seventy-five foot boom and capable of lifting a clear load of thirty tons. The total weight of structural steel in the building was six hundred and fifty tons; costing when erected approximately $\$ 53,000$.

The scheme of decoration for the roof garden is novel in itself and depicts the idea of an outcloor theatre in striking reality. In order to produce the effect of tree trunks and foliage, the columns are covered with cement plaster modeled in the formation of rongh bark and painted in all its true colors. The entire ceiling under
painted with a landscape scene blending in with the foliage around the proscenium boxes. A large skylight in the main roof which may be opened in sections permits of perfect ventilation, and in conjunction with all the exit doors and side windows the garden becomes in reality an outdoor place of amusement as its name implies.

A ten foot court has been provided at the east side of the building for exit purposes in which are fire escapes from both the lower house and the roof garden. Sevel platforms lead



LOEW'S YONGE STREET THEATRE, TORONTO-LONGITUDINAL SECTION OF MAIN THEATRE.


The heating and ventilating system has been planned carefully and combines every sanitary feature known to modern science. The fresh air is drawn in from the street through an air washer, passes over tempering coils from whence it is driven throughont the building by a blower, being automatically controlled by thermostats distributed in the auditorium.
The entire structure is thoroughly waterproof and fireproof. Under the seating of the ground floor is a three ply felt and
promenade of main theatre.
directly from the exit doors to the fire escape stairs which descend to the court levels in a brick-enclosed tower. This tower provides additional advantage by connecting the stairs directly to the court level without any obstruction to the court itself. Two similar towers are used on the rear of the building and so constructed as to prevent any congestion whatever on the street. The emergency exit stairs leading from both houses, which are in addition to the outside fire escapes, are entirely enclosed in fireproof partitions and each theatre is separated without direct commmication with one another. An elevator has been provided in the rear of the building which serves to carry scenery and performers to the stage of the roof garden. This arrangement permits the transfer of acts from one house to another without any delay. pitch course laid on a proper cinder concrete mixture with a topping of four inch protection coating. The building cost approximately $\$ 490$,000.

In this connection it might be interesting to review briefly, with the assistance of the Encyclopedia Britannica, the development of the Theatre. The word is derived from the Greek, meaning "a place for seeing," and constitutes a building specially devised for dramatic representations.

The drama arose from the choric dances in honor of Dionysus, which were held in a circular dancing-place in his precinct at the foot of the Acropolis at Athens. When the leader of the chorus held a dialogue with the remaining choreutae he mounted the table which stood beside the altar of Dionysus in the centre of the orchestra; but as the number of actors and the importance of the dialogue increased, it became


ENITS TO GRAND STAIRWAY AND LOBBY. necessary to erect a platform at the side of the dancing-place and a booth in which the performers could change their dresses and masks. At the same time temporary wooden stands were set up for the spectators, who no longer ranged themselves around the whole ring, but only on the slope of the Acropolis, facing southward. We are told that the collapse of the wooden stands in 499 b.c. led to the erection of a permanent theatre; this was not, however, a stone building. Embankments were made for the support of the spectators' benches:

the stage buildings were of wood, and, although some traces of a stone theatre belonging to the end of the 5 th century have been pointed out, the "theatre of Dionysus," whose remains may still be seen, is in the main a work of the 4 th century. It was completed soon after 340 乃.c. under the administration of the statesman and financier Lycurgus. Alterations were made in the stage-buildings in the Hellenistic period, under Nero, and again in the 3rd century A.D. Although the prototype of Greek theatres, it is not the most perfectly preserved. Amongst those of purely Greek design the most typical is that of Epidaurus, which was built in the latter part of the th century b.c. by Polyclitus the Younger. The largest known to Pausanias was that of Megalopolis, excavated by the British Sichool at Athens in 1889. 91 , in which the stage buildings were replaced by the Thersilion, a large comneil-ehamber. Others of juportance for the study of the ancient theatre have been ex-


STAGE OF ROOF GABDIEN.

detail of boxes.
The Romans, by their use of the arch in construction and also of concrete for vaulting, were enabled to erect theatres on level ground, such as the Campus Martius at Rome, where an elaborate structure, usually in three stories of arcades, took the place of the natural hill-slope of Greek theatres. The Roman theatre thus became an organic whole; the auditorium and stage buildings were structurally connected, and the orchestral was entered from the wings, not by open passages, as in Greece, but by vaulted corridors. The orchestra was no longer used for the performances (whether dramatic, musical or merely spectacular), but was reserved for senators and other persons of distinction. Hence arose the necessity for lower-
ing and enlarging the stage. It is hard to say when this change was made or at what date it was first introduced into Italy (if it did not originate in the west). The larger of the two theatres at Pompeii dates from the Hellenistic period, but was thrice reconstructed, and it is not clear to what date we are to assign the low stage of Roman pattern; possibly it belongs to the earliest period of the Roman colony at Pompeii founded by Sulla (b.c. 80). The theatre of Pompey is said by Plutarch to have been copied from that of Mytilene, which suggests that the Roman theatre was derived from a late Greek model; and this is made probable by the existence of transitional forms.

During the Republican period the erection of permanent theatres with seats for the spec-
tators was thought to savor of Greek luxury and to be unworthy of the stern simplicity of the Roman citizens. Thus in 154 b.c. Scipio Nasica induced the senate to demolish the first stone theatre which had been begun by C. Cassius Longinus. Even in 55 b.c., when Pompey began the theatre of which remains still exist in Rome, he thought it wise to place a shrine to Venus Victrix at the top of the cavea, as a sort of excuse for having stone seats below it-the seats theoretically serving as steps to reach the temple. This theatre, which was completed in 52 в.c., is spoken of by Vitruvius as "the stone theatre" par excellence: it is said by Pliny to have held 40,000 people. It was also used as an amphitheatre for the bloody shows in which the Romans took greater pleasure than in the purer intellectual enjoyment of the drama. At its inauguration 500 lions and 20 elephants were killed by gladiators. Near it two other theatres were erected, one begun by Julius Caesar and finished by Augustus in 13 b.c., under the name of his nephew Marcellus, and another built about the same date by Cornelius Balbus. Scanty remains exist of this last theatre, but the ruins of the theatre of Marcellus are among. the most imposing of the buildings of ancient Rome.

A long account is given by Pliny of a most magnificent temporary theatre built by the aedile M. Aemilins Scaurus in 58 b.c. It is satid to have held the incredible number of 80,000 people, and was a work of the most costly splendour. Still less credible is the account which Pliny gives of two wooden theatres built by C. Curio in 50 в.c., which were made to revolve on pivots, so that the two together could form an amphitheatre in the afternoon, after having been used as two separate theatres in the morning.

All Roman provincial towns of any importance possessed at least one theatre; many of these are partly preserved. Covered theatres were sometimes built, whether on account of climatic conditions (as at Aosta) or more commonly for musical performances. The best preserved is the Odeum of Herodes Atticus, at the south-west angle of the Athenian Acropolis, which has a semi-circular orchestra. It was built in the reign of Hadrian by Herodes Atticus, a very wealthy Greek, who spent enormous sums in beautifying the city of Athens in honor of his wife Regilla. Its cavea, which is excavated in the rock, held about 6,000 people; it was connected with the great Dionysiac theatre by a long and lofty porticus or stoa, of which considerable remains still exist, probably a late restoration of the stoa built by Eumenes II, of Pergamum. It was also a common practice to build a small covered theatre in the neighborhood of an open one, where performances might
take place in bad weather. We have an example of this at Pompeii. The Romans used scenery and stage effects of more elaboration than was the custom in Greece.

Vitruvius mentions three sorts of movable scenery: facades representing public buildings; for comic plays, private houses with windows and balconies; and for the satyric drama, rustic scenes, with mountains, caverns and trees.

During the middle ages miracle plays with sacred scenes were the favorite kind of drama; no special buildings were erected for these, as they were represented either in churches or in temporary booths. In the 16th century the revival of the secular drama, which in the reign of. Elizabeth, formed so important a part of the


DETAIL OF BOXES.
literature of England, was carried on in tents, wooden sheds, or courtyards of inns, mostly by strolling actors of a very low class. It was not till towards the close of the century that a permanent building was constructed and licensed for dramatic representations, under the

built by James Burbage, who used the materials of "The Theatre,". in the year 1599. Its site was in Southwark, in the Bankside, near the "Bear Gardens." It was an octagonal structure of wood, with lath and plaster between the main framework. It was burnt in 1613, rebuilt, and finally pulled down and its site built over in 1644. Its name was derived from its sign of Atlas supporting the globe. Near it were two less important theaitres, "The Rose," opened in 1592 by Henslowe, and "The Swan" (see below), opened in 1598 and partly owned also by Henslowe; like the Globe, the latter was an octagonal mood-and-plaster building. The "Blackfriars" theatre, another of the Burbages' ventures, was built in 1596, near the old Dominican friary. The "Fortune" theatre was huilt by Edward Alleyn, the actor, in 1599, at a cost, including the site, of $£ 1320$. It stood between Whitecross Street and Golding Lane. It stood as late as 1819, when a drawing of it was given by Wilkinson (Londina illustrata, 1819). The "hed Bull" theatre was probably ori-

THIRD LANDING OF GRAND STAIRWAY.
management of Shakespeare and Purbage.
The first building specially erected in London for dramatic purposes was built in 1576-77 by the actor James Burbage. It was constructed of timber and stood in Holywell Lane, Shoreditch, till 1598, when it was pulled down; it was known as "The Theatre" par excellence. of almost equally early date was the "Curtain" theatre, also in Shoreditch; so called from the plot of ground, known as "The Curten," on which it stood. It probably continued in use till the general closing of theatres by order of the Parliament in 1642. The "Globe" theatre, famous for its association with Shakespeare, was
ginally the galleried court of an inn, which was adapted for dramatic purposes towards the close of Elizabeth's reign. Other early theatres were the "Hope" or "Paris Garden" theatre, the "Whitefriars" and "Salisbury Court" theatres, and the "Newington" theatre. A curions panoramic view of London, engraved by Visscher in 1616, shows the Globe, the Hope and the Swan theatres.

The plan of the first English theatres appears to have had no convection with those of classical times, as was the case in Italy: it was evidently produced in an almost accidental way by the early custom of erecting a temporary platform or stage in the middle of the open courtyard of an inn, in which the galleries all round the court formed boxes for the chief spectators, while the poorer part of the audience stood in the court on all sides of the central stage. Something similar to this arrangement, unsuitable thongh it now seems, was reproduced even in building's; such as the Globe, the Fortune and the Swan, which were specially designed for the drama. In these and other early theatres there was a central platform for the
stage, surrounded by seats except on one side, where there was a "greenroom" or "tireyngehowse." The upper galleries or boxes completely surrounded the stage, even the space over the green room being occupied by boxes. This being the arrangement, it is easy to see why the octagonal plan was selected in most cases, though not in all-the Fortune theatre, for example, was square. An interesting specification and contract for the building of the Fortune theatre is printed by Halliwell-Phillipps. In all its details the Fortune is
 specified to be like the Globe, except that it is to be square in plan, and with timbers of heavier scantling. The walls are to be of wood and plaster, the roof tiled with lead gutters, the stage of oak, with a "shadow' or cover over it, and the "tireynge-howse" to have glazed windows. Two sorts of boxes are mentioned, viz., "gentlemen's roomes" and "twoo-pennie roomes." A woodrut showing this arrangement of the interior is given in a collection of plays edited by Kirkman in 1672. The vexed question of the construction of these theatres has been much discussed in recent years. In 1888 a drawing of the Swan theatre, apparently copied from a rough drawing in a London letter from the traveller Johannes de Witt, was discovered by ceiling in maty theatre.
In the 16 th and 17 th centuries a favorite kind of theatrical representation was in the form of "masques," with processions of grotesquely attired actors and temporary scenic effects of great splendour and mechanical ingenuity. In the Reign of James I. and Charles I., Ben Jonson and the architect Inigo Jones worked together in the production of these "masques," Jonson writing the words and Inigo Jones devising the scenic effects, the latter being very costly and complicated with gorgeous buildings, landscapes, and clouds or mountains, which opened to display mimic deities thrown into relief by colored lights.
Dr. Karl Gaedertz in a manuscript volume in the Utrecht University library, consisting of the commonplace book of Arend van Buchell (1565-1641). While undoubtedly authentic, and probably broadly accurate, this copied sketch cannot be accepted, however, as giving the regular or typical plan of the contemporary theatre, as in some respects it does not fulfil the known conditions of the stage. What the typical plan was, if (as is probable) one actually existed, has led to much learned conjecture and great difference of opinion as regards the details required by the interpretation of contemporary stage directions on the necessities of the aotion in contemporary drama. The ingenious reconstruction drawn by W. .-. Godfrey in 1907, of the Fortune theatre, following the builder's specification, appears to approach very nearly to satisfying all the requirements.

detall of cornice at bones.


SHEA'S HIPPODROME, TORONTO.
LEON h. LEMPERT \& SON, ARCHITECTS.
charles j. read, associated.

## Shea's Hippodrome, Toronto

THIS THEATRE, facing the City Hall on Terauley street, furnishes an example of the latest development in vaudevillic architecture both as to design and general arrangement. The exterior is finished in white enamelled brick and terra cotta with glass and copper towers at either corner, which are equipped with an interior illumination visible for a great distance. A massive copper marquee extends the full length of the forty-six foot entrance, covering the entire width of the approach.
The theatre has a seating capacity of approximately three thousand, divided about equally between the orchestra and balcony. There is no upper gallery and the elimination of this feature, together with the desire to obtain the proper seating capacity to accommodate the patrons, has necessitated the use of the area comprised within the walls of the Hippodrome. The lobby is forty-six feet wide, far larger than any other in Toronto, and is decorated in the prevailing tones of the theatre proper; ticket
windows are located on both sides of the lobby so as to facilitate the sale and thereby eliminate the long waits for the purchase so common in the average theatre. Between the lobby and the theatre proper is the vestibule with seven double entrances opening into each and two side doors, one leading to the ticket space, the other to the ladies' parlor, which takes up the entire frontage of the building at one side of the lobby.

The prevailing colors of the decorations are cream, rich golden tones and soft greys, with the ornamental relief work finished in old ivory and gold. The main ceiling consists of decorative panelling with a massive dome effect in the centre, illuminated by indirect lighting. The chairs are upholstered throughout in perfect harmony with the eut drapery of the boxes and the carpets.
The sounding board is enriched with handsome mural paintings, while electric lights, both direct and indirect, have been introduced into the decorations at all available points.

orchestra floor plan.

PLANS OF
StIEA'S HIPPODROME, TORONTO.


LEBON H, LEMPERT \& SON, anchitect.
charles j. read. associated.


SHEA'S HIPPODROME, TOIRONTO-ENTRANCE LOBBY AND ORCIIESTRA PROMENADE.


SHEA'S HIIPPODROME, TORONTO-DETAIL OF BOXES.

The front portion of the balcony has been given up to private boxes, separated from the balance of the balcony by heavy hrass railings. In the construction of the theatre over five hundred and fifty tons of steel and iron have been used for the structural work alone, and a large amount in addition has been used for the stairs, fire-escapes, etc., so that every possible safeguard has been taken to make the structure one of the safest and most substantial of its kind. The balcony is built on the new method of cantilevering that has but lately come into practice
ladies and a smoking-room for the men, both facing Terauley street, with large windows giving them a bright and pleasant appearance at all times.
The auditorium proper is separated from the exterior walls by spacious lobbies at the sides, which afford a space for promenading during the waits and also prevent any possibility of cold air entering the auditorium through the side exit doors. These vestibules are connected direct with the private boxes as well as the orchestra floor and balcony, and have safety

orchestra view looking towards stage.
and which makes possible the construction of a theatre of the vast proportions of the Hippodrome without the use of obstructive columns on the first floor.

Instead of the customary high ceiling under the balcony on the orchestra floor, the soffit has been lowered and the space between converted into a commodious mezzanine accessible by two Carrara marble stairways, each nine feet wide and located at either side of the lobby. There is a comparatively slight rise to this mezzanine from which the patrons enter the balcony on a level, thus eliminating a long and tedious climb. The mezzanine contains a large parlor for the
exits direct to the areaways at the sides of the building. At the rear is the stage, thirty-two feet in depth with three tiers of dressing-rooms separated by means of a fire wall. In the basement is an additional smoking-room, reached from the rear of the auditorium by a short flight of stairs; with windows opening on the side area.

A combined system of heating and ventilation has been installed, using the direct and indirect radiation. The auditorium and dressing-rooms alove the basement will be heated by the mechanical blast system, while the auditorium, dressing-rooms and toilets on the east side will
have the exhaust system of ventilation. Fresh air is taken in beneath the fire escape on the north side through a cold air duct seven by eight feet, passing over heating coils into a steel plate blower from whence it is forced through a system of sheet metal ducts and delivered to the auditorim. The foul air is removed through a series of metal exhaust ducts leading to an exhaust chamber, and thence taken to the outside at the roof ly means of dise fans. The heating coils are in five sections covering an area of 3,98 square feet in double tier, the vento loops being set on five-inch centres. A galvanized iron screen of one-half inch mesh is placed in fresh air intake as well as in front of each dise fan exhanster near the roof. In each supply and exhaust opening in the main auditorium is a register screen of flat ribbon mesh, including three circular vent openings in the ceiling of the balcony and four in the gallery ceiling. Between each set of entrunce doors in the lobby are tall narrow cast-iron radiators capable of being removed during the summer months. The heating system can be maintained at a temperature of $70^{\circ} \mathrm{F}$. when it is zero without; while the system of ventilation into the main auditorium can supply and exhaust 54,000 cubic feet per minute without undue draft or noise.

In the plumbing system are two nineinch street connections, the southerly one rumning to a sump pit, the other used for all lavatories and the four conductors in pipes from the roof. Two sump pits of cement emptied by means of an automatic rotary pump are used for the lavatories in the dressing-rooms at the rear of the basement; also from the three-inch weeping tile around the outside walls and the floor wastes in the boiler room. The fixtures throughont the building consist of fifteen closets, eleven urinals, twenty-two wash-basins, one sink, and a three-hundred-gallon water tank connected with a heater of one hundred gallons per hour capacity. In addition to the fire hose system is a complete sprinkler outfit, including a twenty-thousand-gallon tank on the roof equipped with alarm valve.

A noticeable feature is the adequate protection against fire, for in addition to the materials employed, which are absolutely proof against conflagration, there are two fire-escapes which are accessible from the numerous exits throughout the building. These lead into fire-towers set inside the building line, therely removing from the areas all possible olstruction to the free egress of the people, who may make use of the remaining side exits along the ground floor. All
doors, casing and interior trim in the building are kalamined and finished to imitate mahogany. The construction of the doors consists of a wood core of non-resinous lumber thoroughly kilndried and covered with heavy metal drawn through steel dies. The panels and rails are stamped in separate pieces of metal with the joints seam-locked, thereby securing the covering in a manner permitting of expransion and contraction.


The theatre throughout is of reinforced concrete and erected as a permanent structure, adhering closely to all the conditions required by the local by-laws. All curtains are of an inflammable material and every separate unit in the planning has been carefully studied in regard to the safety of the patrons as well as the artists. The general warmth of the color scheme with the harmonious blending of the marble, plaster ornament, mahogany finish to the doors and trimmings, and furnishings, produce a feeling of restfulness so necessary in a theatre of this nature. It is felt that this building presents full value for the $\$ 245,000$ spent in its erection.


BASEMENT PLAN.
orchestra floor plan.
heating and ventilation piads
FOR
SHEA'S HIPPODRONIE,
toronto.

attic space plan.


Bongitudinal SEETION.





## BEAVER THEATRE, TORONTO

SITUATED at No. 1784 Dundas street, in West Toronto, this theatre is somewhat more pretentious than the average moving picture building. The main facade is designed in buff terra cotta of a smooth glossy finish with the mirrored entrance doors of quarter sawed oak. A ticket lobby is planned between the two stores which are of unusual interest in having glass fronts on a curve measuring sixteen feet square. The lobby itself and foyer have alternate mirror panels in frames of terra cotta and rouge-noir marble with the other panels in Italian marble. Upon the interior the treatment is in old ivory and green with a mural centre decoration of flying cupids. The seating capacity is eight hundred. On account of the narrow lot, fifty by one hundred and seventy-six feet, the boxes extend along the sides, causing the main gallery to be placed fifty feet from the stage. In addition to the stores and main audjtorium the ground floor provides four large dressing rooms, toilets, retiring rooms, etc.; the basement accommodates large tiled barber shop, boiler room and ventilating apparatus; the mezzanine floor has manager's office and janitor's
quarters; the second floor furnishes five offices with all sanitary conveniences and having a common waiting room in which is an effective stained glass window. The picture curtain is made of a special fireproof material under the direction of Mr. Joy, the manager. A large orchestral equipinent has been installed at the cost of $\$ 15,000$ capable of producing all sounds necessary in the general run of pictures, and operated by one musician. In the gallery the color scheme consists of bronze of varied subdued tints, while the proscenium and sounding board is heavily decorated in relief work. Beneath the stage a large fan is used to drive the tempered air throughout the building, provided with the usual mechanical equipment. A complete system of stand pipes, fire hose, and lighting has brought the building to a state of high efficiency. The theatre is absolutely fireproof, the doors being kalamined; the roof of tile and gravel composition; the walls of brick. The entire cost of the building was approximately $\$ 60,000$, and the architect, Neil G. Beggs, has endeavored to use all Canadian materials in connection with the work.



## THE BIG NICKEL THEATRE, TORONTO

J. W. SIDDALL. Architect
consisting of wood painted white is a cigar store, on the other the ticket of-

GROUND FLOOR PLAN.

THE Big Nickel Theatre demonstrates clearly the use of design and practicability as evidenced in the placing of the posters. Contrary to the usual custom this building was planned to maintain an artistic feeling after the customary advertisements were put in place, a scheme well worthy of notice by architects and builders who contemplate ereoting structures of this nature. Here the posters are placed in a natural framework which gives the necessary display and becomes at once a part of the general design. There is a frontage of thirty-three feet and a depth of one hundred and thirty feet having the entrance at the sidewalk level and a fall of four feet for the entire length. The main facade is tastely treated in two colors of buff brick laid in diaper pattern, and wired glass in steel frames. On one side of the entrance hall
fice and ladies' toilet. The floor is treated in tiling of white, green, brown, rerl and black, with a mosaic pattern of the big nickel in the centre.

The auditoriun seats approximately six hundred and impresses at once the fact that it has been planned for a moving picture theatre. The walls have a green burlan dado with walls above painted a rich red while the ceilings are panelled and ornamented. The operating booth is placed far enough to the rear so as to allow of two large office rooms on the second floor reached by a private entrance from the main street. At the rear is a platform twenty-seven by four and one half feet, the screen being built into the wall. Directly in front of the platform is a pit with a mechanical organ which has all the stops needed to imitate the natural sounds and lend a touch of reality to the pictures themselves. The building is fireproof throughout with brick and steel, costing about $\$ 14,000$.


## YORK THEATRE,TORONTO

THE rapid strides of moving picture shows have changed the preliminary plan of using any temporary structure available, for the erection of a building adaptable for the work and of
 a permanent nature. They are commendable in that they are sanitary, fireproof and eguipped with all the modern conveniences necessary for the enjoyment of the general public. Another feature is the unobstructed view of all seats in the house and the general depression of the floor towards the stage, which eliminates the amoyance experienced when forced to sit behind a taller person on a perfectly level space. The picture board is also built in the rear wall or made stationary, while the material is of such a nature as to absorb the light and not reflect it.

The York Theatre is built with eighteen-incli brick walls having a twenty-two inch width beneath, the exterior being of tapestry brick. The prevailing colors are deep reds and broms with white joints. The main facade forms a suitable design for the entrance and does not extend to the full height of the building. In hamony
with the brick are the window treatment, lase course, cornice and parapet, the former heing of stone. A pleasing lighting treatment consists of seven globes spaced along the frieze. In the space between the parapet and the main structure is located the operating cabinet directly over the entrance lobby. The vestibule is fifteen by twenty-five feet, having the ladies' parlor at one side and the ticket office on the other, with stairs leading to the cabinet. The doors are quartered oak, which material is used for the trimming throughout; the wainscot of white tile, the floor of mottled gray terrazzo ; the ceiling of light green plaster, decorated in low relief. The auditorium, one hundred and thirty feet deep by fifty-two wide, seats nine hundred with loges holding ten people each placed in the rear. At the rear is a narrow platform with metal lath and plaster sereen. Cost was $\$ 25,000$.


# Mediaeval Domestic Architecture in England <br> \author{ C. PEAKE ANDERSON 

}

O$F$ the two branches of Gothic work in England, Ecclesiastical and Domestic, I have chosen the unusual course of giving domestic work the precedence for two reasons. We are so prone to accede to the popular estimate that the suggestion that the domestic side of an architectural style should be studied before the ecclesiastical side will probably be received with surprise, if not with resentment; yet this is one reason why I propose treating of the two sides of Gothic architecture in this order, because I believe the suggestion to be a wholly defensible one, for not only is it more likely that the germs of an architectural style will be found first of all in the houses of the men who used it; and in this connection $I$ am, of course, considering the abbeys and priories as essentially domestic in character, though we too often associate the idea with the abley or priory church; but as all architecture tends to pass from simplicity to elaboration, so we are safer to consider the style first of all in its simplicity in domestic work before we attempt to discuss it in its state of ecclesiastical elaboration. My other reason
is this, that probably for the first time in history. of the two branches, domestic work :s claiming the major share of the attention of the architectural profession; its rightful share, I might say, for the home is of greater importance than the church.

Satisfactory evidence of the interest that has arisen in domestic work is the number of books dealing with this side of architecture that have appeared in recent years: the lesser books on houses and all that appertains to them are legion; and two outstanding books have just been published, "The Houses of Mr. Latyens" and "The Houses of Mr. Platt"; while mediacval domestic work has come into its own in the appearance of Messrs. Gardiner \& Stratton's splendid work on "Tudor Architecture in England."
I do not propose to trace the evolution of English domestic work from the rude Norman Keep, as those in the Tower of London, Dover Castle or Kenilworth, down to the last great mansions of the Tudor style-Haddon Jall, Kirkby Hall, Barrington Court, Compton Win-



yates, and the host of other great houses that are the standing monument of the expansion of England in the fifteenth century-for such as desire a treatise on the evolution of the house this is admirably done in Mr. Goteh's "Growth of the English House," but I will rather discuss such of these houses as I have studied in detail in an endeavor to find wherein the charm of the buildings in that style lies, for they do hold a charm distinct from that of all other architectural work. Critics differ as to which of all the English houses deserves first place, and the. differ in choice in so far as they differ in regard to that which they value: to one the somewhat "shaggy" Haddon Hall appeals, set among rocks amidst trees on the bank of the Wye; to another a stately building sitting mid spacious lawns, such as Barrington Court, Montacute or Hatfield House proves irresistible; and for yet another, one of those romantic piles, now, alas, too often ruined, half house, half castle, that dot the English country-sideKenilworth, Warwick, Richmond and their like holds special charm-buildings whose masses of masonry vie with the masses of the cathedrals, and whose embattlemented towers o'erlook the crows' nests in the summits of the trees.
But, after all, there is one type of Tudor: house which is so essentially English in character, and so at home in English scenery, so that, when we speak of English domestic architecture, it is of it, the simple brick or stone manor house that seems to sleep among en. chanted woods, by quiet waterways, most often

that we think; that it is to the house that best portrays that type that we must turn for the perfect English home of medixval days; and of this type the supreme example is undoubtedly Compton Winyates.

Compton



Winyates Manor House in Warwickshire is situated about eight miles west of Banbury, and, lying as it does in a tree-encircled hollow, hidden away from the vulgar eye, it somehow reminded me when I saw it first of those lines of the "Morte d'Arthur":
"Where falls not hail nor rain nor any snow, Nor ever winds blow loudly, but it lies
Deep meadowed, happy, fair with orchard lawns,
And bowery hollows crowned with summer seas."
To come by these roads through sleepy villages, villages where the langhter of the children, and even the barking of the dogs seems as in some dream, and to wind down that last hill from which glimpses of the manor house may be had as you descend, and to come at last past a time-worn chapel and ancient lily pond, to this mellow English home is to pass by easy stages into an enchanted land.

The house dates from about the year 1530 A.D., and in plan is comparatively regular, in that it is built round a rectangular courtyard, which courtyard is entered through the archway in the entrance porch, which is placed more or less centrally on the S.W. front. On the op-
posite side of the courtyard are the hall, which is entered from the screens, the buttery and the kitchen; on the E. corner, and opening off the upper end of the hall, are the family rooms and a grand staircase to the upper floors. On the S.E. side are the chapel and drawing room, and the opposite side of the house is appropriated to servants' quarters, etc.

As I have said, the house is more or less rectangular in plan, but in elevation, however, it is a most delightfully irregular mass, building up from the low two-storey front to the high and picturesque group on the S . corner.
The materials of which the house is built are a beautiful brick, which runs in colors from black-which is used here and there as a diaper-through a rich dark purple and madder to a light grey and red; with a cut stone that has weathered to a mellow light sienna color; and an almost black oak which is used with effect in the half-timbered gables. Everywhere time has toned down the harshnesses of the varied materials, and over all she has flung a mantle of creeping plants and mossy greenery.

Needless to say the whole house is full of interest, but that which probably interests the architectural student most is the beautiful entrance porch; this is, as it were, the gem of which the rest of the honse is the setting; its proportions are perfect; its de-


GENERAL VIEW OF HADDON HALL.
tails belong to that most interesting period of hesitation that marked the later stages of Tudor work before it changed into English Renaissance; and on the whole this porch is one among the smaller pieces of domestic work in Eagland most worth study.
It is hardly necessary, in so short a paper as this, for me to tender excuses for jumping from Warwiekshire to Derbyshire; from Compton Winyates to Haddon Hall; indeed, it requires no excuse, for this reason, that, as Compton Winyates stands for that later style of domestic work done when English nobles were no longer afraid of their neighbors and could build without the old defences of moat, wall and keep, so Haddon Hall is probably the best example of the earlier manners.

Haddon Hall dates from the twelfth century, a portion of the chapel, part of the eagle tower over the east entrance, and much of the west wall being of this period. The dining room, hall, buttery, etc., and kitchen; in fact, practically the whole of that block which lies between the two courtyards, is of the fourteenth century. The chapel is of the fifteenth century, and most of the S.W. Wing belongs to the latter part of the fifteenth and beginning of the six-
house was rebuilt in the fourteenth century.
The house stands on a hillside facing west, and is built around two courtyards, the east of which is known as the upper, and the west-that entered first by the public to-day-as the lower.
'The grouping of the building is very irregular
and massive, parts are heavy and minterest-ins-built mather for motection than for beanty of pronortion, but other parts, notably the chapel and south, or garden front, are interesting in the extreme. The long gallery, in the S.H. comer, contains fine Jacolienn panelling,



FIREPLACE IN HADDOA HALI,
but the most interesting work in the whole building is contained in the rery beautiful hall and dining-room, which, with the drawing-room, are too well known, from frequent illustration, to need description.

In Faddon Fall there is none of that variety in the use of material that lends so much charm to Compton Winyates; in fact, as T have said, the first impression is of a somewhat shagsy buiding, for it is built entirely of a rough rubbe with cut stone trimmings, and the moulding; are heavy and a triffe coase; here and there are lead rain water heads of charming design, and inside are miny jieces of fine woodwork.


DETAII, OF SOUTH WRANALL MANOR.
but it is to its general effect that we must look for its real interest.

In it is seen such variety of period, ranging from a Norman column to Sacobean woodwork; it is, though originally fortified, yet so thoronghly domestic in character, and has so completely escaped the hand, hoth of the vandal and of the restorer, that it is small wonder that rearly thousands of visitors pace its courtyards and its galleries, and that over all it exereises its potent charm-the charm of Tudor architecture.

From Haddon Hall in the northwest to South Wraxall, near Bath in the sonthrest. is some-


what of a far cry in England, but as South Wraxall Manor House stands for that other type of country house-the smaller manor house--it is worthy of note. It also helongsas does Compton Winyates-to that periorl when the necessity of defence no longer affected the design of comestic work. The house is built around three sides of a courtyard, which is entered through the entrance porch. The

South of the house is what may well have been the original duck pond. On the north side of the group stands the magnificent tithe barn, with its chestnut roof-a good example of its kind-and showing the old wind-bracing between the principal rafters. The interior of this barn is quite well lighted-as may be seen from the illustration-by the very narrow piercings in the thick walls.
exterior has many points of interest: the porch before mentioned, the large square bay in close juxtaposition to pointed windows, and the use of Jacobean columns in the windows in the rear elevation; and inside there are elaborate stone mantelpieces of Jacobean design, and plaster ceilings of interest.
Within a stone's throw of South Wraxall is Great Chalfield Manor Flouse, very similar to it in many ways, but now, umhappily, much restored; and both these houses are very close to the border of Somerset Corunty-the heart of the West of Englanda sleepy county, where even the architecture seems asleep. This certainly applies to Muchelvey Abbey, which lies just south of Langport, right in the centre of Sedgemoor, a tree-encircled group-the abbey, the abber church, and the fourteenth century vicarage, all hidden away among willow trees on the banks of a slow stream. The church has some fine tiling on the chancel floor, but fer visit it; the abbey contains some lovely rooms, but no one lives in them, and the vicarage is almost a ruin. Here is a place in which one can get very near to the secrets of the charm of Gothic work, a spot untouched by the ravages of change-a spot outside of today.

The Somerset houses are noted - Montacute House with its gardens, Montaente Priory, Clevedon Court, Iytes Cary, Sindford Orcas, Brympton d'Evercy, with its later front by Inigo Jones, and one of which I. wish to make note-the abbey farm at. Preston Plucknett.

This farm stands off the main road, just north of Yeovil. The buildings are ranged round a large square. On the east is the house itself, with its long, low roofs and its unique Louvre chimney, its entrance porch and its original hall, which is now the home of a cider press.

detall of screen at holbeton, south devon.

On the other sides of the square are barms and stables, all of which have been repaired, but all of which show traces of the earlier building. The whole group is built of a warm local stone, with bands of light yellow Harn Hill stone, from that splendid quarry which still supplies the hest building stone in that district.
So much, then, for four typical English houses, chosen almost at random, but each exhibiting a special type.
T have not found time to toneh on many of the interesting sides of Tudor domestic archi-

tecture, half-timber work, for instance, has wholly escaped this paper; so also have the great brick mansions of East Anglia. More than that, I have not even mentioned Oxford and her colleges. Oxford -"steeped in sentiment as she lies, spreading her gardens to the moonlight, and whispering from her towers the last enchantments of the Middle Age.'

The buildings which I have selected have been chosen quite at random, and purely because they happen to have especially interested myself.
I. lave attempted no summary of Tudor architecture, and, except as it arose from the study of some building presented, I have made no effort to find either its roots or its possibilities. These lie outside the scope of a paper, and, indeed, for myself, lie outside my thoughts on the subject. We are killing much of the charm of life to-day because we are seeking to know too much about it. T have worked on the assumption that one can know and love a style of architecture just as one can know and love a person-witlout the necessity of an intimate knowledge of their heart action, or of the state of their cliges-

tive organs. We shall gain more from a study of the spirit in which our forefathers worked than can ever be gained from a minute inspection of their works.

One or two broad conclusions I am safe in drawing in justification of my statement that I was in search of the secret of the charm of Tudor workand I am done. An I but beating a time-worn drum when I say that the absolute necessity for truth is the first of them? In all my study of medimeal work I found no piece of sham; when the medieval builder: used wood he used wood; he held up his floors on oaken beams; he held up his walls on oaken beams, and he framed his magnificent roofs out of solid timber, and with this, as with all his materials, be exercised a regard for its just uses and limit.s.

There were no tin comices in Ancient Greece! My second conclusion is: that much of the charm of old work arises from the medieval builder's intimate knowledge of his materials; his was a place in a great tradition, and generations of loving study helped him to achieve his charming effects.

gIENERAL VIEW.
MCHENEG ABBEY

My third and last conclusion is that the medieval buikder managed to solve the difficult problem of how to achieve breadth of proportion without sacrifice of utility. We have come to this pass to-day, mainly, I fancy, because of our parsimonious attitude towards our materials, that we consider beauty of exterior and utility of plan as-if not diametrically opposed to each other-at least difficult to combine without sacrifice of utilit:-

Our god-"Utility." Our forefathers worshiphed at the feet of a deity somewhat more divine. Nuch of the charm of medirval work arises from its thoughtful use of materials; more arises from its breadth of vision-a vision that did not consider materials in their minimum dimensions.

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1ts final appeal: The appeal of all true architectural work is its intrinsic worth-its height, its depth, its breadth-in one word, its truth.

The most complete and mosi interesting house of the fourteenth century is the well known Haddon Hall in Derbyshire. It consists of two courts, the hall heing placed in the wing which divides them. It is thas protected on hoth of its long sides, and is therelyy enabled to have larger windows than if it had been on an outside wall. The exterior walls of the earlier parts of Haddon have comparatively few windows in them, and these of small size; and as the kitchen is one of the rooms so lighted it is dark, in spite of a larger window inserted in the sixteenth century, to a degree which horrifies housemives of the present day. Haddon



DEIAITS OF MEDIAEVAL DOMESTIC ARCHITECTURE IN ENGLAND.
drawn by c. peate anderson.



## bRYMPTON DEVERCT, SOMERSET.

being built on the slope of a hill could not be protected by a moat, hence it was more than ever necessary to be careful about external apertures.

It is curious to observe on a plan of the house how much thicker the external walls are than the internal, and how few windows look outwards; they nearly all look into the courts, and of those that look out over the country most are of later date. The plan also shows very clearly how the disposition of the hall follows the orthodox lines. It is entered through a porch at the end of one of its sides; the porch


GARDEN FACADE, BRYMPTON D'EVERCY.
leads into the "screens"; on the right is the hall entered through a panelled wood screen with two openings. On the left are three door-ways-one to the buttery, one to the kitchen passage, and the third to the pantry. At the end of the screens is a door leading into the upper court. The kitchen department is large, rambling, and ill-lighted, bort when the honse was in full occupation an enormous amount of work had to be done here, and doubtless the fire itself sufficiently supplemented the scanty daylight.

At the upper end of the hall is a range of rooms of two storeys, devoted to the use of the family; and doubtless in the fourteenth century it was already of two storeys, although apparently it only extended at that period from the front or west side of the hall as far eastwards as to overlap the east side of the upper court. It is difficult to disentangle these rooms from the additions and alterations of later years, for in the early part of the sixteenth century the rooms immediately contiguous to the south end of the hall were improved, and a new range was built on the top of the curtain wall, which ran from the hall wing westwards to the chapel. Again, towards the close of the same century, the long gallery was built over the ground floor rooms forming the south side of the upper court, and apparently this wing was prolonged

general view of garden facade.

detail of plan.


## MONTACUTE HOUSE

 SOMERSET; ENG.
in order to give that extreme length to the gallery which was so characteristic of Elizabeth's time. This prolongation carried the south front beyond the line of the east front, an arrangement very unlikely to have been adopted while the house was still fortified.

Another curious and instructive feature is the gallery or gangway which is carried along the east side of the hall. This is not an original gallery, but was erected in order to connect the south rooms with those on the north, which previously had been completely severed from each other by the lofty hall.

Haddon Hall, therefore, taken as a four-teenth-century dwelling, shows that protection from casual attack was still essential, but that there was a great
general view of totise and barn,

entrance porch.
abbey farm, preston plucknettr. somerset.
amount of separate accommodation for the members of the household. The rooms, however, were arranged without much regard to convenience. They were placed in long and somewhat straggling ranges of single apartments leading one into the other. Privacy was much more studied than it had been in the preceding centuries, but it was provided to a degree that falls short of modern requirements.
The fact that the only entrance through which a wheeled vehicle could enter the place was a secondary archway up the hill beneath the Eagle Tower, brings home to us again the fact that the usual means of locomotion was at that time either on foot or on horse-back.-"The Growth of the English House," by J. A. Gotch.
front elevation.


# CONSTRUCTION 



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## Vol.VILI Toronto, April, 1915 No. 4

IN THE DEATH of Thomas R. Johnson, Tuesday, March 30th, at his residence, 629 West 115th street, New York city, the profession of arehitecture has lost one of its most accomplislied and brilliant members. He was born in Toronto, Canada, March 11, 1872, of English descent, some of his ancestors coming to America with William Penn. Mr. Johnson studied at the art schools and technical schools in Toronto, where he was early recognized as possessing rare artistic talents. He wished to become a painter, but yielding to his father's wish, chose architecture as his profession and entered the office of E. J. Lennox, a well known architect in Toronto. He went to New York in about 1896 and was connected with the offices of several architects, including those of Ernest Flagg and Edward P. Casey. He entered the office of Cass

Gilbert as an assistant in April, 1900. He was admitted to a partnership interest in this office several years ago, and has had an important part in many of the buildings under Mr. Gilbert's charge during this period. Mr. Johnson possessed to a rare degree the qualifications of an architect; he was thoroughly versed in all phases of his art; he was a designer of rare ability; he was a draftsman of extraordinary skill. A master of every form of architectural draftsmanship, he had a keen and delicate sense of color and form in painting and sculpture. He was a deep student of architectural precedent and at the same time possessed exceptional inventive powers as an artist not only in the intricate detail of architectural ornament. but in the larger forms of planning and composition. His untiring industry and enthusiasm for his art were inspiring to all who worked with him and his singularly unselfish and lovable personality endeared him to all who knew him.

THE annual general meeting of the Architectural Institute of British Columbia was held recently in Vancouver. The usual good-fellowship was manifest and in spite of present conditions a feeling of optimism prevailed relative to the future outlook. After the various reports had been read and adopted, the following officers were elected for the coming year: President, R. Mackay Fripp, F.S.A.; vice-president, W. T. Dalton, F.R.A.I.C.; honorary secretary, Fred L. Townley; honorary treasurer, S. B. Birds, A.R.I.B.A.; council: S. M. Eveleigh, A.R.A.I.C.; J. W. Keagey, J. J. Honeyman, W. F. T. Stewart, G. D. James, R.I.B.A.; G. L. Wright, L.R.I. B.A.; R. P. S. Twizell, A.R.I:B.A.; K. Bryan.

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