

BUILDERS AND BUILDING

Bro. A. W. Wood, P.G.Supt. Wks., E.C., Secretary

Introduction

I apologise for presenting this paper to a learned Society. It is not a learned discussion. It was originally written for delivery to a mixed group of masons and non masons, and has since been used on a number of occasions as a light hearted look at the origins of the operative craft, with a very simple outline of the transition to the present speculative body. For much of the information about the growth of stone building, I am indebted to *The Ancient Engineers* by L. Sprague de Camp. The rest comes from general reading, and I have made no attempt to identify sources. If the critical object, then I can only say that they should not have persuaded me, against my better judgement, to present the paper here.

Early Builders.

In the explanation of the tracing board in the first degree, we are told that "the usages and customs of Freemasonry ... correspond in a great degree with the Mysteries of Ancient Egypt." Those words were originally written at a time when most masons thought that Freemasonry was descended from the mystery religions of the Middle East. No serious masonic scholar would now contend that there is any connection. That is just as well, because the mysteries were in general, quite unbelievably nasty, and if there was a connection, our wives would have ample grounds for objection to the Craft.

There is, however, one sense in which we may compare Egypt and the Craft. Freemasonry derives from, and is about stonemasons and stone buildings. The ancient Egyptians were the first people to build in stone.

Civilization as we know it began, as far as we can tell, in the river valleys of the Tigris-Euphrates, in what is now Iraq, and in the Indus valley in northern India. At civilization advanced in the river valleys, men began to build, but as there is little stone to be found in the river valley of Iraq, they used sun dried mud brick, which is quite a durable material provided the climate is not too wet, the maintenance is reasonable, and the tops of the wall is protected. Burnt brick was too expensive, as the timber had to be imported.

Ancient Egypt developed some hundreds of years after the Mesopotamian kingdoms, and the Egyptians no doubt had the advantage of learning from them. The Egyptians used mud brick as well, but the material is not so well suited to a country whose agriculture depends on an annual flood of monumental proportions. The local peasants, of course, did not matter. Rebuilding once a year kept them out of mischief, and stopped them from brooding on being peasants. However, the gentry preferred not to get mud on the carpet.

The stimulus to the great step in building was probably the difference in religion. The Mesopotamians believed that the dead lived underground, wore feathers, and ate dust. Like the Greeks, they believed in the half life of the gibbering shades. The Egyptians believed firmly in an after life which could only be enjoyed if the body of the deceased was preserved, and provided with a copious supply of worldly goods. Naturally, in a poor society, caches of gold and silver, to say nothing of useful articles like pots, and cutlery, were a strong attraction for thieves. Equally naturally, the wealthy objected to being robbed in death, just as much as they had in life - hence the pyramids, which of course, were simply giant safes for the frustration of the ungodly. They provide a magnificent example of the vanity of human wishes, and the superior intelligence of evildoers, because none of them survived intact for more than a few years - in some cases, days. Tutankhamen is the exception, but in that case the robbers were disturbed, and the remains were thrown hastily into a hole in the ground, and covered with rubble, and no one thought to look *there*.

The earliest tombs were not pyramids, but what archaeologists call *mastabas*, which are raised platforms of considerable size, made of mud brick, and filled with rubble. The walls were raked back, that is to say, sloped inward from the base, because mud brick structures fall down if the angle of the wall is too steep.

Stone building began in the reign of Xoser round about 2700 years before the present era. The genius responsible was a man named Imhotep, who was the chief civil servant in the kingdom, and apparently a universal genius like Leonardo da Vinci, as his reputation lived on for

centuries as an engineer, doctor, writer, wizard, statesman, and general know-all. At first the stone work was rough and hesitant. It is quite clear that the designer was taking no chances. Mud bricks are small and rectangular. About five inches is the largest that will stand up without cracking. No doubt it occurred to Imhotep that if you can build with rectangular mud bricks, you could also make rectangular stone bricks which wouldn't melt in the flood. However he still kept the blocks to the same size, and he still raked the walls inward, in the same way that he would have done with mud bricks. Indeed, so conservative were the Egyptians, that 2000 years later, when the builders of the pyramids were only a vague memory, they still raked all their walls inward.

The first pyramid was only a series of masabas, one on top of the other, with a level space between the top of one, and the bottom of the next. The first true pyramid began in the same way, but the builder changed his mind, and filled in the gap with masonry to give smooth sloping sides tapering to a point.

Pyramid building reached its peak in the reign of Khufu, or Cheops, the owner of the great pyramid. Probably less than a hundred years separated the two kings, but in the time the Egyptians had mastered their material. It contains 2.3 million blocks of stone, weighing an average of two and a half tons each. The sides of the base come within 7 inches of forming a perfect square, and are oriented East/West, and North/South to within less than 6 minutes of arc, the South side being the most accurate. It is within two minutes of arc, and was probably the one first laid out, using some form of stellar or solar observation. The stones in the interior of the pyramid are only roughly finished, but the exterior has been finished with extraordinary accuracy, often to within .002 of an inch.

One of the most remarkable feats is the so called ventilation shaft from the king's chamber, which goes through almost 200 feet of solid masonry. There are many theories as to its use (if any), one being that it was a primitive astronomically instrument to predict the annual inundations of the river Nile. It is only about two inches wide. No instrument the Egyptian had could have pierced to great a distance, so the stones must have been bored before being put in place, and a moment's consideration will tell you how accurately the beginning of the hole in each stone must have been placed, and how accurately the shaft must have been driven, so that the shafts in each stone lined up.

Having made this giant leap forward, the Egyptians had exhausted themselves. Their civilization remained virtually unchanged until its extinction in about 1200 B.C. Builders are a conservative lot. The Egyptians had not learnt the secrets of the arch. They held up the roof with corbels if it was small, and with pillars and beams if it was large. The corbelled arch resembles the structure all children make with blocks, in which each course of blocks is offset a little further until the two sides meet.

There is virtually no building timber in Egypt. the earliest columns were made of palm trunks, or bunches of reeds, papyrus stems or the like, bound together top and bottom, which could support simple structures. When they came to use stone for the same purpose, they continued to carve it to resemble the older material, even to the fluting, representing the individual reeds, the ring top and bottom, representing the tie, and the leaves at the top, which in later architecture becomes the capital, or chapter. Who knew what disaster would follow any deviation from tradition. We should not laugh too loudly. The stone pillars outside the New Zealand Insurance building in Queen St. are fluted and bound top and bottom in the same way. One never knows!

Medieval building.

Stone building passed from Egypt to Greece, and thence to Rome. During the dark ages after the fall of Rome, stone building almost ceased. It began again in earnest in England in the 1100s, and perhaps a little earlier on the continent. The crowning glory of medieval architecture is the Gothic cathedral, and it is with these structures that we as Freemasons are concerned. Operative masonry developed along with the cathedrals and castles, and as the cathedral building ceased in the 15th century, operative masonry likewise fell into decline.

It is never possible to be sure of the explanation of historical events, because we are never sure that we understand the thinking of the people of the time, and the background assumptions

which made up the pattern of their lives, even as the assumptions of today are the pattern of ours.

The likeliest reason for the development of the operative lodge is to be found in the feudal system. The life of the Celtic and Germanic tribes who settled Europe and Britain revolved around fighting. Under the feudal system everything turned on the ownership of land. The King owned it all, and provided an army by letting out large parcels to the great barons in return for military service. The barons in their turn, sublet the land to lesser barons and knights for the same service - so many mounted, so many foot, and so much corn for each parcel held. The knight maintained an army of semi free soldiers by a system of land tenure known as copyhold, because the holder had to re-enrol at the annual Manor Court. A manor was by definition, a place where the owner had such a jurisdiction. Copyhold was only abolished in England in the last century.

In addition to the copyholder, the larger estates had men at arms who were not free, that is they held no land, and all estates had serfs and villains, who could graze stock on the common land, perhaps take fish, or cut peat or gather wood in the forest for fuel. This is the origin of the Common, so frequently referred to in English books. they could also till a small piece of land for food. None of these people, except perhaps the great nobles, were in any way free as we know the term. On the contrary, the masterless man was an abomination, an outlaw, who could and should be hanged from the nearest tree.

In the earliest days of the system in England after the Conquest, commerce as we know it was unknown. Most estates were virtually self sufficient. The miller held under a feudal tenure, the rest of the artisans were virtually slaves in the household. Barter of food, cloth, etc. took place at markets which were at first held in the lord's castle, and later in villages that grew up round the manor or castle. Markets needed a license or charter from the landowner, giving him the right to first pick of anything worth having, and later cash by way of fee. In time the larger market towns achieved separate charters, often from the crown, if they were wealthy enough to pay for them, and thus achieve a measure of self government. This usually took the form of a common council elected from the trade guilds in the town. In consequence, membership of the guild was compulsory. There is nothing new about compulsory unionism. In addition, membership was restricted to the particular town. A London weaver had no chance of setting up in business in Bristol, and would probably have been hanged if he had tried.

The mason craft.

Masons differed from the other trades, because of the nature of their work. In general, towns were built of wood, and there was no need for masons. Most stone building took place outside the towns, either on castles, or on ecclesiastical buildings. The King regularly impressed masons for work on the royal castles. The great cathedrals in England and on the continent are now imbedded in the towns they serve, but this was not so when they were built. In consequence, masons did not at first belong to a guild. The first guild of stonemasons was the London Company of Masons, and it did not come into existence until long after the other guilds were fully established. It arose as the result of a demarcation dispute between the mason hewers and the mason layers, and resulted in the masons petitioning to be entitled to send two men to the common council in London, as the other trades are wont to do.

Because of the nature and place of their work masons had privileges which were denied other trades, which were jealously guarded. One of these was the ability to move around the country in search of work. In other trades, the organisation was based on the guild, which was local to a town. In masonry it revolved round the lodge, and admission to a strange lodge was not restricted in the same way. We have no surviving records of English operative lodges, and therefore no means of knowing whether the masons word existed in England, as it undoubtedly did in Scotland, but certainly there must have been some mean by which a man could prove that he was entitled to the privileges of masonry.

One of the other privileges is still in evidence in a modern Lodge. In medieval times, there were strict rules as to who could wear certain articles of clothing. Dress was regulated according to rank, and only the very great were permitted to wear gloves. Because of the nature of their occupation, masons were exempt from that regulation. In consequence they no doubt took care to flaunt their gloves whenever tradesmen met together, as on Corpus Christi, when the

various crafts were required to exhibit their appropriate Mystery play for the common edification. This tradition is reflected in the third degree tracing board, where, you will recall, the fifteen fellowcrafts were ordered to appear in white aprons and gloves. No doubt it was also a useful provocation to one of the street fights of apprentices that formed a happy relief from mundane affairs. Who says gangs are a new phenomenon.

I have said that the decline in cathedral building also led to the decline in the operative craft. Exactly how the transition to speculative Masonry took place, and when, and even more curiously, why, we cannot now tell. Operative lodges were originally the rough shelters which the workmen built to work in, and to eat, sleep, and play in. Later it also came to mean the actual organised body of masons in a particular place, or employed on a particular part of the work, and also the place where a new mason was made. The making of a mason was a fairly simple ceremony. We know almost exactly what it was like, because most, if not all Lodges had a copy of the Old Charges, and copies from the 13th to the 17th centuries in almost identical form have survived.

Basically the ceremony consisted of a prayer, a reading of the Charges, a simple obligation of obedience to the King, to Mother Church, and to the Lodge, and of concealment of the mysteries of the craft, and a reading of the traditional history. The "mystery" to be concealed simply referred to the trade secrets. It does not bear the meaning we now attach to it. It is, in fact, the same word as "mastery", and had nothing to do with the esoteric portions of our ritual, or anything like it.

The traditional history follows a fairly standard form. It tells how Lamech had four children, Jabell, Juball, Tubal Cain, and Naamah, who founded all the crafts in the world. Jabel founded geometry, Juball music, and Tubal Cain the smith's craft. The daughter, Naamah, discovered the art of weaving. They were warned by God that he intended to destroy the world for its sins, and to preserve their knowledge, they engraved these sciences on two pillars. The description of the material of the pillars differs from version to version, but basically, one was required to resist a flood, and the other, fire. After the flood the pillars were found by Hermes, the father of wisdom, (sometimes Enoch), by whom the sciences were taught to others.

The history goes on to account for the diffusion of masonry, which was supposed to include all other sciences, over the world, and refers to the tower of Babel, Abraham in Egypt, David and Solomon, Hiram by a rather strange name that has caused a great deal of controversy among masonic scholars, the worthy clerk Euclid, and others, ending up with the establishment of the craft in England under St. Alban, Athelstan, and Edwin.

The memory of the two pillars as repositories of knowledge is preserved in the English version of the second tracing board, where the pillars are said to have been formed hollow, the better to serve as archives to masonry.

Masonic scholars differ as to when non operatives were first admitted to lodges. Bro. Harry Carr has suggested that it was done in some cases from the earliest times. Other scholars deny this, some even suggested that there is no connection at all between the operative craft, and modern Freemasonry. In England, as I have said, there are no surviving records of operative lodges, so it is not possible to prove the connection. We do know that the early lodges contained both speculatives and operatives, and in Scotland the actual progress of the change can be traced in the minutes and records of lodges that still exist. This is probably because in Scotland lodges were more likely to be associated with a particular town or district, rather than, as in England, to a particular work or building. As there is little to suggest that the craft *history* is radically different in the two countries, although the development of the *ritual* may be, it seems to be that it is senseless to deny that speculative masonry developed from the old operative lodges. On the other hand, the ritual may well owe much to a connection with the wisdom literature, and rosicrucianism, not, I hasten to add, the spurious version of the rosicrucian order based in California, which is regrettably more akin to the large numbers who in that country have set up business in the name of religion.

The earliest authentic record of the making of a speculative mason in England is found in the diary of Elias Ashmole, an antiquary, that is to say a student of old times from relics, monuments, records etc. He records his own admission to the Craft in 1646, and the entry makes it clear that this was a speculative lodge composed of local gentry. The meeting took place in Lancashire. In 1682, he records being summoned to a lodge at Mason's hall, London, which would be a meeting

of what was known as the Accepcon, apparently a speculative group attached to the trade guild, the London Company of Masons, which still exists. The entry in the diary shows that there was at least one speculative lodge in existence, and other evidence indicates that there were a number in Lancashire and Derbyshire at least.

In 1716 there were at least four lodges meeting fairly regularly in London, and at least some of the members were operatives. In 1717 these lodges met and constituted a Grand Lodge. They said they were "reviving" it, but there is virtually nothing to indicate that there had ever been anything like a Grand Lodge before their time. This meeting is the original of the Grand Lodge of England, the first of all Grand Lodges.

The rise of speculative Masonry.

Why did men of wealth, education, and power, join an organisation of artisans at a time when class was of the very first importance? I do not think that we can now do more than guess. Some clues are to be found in the habits and tastes of the times. The earliest speculatives belong to the same time as the founding of the Royal Society, the first, and still one of the leading learned societies in the world. It was patronised by Charles II, and by Pepys, Evelyn, and other notable figures. Antiquarian research was the in thing. Before the Civil War, no one was in the least interested in history, or the past. From the Restoration down to the middle of the 19th century, antiquarianism mathematical knowledge of the rule of thumb variety, to be learned from the operatives.

The interest in architecture also dates from the Restoration. Before the civil war, houses were still fortresses. Many of them could, and did, withstand sieges for most of the war. After the war, men were more interested in comfort, and in beautifying their homes. Gardening for pleasure rather than utility became common, and a knowledge of architecture was deemed an essential part of a gentleman's education. Where better to seek a knowledge of architecture than from the men who had contributed most to it in the last three or four centuries.

Finally, this was the period of Clubs. There were clubs for every conceivable, and in some cases inconceivable, taste - cards, music, gambling, talk, horse racing, prize fighting, drinking, you name it, there was a club for it. A new club of any kind was bound to attract members.

There can be no doubt, however, that those first speculatives found something in the Craft which held them to it. The ritual as we know it developed during the first four decades of the 18th century, but there must have been a nucleus of moral and religious teaching from which this ritual could grow.

That moral teaching has since spread over most of the civilised world, and has been a source of inspiration and comfort to millions who have ranged themselves under the banner of Freemasonry. May our descendants enjoy the same comfort and inspiration, and may each one of us ensure that we uphold the high ideals of the Craft, and demonstrate them to the world at large. May we dedicate ourselves once more to the service of God, and of our fellow men, for unless we do so, the Craft will eventually perish, and our descendants will be the poorer.

In the comments, Bro. Glennie suggested that the connection with the Ancient Egyptian mysteries stems from the mysticism still common in the period of development of the Craft. Bro. Allen reminded the audience that raked stone walls filled with rubble were still common until the later period of cathedral building, and that the lecture ignores Irish Freemasonry, and the early stone building in that country.

By Bro. A.W.Wood, Secretary; Published in United Masters Lodge, No. 167;
SELECTED PAPERS, Volume III; Auckland, New Zealand; 1993.

Submitted by D. Roy Murray [with permission]
King Solomon Lodge, No. 58, GRS