The word “brockage” means “breakage”, and in the ancient mints there was probably a lot of coins broken in the minting process, which was all done by hand. The die for the obverse of the coin was fixed in a metal anvil, and the die for the reverse die was fixed in a metal punch which was hit with a hammer so that the designs on the dies were pressed into the coin blank. (Figure 1) The blank was heated and then struck while it was cooling. Apparently this is the time when the metal becomes malleable and can be impressed with the dies. If the conditions are not right or the force of the hammer is too strong the blank will break, but the pieces would not have been wasted. They would have been melted down and made into blanks again.

In numismatics the term “brockage” is used for a particular mishap where the coin remains between the two dies and is thereby involved in striking a second coin. Because the second coin usually has the obverse die incused on the reverse (i.e. it is impressed into it like an engraving) it means that the coin must have stuck to the reverse die. (Figure 2) If the worker who was using the hammer was distracted after striking a coin that became stuck to the reverse die he would look down, see that the space above the obverse die was empty and get ready to strike another coin. Only when he saw the result (the same design on both sides) would he realize what happened. Because the ruler’s image was still apparent he may not have discarded the coin. (Figure 3)

Recently I bought a brockage coin that has an elephant on both sides. (Figure 4) It was the brockage of a denarius issued by Julius Caesar in 49 BC. On the reverse it should have had the emblems of the Roman high priest, a role assumed by Julius Caesar in 63 BC (Figure 5) but it has the mirror image of the elephant incuse.

I thought this brockage of a coin of Julius Caesar must be extremely rare, but to my surprise a quick search on the Internet revealed two other examples. (Figures 6 and 7) They were certainly not fakes, but why were there so many brockages of this coin? Also I did a quick search for brockages of the common denarius of Tiberius and I found many examples. One is shown in Figure 3. An explanation was needed.

When you think about it, there were certain conditions that would make the production of brockages more likely, but you need to have some knowledge of ancient history to understand why there were brockages of particular coins. The
elephant coin of Julius Caesar was issued when he defied the Roman senate by crossing the Rubicon River with his army and invading Italy. These coins were produced in large numbers by a mobile military mint, and it takes little imagination to see the men in the mint working frantically under conditions that were far from ideal. If the occasional brockage popped out, who cared? In the case of the denarius of Tiberius, the main reason would have been the huge number of coins that were needed. Throughout the long reign of Tiberius from 14 to 37 AD the denarius with the seated woman on the reverse was the standard silver coin that circulated in the Roman Empire, and it was produced by only one mint which was at Lugdunum (modern Lyon) in Gaul. Enormous numbers of denarii were needed just to pay all the soldiers in the Roman army. As millions of these coins were rapidly struck in a mint far removed from the capital it is to be expected that some would be brockage.

**Figure 3 – A brockage is produced.**

**Figure 4 – Brockage of a coin of Julius Caesar. (Author’s collection)**

**Figure 5 – Denarius of Julius Caesar issued in 49 BC. On the obverse an elephant tramples a serpent perhaps to represent the triumph of good over evil. The implements on the reverse are a simpulum (ladle), sprinkler, axe and apex (the hat worn by a Roman priest). Sear, Volume 1, 1399. (Triton Auction XXI, Lot 660)**

**Figure 6 – Another example of brockage. (Classical Numismatic Group, Auction 79, Lot 980)**

**Figure 7 – Another example of brockage. (Classical Numismatic Group, Auction 129, Lot 329)**
The ancient Romans were practical people and they would have been concerned about the supervision of mints to prevent stealing, which must have been a great temptation for the workers, and for quality control. So instead of one large mint for silver coins as at Lugdunum, the Romans devised a system where there were several mints in each major city. For example, under Constantine the Great (308 –337 AD) there were five mints or factories (Latin: officinae) in the city of Heraclea, and the officina number, from A (1) to E (5), appears in the exergue on the reverse of the coins. On a coin with Constantine’s son, Constantine II, on the obverse, the number E occurs in the exergue after SMH, which stands for Signata Moneta Heracleiae and means “Money struck at

Figure 8 – Billon centenionalis of Constantine II as Caesar. On the reverse a military camp gate is shown with SMHE in the exergue. RIC, Heraclea, 83. (Author’s collection)

Figure 9 – Brockage of the coin in Figure 8. (Author’s collection)

Figure 10 – Brockage of a silver diobol minted at Taras c. 350 BC. It is from the WJP Brockage Collection. (Triskeles Auctions, Auction 18, Lot 503)

Figure 11 – Silver diobol of Taras. On the obverse Athena wears a helmet decorated with Scylla on the side. Scylla was a sea monster with the upper body of a woman. On the reverse Heracles strangles a lion. (Bertolami Fine Arts, Auction 6, Lot 35)
Heraclea." (Figure 8) It was, however, impossible to prevent mistakes occurring even under this tightly controlled system and brockages are occasionally seen. (Figure 9) Actually brockages have occurred throughout the history of coinage. In the 4th century BC an obvious brockage was produced in the Greek city of Taras in southern Italy. (Figures 10 and 11) If you look carefully at some ancient coins you will see an obvious raised edge on the reverse (Figure 12 and 13) and it is this lip which can grip the reverse die and make brockage more likely, as shown in Figure 2. A major factor that would increase the incidence of brockage is the value of the coin. More brockages would be expected with bronze coins than with silver. With gold coins great care would be taken in minting them and brockage of gold coins is very rare. Even then, it is not a full brockage but only a trace. (Figure 14) Such a minor defect would not have required the coin to be melted down.

Concerning the value of the coins the lowest would be the little bronze coin known as the widow’s mite. The story of the poor widow who gave all the money she had to the Temple in Jerusalem (Figure 15) is recorded in Mark’s gospel. It is explained that the two small coins that she gave were worth only a quadrans (Mark 12:42). The quadrans was the smallest denomination that circulated in Rome. It is generally considered that

![Figure 12 – Reverse of a silver hemidrachm minted at Kalchedon c. 350 BC. It shows three ears of grain, but notice the raised edge. (Image courtesy of Joseph Sinski)](image1)

![Figure 13 – Coin in Figure 12 seen from the side. (Image courtesy of Joseph Sinski)](image2)

![Figure 14 – Gold solidus of the Byzantine emperor, Phocas (602-610 AD). Sear, Byzantine Coins, 620. The wavy lines of the emperor’s cloak have appeared on the reverse above the angel. (Image courtesy of Pavlos S. Pavlou, Vcoins.com)](image3)

![Figure 15 – Jesus observes a widow putting coins in the Temple treasury. (Engraving by Gustave Doré, c. 1880)](image4)
the widow’s mite was a coin issued in large numbers by the Jewish king, Alexander Jannaeus, who ruled from 104 to 76 BC. (Figure 16) In striking coins of such little value the mint workers would not have worried if some were brockages. Nor would they be fussed if the blank was an odd shape or struck off-centre. So we find that there are a lot of brockages of this coin and that most are badly struck. (Figure 17) It is interesting to think that at least one of the widow’s coins might have been brockage.

When seeking an explanation for why a particular coin is brockage, the factors to consider include the number of coins that were minted, as judged by how common they are today. If millions were produced, mishaps would be more likely to happen. The time factor is important in this regard because the degree of urgency would influence the chances of brockage. Discipline and supervision would be important and one would expect more brockages during times when the government was weak. Also the value of the coins being minted would largely determine the frequency of brockage. All these factors should be taken into account together with the history of the period when the coin was minted.

A brockage is a mistake, and however careful people are in doing what they do, mistakes will inevitably occur. They are part of being human. Actually they are part of being human in a very profound way. The whole of human evolution depended on mutations (mistakes) occurring in the genome (the creative messages encoded in genes). If a mutation gave an animal an advantage it would evolve into a more capable animal. It was through mistakes that God brought about evolution.

Some numismatists particularly collect brockages. You can see what the appeal is: the coin has captured that moment in time when a mistake occurred in the minting process. Brockages should be more expensive than the properly struck coins but they are in fact much cheaper.

Figure 16 – A small bronze coin of Alexander Jannaeus. There is an anchor on one side and a star on the other. Hendin 1150. (Classical Numismatic Group, eAuction 273, Lot 43)

Figure 17 – Eight brockages of the coin in Figure 16. They are from the WJP Brockage Collection. (Triskeles Auctions, Auction 18, Lot 503)