
Document 1519E

Magellan's ships and their contents

Sources: AGI Seville: Papeles del Maluco, leg. 1 de 1519 a 1547. Published by Navarrete in his Colección de los viages, iv, pp. 3-11, 162-188. The translation below is a corrected version of one found in Stefan Zweig's The Story of Magellan (New York, 1938), appendix iii, pp. 319-325. Ship illustrations for this chapter are from Walter D. Brownlee's The First Ships Around the World, Lerner Pubs., Minneapolis, 1977)

Preliminary note

The three ships that Magellan had when crossing the Pacific were:

- 1) the flagship **Trinidad**, of 110 tons¹, cost 270,000 Maravedis²;
- 2) the **Victoria**³, of 85 tons, cost 300,000 Maravedis; and
- 3) the **Concepción**, of 90 tons, cost 228,750 Maravedis.

The above costs represent the purchase price of the empty ships; the price included some minor equipment and one boat each, but excluded the sails, anchors, cables and other appurtenances.

The two other ships were: the **San Antonio** of 120 tons that turned back in the Strait of Magellan, and the **Santiago** of only 75 tons that was wrecked before they reached the Strait.⁴

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- 1 Ed. note: This measure was stated in "toneles", a measure of capacity used in Vizcaya, which was 20% bigger than the "toneladas" of 2,000 pounds used in Seville; so, roughly, one "tonel" was like 1 metric or long ton, and one "tonelada" like one short ton (See O'Scanlan's "Diccionario marítimo español", p. 526, for further details).
 - 2 Ed. note: It is not possible to give an exact equivalent value for the Maravedi in modern currencies, other than an approximate relative value derived from many comparisons between the costs then (See below) and comparable costs in modern times. This editor would venture to say that one Maravedi then (1519) was worth about US\$1 today (circa 1990). It is to be noted that one ducat was then worth exactly 375 Maravedis.
 - 3 Ed. note: Destined to become the first ship around the world. This ship had been built at Zarauz, west of San Sebastián in the Basque country.
 - 4 Ed. note: The editor has made great efforts to ensure the technical accuracy of the translation that follows.

List of the costs of Magellan's fleet

1. Ships and their gear.

228,750 Ms. is the value of the ship **Concepción**, 90 tons, including its gear and its boat.

300,000 Ms. is the value of the ship **Victoria**, of approximately 85 tons, with its gear and its boat.

330,000 Ms. was the cost of the ship named **San Antonio**, 120 tons, with its gear and its boat.

270,000 Ms. is the value of the ship named **Trinidad**, 110 tons, with its gear and its boat.

187,500 Ms. was the cost of the ship **Santiago**, 75 tons, with its gear and its boat.

24,188 Ms. includes the expenditure of 20,438 Ms. for bringing the ships from Cádiz and San Lúcar [de Barrameda] to Seville and 3,750 Ms., which the factor Juan de Aranda spent when he went from Seville to Cádiz in order to buy the ships.

13,482 Ms. was expended for day laborers to launch the ships from the stocks.

104,244 Ms. was the labor cost of the carpentry work on the five ships.

129,539 Ms. was the labor cost for the caulking of the ships.

6,790 Ms. was the labor cost for the woodworkers who sawed the planks for the above-mentioned ships.

175,098 Ms. was the cost of the wood for the [spare] spars and planks as well as for the smaller pieces of wood that were bought for repairs on the ships.

142,532-1/2 Ms. was expended for the metalwork on the ships' bottoms.

31,670 Ms. for the oakum bought to caulk the ships.

72,267-1/2 Ms. for pitch, tar, and oil for greasing and caulking the ships.

53,852 Ms. for tallow to rub into the ships.

149,076 Ms. was the cost of 173 pieces of sailcloth which were bought as reserve stock for the voyage.

32,825 Ms. for thread and needles for sewing the sails, as well as for the labor cost of those who sewed these sails.

37,437 Ms. was the cost of the masts and yards for the ships.

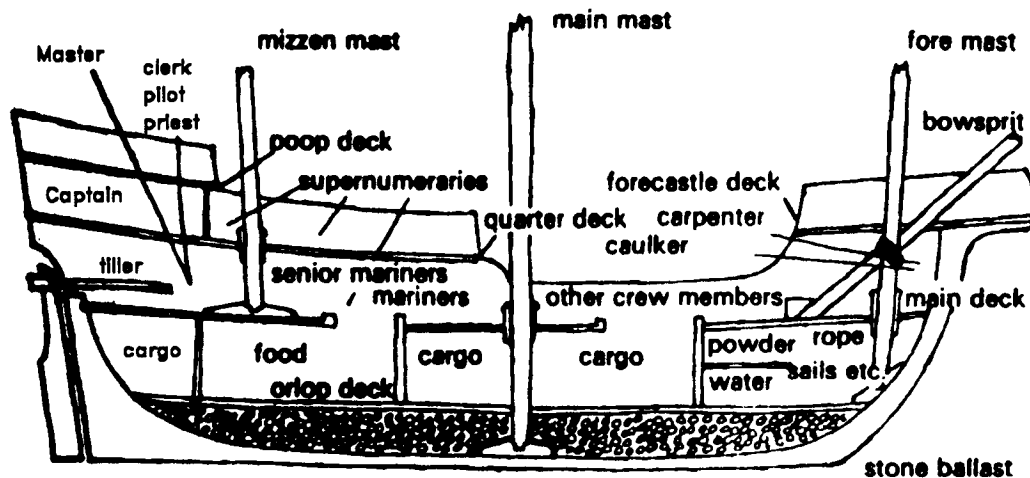
3,937-1/2 Ms. was the cost of a **skiff**¹ that was bought for the ship **Trinidad** to take on the voyage.

15,475 Ms. was the cost of the ships' pumps, nails, and tacks.

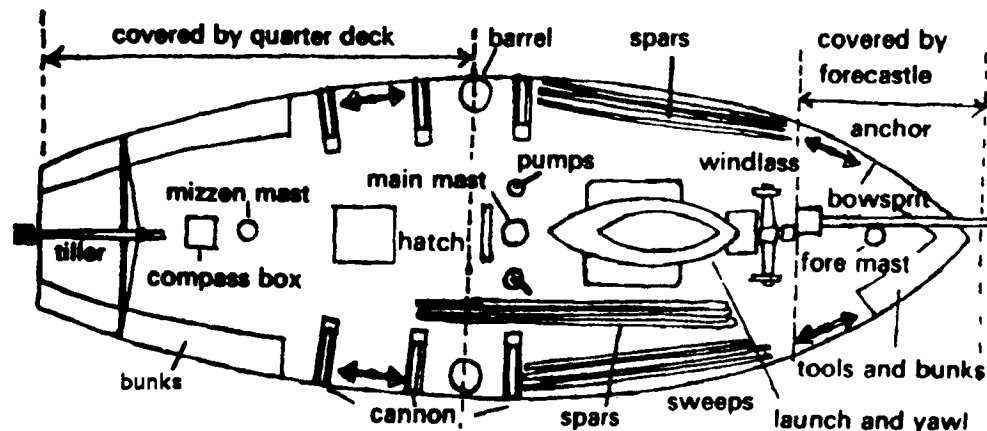
6,563 Ms. for the oars bought for equipping the ships.

¹ Ed. note: This was the famous second boat of the flagship; hence, this was the price paid for Magellan's larger boat which was towed behind the **Trinidad** and which was stolen by the natives of Guam. It is no wonder that Magellan was made very upset by the incident.

Section along center of ship



Plan of main deck



9,364 Ms. was the cost of the leather chafing gear¹, shafts, and leather to make chaps for the pumps.

1,285-1/2 Ms. for six *broznos* [?] for pulleys.

3,687-1/2 Ms. for 3 *gurbias* [rolls of twine?].

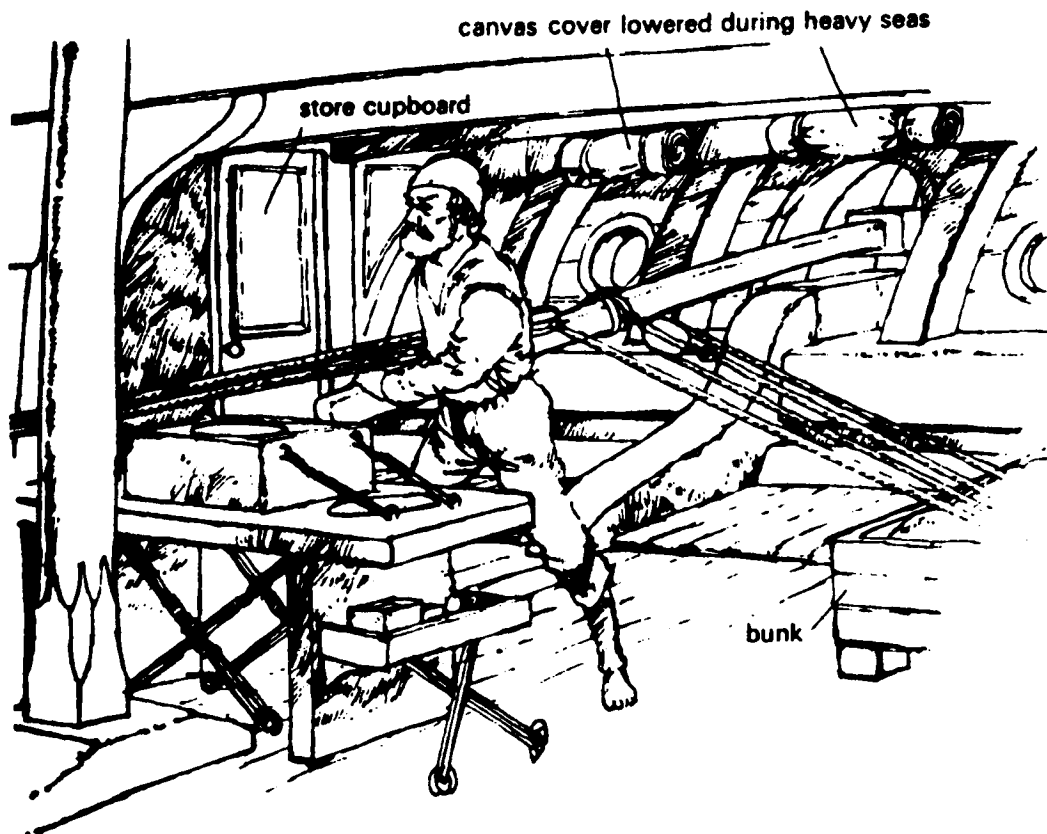
4,204 Ms. was the cost of 8 pulley blocks for launching the ships from the stocks.

34,672-1/2 Ms. was the cost of the tackle of the fleet as well as of the tackle required to rig them.

511 Ms. was the cost of 3 ladles for the pitch.

1,962 Ms. was the cost of 13 boatloads of ballast.

1 Ed. note: That was the leather that the crew ate to prevent starvation while crossing the Pacific.



The steering compartment below the quarter deck.

807 Ms. was the cost of 32 ells of burlap for making sand bags and other things necessary to ballast the ships.

438,335-1/2 Ms. was paid as wages and board for the ships' companies while they outfitted the ships for the voyage.

42,042 Ms. was the cost of 13 anchors bought for the ships.

1,008 Ms. was the cost of 8 large and small saws for the ships.

1,762 Ms. was the cost of assorted augers and drills for the fleet.

663 Ms. was the cost of 6 hoes [=trench spades] to launch the ships, that is to make the ditch for beaching them.

2,495 Ms. was the cost of 76 sheepskins for the brushes for tarring and greasing the ships, and for storage purposes on the voyage.

4,277 Ms. was the cost of wood fuel needed in caulking the ships.

1,054-1/2 Ms. was paid to the pilots who brought the ships from San Lúcar to Seville.

324,170-1/2 Ms. was the cost of 221 **quintals**¹ of cables, splices, and buoy lines as well as 1,000 **arrobas**² of hemp from which were made the rigging needed by the ships, spares included. Included also are the 38,972 Ms. for the labor and 14,066 Ms. which was the cost of the lines, buoy ropes, and bolropes.

25,029 Ms. was the cost of 80 flags, together with their painted decoration, and a royal standard of taffeta.

49,584 Ms. was the cost of the brigantine³ which was built.

84,144 Ms. of which Duarte Barbosa spent 7,500 Ms. in travelling from Seville to Bilbao [to place a purchase order], and of which Antón Semeño expended 3,750 Ms. in bringing the money to Bilbao [to pay the invoice], and of which 24,390 Ms. was paid for the loading of the ship which came from Bilbao. The remainder, 48,504 Ms., was spent on miscellaneous items for the ships and the carts.

[Sub-total: 3,350,034-1/2 Maravedis]⁴

2. Ordnance, powder, and incidentals.

160,135 Ms. was the cost of 58 cannon, 7 falconets, 3 large bombards, 3 carronades. They all came from Bilbao in addition to the ordnance that the ships already had.

109,028 Ms. of which 104,200 Ms. was for 50 quintals of powder, and 4,828 Ms. for the freight charges from Fuenterrabía [in Vizcaya] to Bilbao.

5,477 Ms. was the cost of 165 pounds of powder bought in Bilbao for the training of the men.

11,633 Ms. was the cost of the iron and stone projectiles and balls for the ordnance of the fleet.

3,850 Ms. was the cost of the molds for making cannon balls for the carronades, falconets, and cannon.

39,890 Ms. was the cost of 221 arrobas and 7 pounds of lead, of which 84 arrobas were pounded into strips for caulking the seams of the ships, the rest going with the ships as spares, and to make pellets for the guns and arquebuses.

3,276 Ms. was expended for polishing the guns.

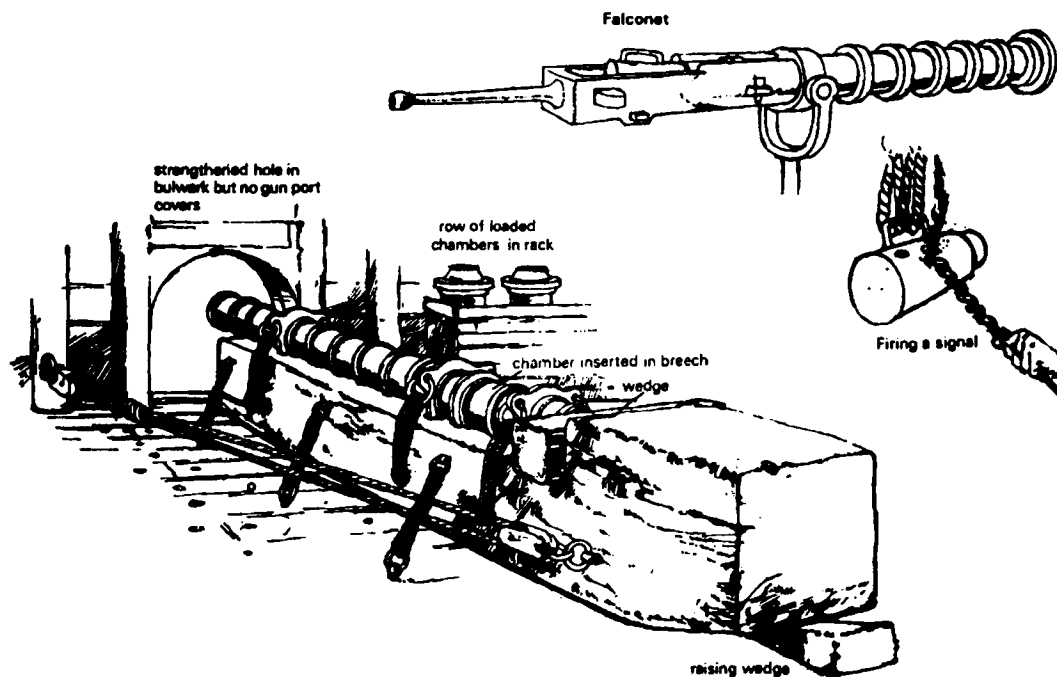
1 Ed. note: One quintal is also called a hundredweight in English, because 1 quintal equals 100 pounds (in the U.S.).

2 Ed. note: One arroba is one-quarter quintal, i.e. 25 pounds, or 11-1/4 kilograms.

3 Ed. note: Most likely, this brig remained with the India House of Trade in Seville, after it was used for shuttling cargo and people between Seville and San Lúcar de Barrameda in August & September 1519.

4 Ed. note: I have provided the sub-totals for checking purposes.

8,790 Ms., of which 4,290 Ms. was spent on food for the soldiers, on the days that they were on duty; and 4,500 Ms. was paid out to them in incidentals.
[Sub-total: 342,079 Maravedis]



3. Crossbows, arquebuses, armor, and other weapons.

110,910 Ms. was the cost of 100 suits of armor, with arm and shoulder pieces and helmets, and 100 breast-plates.

33,495 Ms. was the cost of 60 crossbows and 360 dozen arrows from Bilbao.

10,500 Ms. was the cost of 50 muskets from Vizcaya.¹

6,375 Ms. was the cost of 1 coat-of-mail and 2 complete suits of armor for the captain [i.e. Magellan].

6,800 Ms. was the cost of 200 round shields from Bilbao.

680 Ms. was the cost of 6 sword blades from Bilbao, as received by the captain.

¹ Ed. note: The word *escopetas* did not mean "shotguns" then, but flint-lock carbines, or light muskets. No doubt, some pistols of the same type were also included in this line item. The heavier muskets were then called *espingardas*, better translated by the English word "arquebuses".

44,185 Ms. was the cost of 95 dozen spears, 10 dozen javelins, 1,000 lances, 200 pikes, 6 boarding pikes and 6 lance shafts from Bilbao.

2,499 Ms. was the cost of 120 balls of wire as spares for the crossbows and 7 *dantas para las mieses*¹, and what was used to refit 59 crossbows.

3,553 Ms. was expended to put the weapons in good condition as well as for 4 leather [straps or pouches] for stowing them aboard, and 6 pounds of emery for cleaning them, and for 3,000 tacks and 200 spare buckles.

5,611 Ms. was the cost of 50 [powder] horns for the arquebuses, 50 scrapers and 150 ells of wick.

[Sub-total: 224,608 Maravedis]

4. Provisions for the fleet and related expenses.²

372,510 Ms. was expended for biscuit, of which

363,480 Ms. was the cost of 2,138 quintals and 3 pounds of biscuit at 170 Ms. per quintal, and

6,375 Ms. was the cost of the 18 units of biscuit which they bought with the ship **Santiago Bretona**³, and

2,655 Ms. was laid out for the loan of the sacks and the transport of the biscuit.

590,000 Ms. for [sherry] wine from Jerez: 508 butts⁴ purchased at various prices for a total of 511,347 Ms.; for which an additional 78,653 Ms. was expended as follows:

37,870 Ms. for the freight charges;

18,428 Ms. for the cartage;

6,324 Ms. given to Gonzalo Díaz for the 93 days that he spent purchasing them;

3,320 Ms. for the hoisting of 420 casks;

1 Ed. note: Incomprehensible as it is. Literally, this could mean “scoops for the harvest, or for grain fields”, but this has nothing to do with crossbows. My guess is that it is a transcription error for “carcax para las saetas”, which would mean “quivers for the arrows”.

2 Ed. note: Navarrete has given a detailed distribution list for each ship (*op. cit.*, pp. 10-11, 182-188). It is of little interest to us, since most of the food had been used before the crossing of the Pacific. Suffice to say that the food budget was based on rations required by 237 persons for 2 years; that is, there were 9 quintals and 17 pounds of biscuit per man, and 1 barrel, 20 arrobas and 2 tots of wine per man.

3 Ed. note: Here we find a clue as to the origin of the ship **Santiago**; it had come from Brittany, and was probably bought from its owners while at Seville. Also, it comes as no surprise to find about 18 Frenchmen serving among Magellan's crews. Seven of them served aboard this ship (See next document). They may have been the same men who had sailed her down from Brittany.

4 Ed. note: Butts or *botas*. A *bota* is a liquid measure equivalent to 125 gallons or 516 litres.

6,115 Ms. was the cost of the cork and the [cart] sideboards, as well as of the couriers sent from Seville to Jerez with regard the the said wine;
 4,790 Ms. was spent by Juan Nicolás while he travelled to purchase it;
 and
 1,806 Ms. went to watchmen during the loading in Jerez and the unloading in Seville.

23,037 Ms. was the cost of 50 **fanegas**¹ of beans, 90 fanegas of chick-peas, and 2 fanegas of lentils.

58,425 Ms. was the cost of 47 quintals and 5 arrobas of edible oil.

62,879 Ms. was the cost of 200 barrels of anchovies and 166 dozen dried *alvarinos* and *cazones*[sturgeon?], as well as 9 dozen of *dentudos*[toothed fish] and 63 dozen of *cornudillas*[horned fish], and 17 arrobas 23 pounds of dried *vastinas*[?], and charges associated with them.

43,908 Ms. was the cost of 57 quintals and 12 pounds of bacon [i.e. dried pork bellies], purchased at various prices.

17,735 Ms., of which 14,000 Ms. was the cost of 7 cows bought in San Lúcar, 1,180 Ms. for 3 pigs, and the 2,500 Ms. spent for meat for the crew that took the ships down to San Lúcar and [while] in San Lúcar.²

26,434 Ms. was the cost of 984 cheeses, whose total weight was 112 arrobas and 16 pounds, and which were purchased at various prices.

393,623 Ms. was expended on the butts, casks³, and hogsheads, in which was stored the wine and water for the voyage, as well as for iron hoops and coopering, as follows:

230,017 Ms. for 417 casks, 253 butts, and 45 hogsheads, purchased at various unit prices, to store the wine and water for the said voyage;

125,973 Ms. for 3,293 hoops for the hogsheads, butts and casks;

4,925 Ms. for the jars to store the oil;

2,625 Ms. for 75 barrel hoops;

4,798 Ms. bundles of wicker carried as spares⁴;

4,216 Ms. for 43 sets of hoops also carried as spares;

3,511 Ms. for the cheese barrels, the coopering of 11 butts and 10 casks, and the 129 jars bought, in addition to those mentioned above, for the vinegar and other things necessary for the fleet.

[Sub-total: 1,588,551 Maravedis]

1 Ed. note: One fanega of Castile was equivalent to 55 or 56 liters (See B&R II, p. 147).

2 Ed. note: No doubt some live hens and ducks were also carried in coops on the deck.

3 Ed. note: Called *pipas* or pipes, which probably contained 105 gallons each.

4 Ed. note: Not all barrel hoops were made of iron. Some were made of twisted wicker.

5. Pantry items and other small articles for the fleet.

15,451 Ms. was the cost of 21 arrobas and 9 pounds of sugar, bought at 720 Ms. per arroba.

3,655 Ms. was the cost of 200 arrobas of vinegar brought from Moguer, as delivered to the docks.

2,198 Ms. was the cost of 250 strings of garlic and 100 bundles of onions.

5,997 Ms. was the cost of 18 quintals of raisins, sun-dried or lime-dried, purchased at various prices.

1,130 Ms. was the cost of 16 quarter-casks of figs.

2,922 Ms. was the cost of 12 fanegas of almonds in the shell, including transport.

8,980 Ms. was the cost of 54 arrobas and 2 pounds of honey in pots, including transport.

750 Ms. was the cost of 2 quintals of prunes.

1,554 Ms. was the cost of 3 jars of capers.¹

1,768 Ms. was the cost of [blank] crates of salt.

1,575 Ms. was the cost of 3 quintals and 22 pounds of rice.²

380 Ms. was the cost of 1 fanega of mustard.

5,779 Ms. was the cost of the quince paste for the fleet.

13,027 Ms. was the cost of the pharmaceuticals, the medicines, ointments, oils and distilled water.³

5,927 Ms. was the cost of 5 casks of flour, of which each ship in the fleet had its own [cask].

[Sub-total: 71,093 Maravedis]

6. Copperware and other cooking implements for the fleet.

21,515 Ms. was the cost of the copperware of the fleet, of which

6,165 Ms. was for 5 large cauldrons of copper which weighed 280 pounds;

3,700 Ms. for 5 copper kettles which weighed 132 pounds;

7,695 Ms. was for 2 copper ovens which weighed 171 pounds;

1,215 Ms. was the cost of a copper kettle weighing 27 pounds;

2,200 Ms. was the cost of a cauldron for heating pitch, weighing 55 pounds;

540 Ms. given to Cabrera, the coppersmith, to replace the copper bottom of one of the cauldrons, and 11 pounds of copper that was left over.

884 Ms. was the cost of 10 large knives for the ships.

1 Ed. note: An example of how expensive spices were in Europe at that time.

2 Ed. note: It is obvious that more rice was to be purchased elsewhere cheaper, perhaps in the Canary Islands.

3 Ed. note: A mortar and pestle set was purchased later (See below).

- 516 Ms. was the cost of 42 wooden pints [measures] for the rationing of wine and water.
- 3,440 Ms. was the cost of 8 arrobas of candles and the 42 arrobas of candles made with the tallow bought for the ships; also 20 pounds of wool waste which they took along to make more candles in case of need.
- 1,430 Ms. was the cost of 89 lanterns which the ships received.
- 495 Ms. was the cost of 9-1/2 pounds of ornamented wax candles which were provided for the blessing of the ships.
- 8,860 Ms. was the cost of 40 wagon-loads of wood which were bought for the fleet.
- 1,280 Ms. for 40 ells of linen, of which each ship received 8 ells for table cloths.
- 476 Ms. was the cost of 14 serving pans.
- 158 Ms. was the cost of 1 chain for the stowage area.
- 256 Ms. was the cost of 12 funnels with their iron pipes.¹
- 1,530 Ms. was the cost of 22-1/2 pounds of wax which the ships received for waxing the thread for sewing sails, as well as for the archer [sic]².
- 768 Ms. was the cost of 12 iron knives³ for the pantries of the ships.
- 204 Ms. was the cost of 5 large iron spoons.
- 5,834 Ms. was the cost of 100 wooden mugs, 200 bowls, 100 carving knives, 66 wooden platters, 12 mortars, 62 mess-dishes, all of which came from Bilbao.
- 240 Ms. was the cost of 20 binnacle lamps.
- 330 Ms. was the cost of 12 sheet funnels, 6 large and 6 small.
- 125 Ms. was the cost of 5 hammers.
- 995 Ms. was the cost of 18 mess-pans over and above the 14 included in this account [category].
- 653 Ms. was the cost of a mortar and pestle for the pharmacy.
- 3,622 Ms. was the cost of 35 padlocks which the stewards of the ships received.
- 2,891 Ms. was the cost of the leg-irons, manacles, and shackle chains for the fleet.
- 200 Ms. was the cost of 8 furling gaskets.
- 240 Ms. was the cost of 20 pounds of steel for reinforcing the picks and other tools.
- 297 Ms. for one arroba of marked weights of iron for the purpose of weighing the weights and other measures they might find in the lands to be discovered.⁴
- 2,400 Ms. was the cost of 50 hoes and mattocks.
- 1,600 Ms. was the cost of 20 iron bars and crow-bars for the ships.
- 2,531 Ms. was the cost of 56 iron picks and hammers, and 2 large iron sledges.
- 1,200 Ms. was the cost of 2 iron lanterns.

1 Ed. note: These items could be small bellows for the fire pit, rather than equipment for transshipping liquids.

2 Ed. note: Perhaps this word (*ballestero*) means some crossbow mechanism, rather than the crossbowman himself.

3 Ed. note: The word *calabozo* used in the original refers to a machete-like knife with a hooked tip.

4 Ed. note: No doubt, some scales and balances were also included.

360 Ms. was the cost of 8 pairs of tongs which the stewards received.

1,224 Ms. was the cost of 12 borers, 6 awls, 5 boat hooks, all of which came from Bilbao.

24,938 Ms. was the cost of 19 quintals and 12 pounds of iron in small bars which the stewards received.

10,639 Ms. was the cost of the matting and baskets for the fleet, of which

9,290 Ms. was the cost of 128 mats for [protecting fragile goods] in the storage areas, and

1,349 Ms. was the cost of 87 baskets for the service of the ships, and to take out [and distribute] the biscuit from the stores, and 22 panniers for the weapons.

30,254 Ms. was the cost of the fishing tackle divided up as follows:

8,500 Ms. for 2 draw-nets;

125 Ms. for 6 fish-hooks for a line;

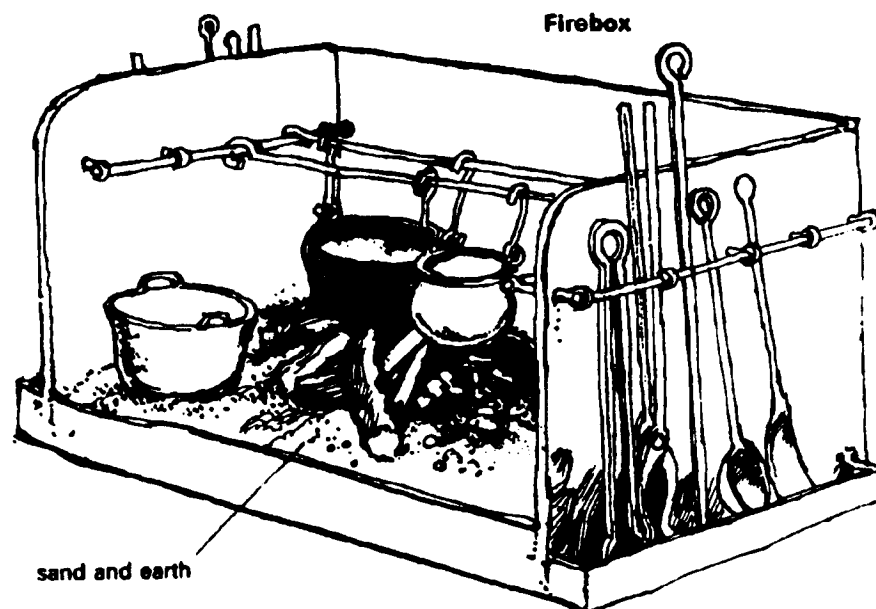
425 Ms. was the cost of the cork for the draw-nets;

8,663 Ms. was the cost of the flax and cord for fishing lines;

8,715 Ms. was the cost of the harpoons and tridents that came from Vizcaya;

3,826 Ms. was the cost of 10,500 fish-hooks.

[Sub-total: 132,385 Maravedis]



The portable kitchen.

7. List of many things that go with the fleet (cont'd).

- 9,147 Ms., of which
 3,000 Ms. for one fully-equipped forge, and
 6,147 Ms. for some large bellows, one anvil, and air pipes, which came from Vizcaya.
- 1,211 Ms. was the cost of 15 blank books, ruled, 5 of which for book-keeping and the rest to be given to the officers for record keeping.
- 2,635 Ms. went to the stevedores who loaded the ships.
- 2,125 Ms. was the cost of 2 hones and 1 grindstone for the two barbers who went with the fleet.
- 2,895 Ms. was the cost of 5 drums and 20 tambourines for the diversion of the crew of the fleet.¹
- 16,513 Ms. was the cost of the [religious] ornaments, with all the adornments, in order for the two [sic] priests who go with the fleet to say mass.
- 5,735 Ms. went to the pilots, 3,700 to those who brought the fleet from Seville to San Lúcar, and 1,985 Ms. to those who took the ships out of the harbor of San Lúcar.
- 11,250 Ms. went to Rodrigo de Garay for having served in the fleet from the beginning of the outfitting until it left Seville.
- 7,500 Ms. went to Juan de la Cueva, also involved with the business of the fleet for the same time period.
- 12,014 Ms. was paid for quicksilver [i.e. mercury] and vermilion² that were taken from the Almaden, along with the dressed skins, plaited wicker ropes, finishing material, and copper sheeting that come with them.
- 5,625 Ms. was received by the man who came from Portugal and was sent to the Court, to pay his expenses.
- 45,000 Ms. was paid to the couriers of the Royal Court and to Juan de Cartagena³.
- 6,750 Ms. was given to the caravel and for the food of the man who brought letters to the Canary Islands.
- 15,000 Ms. was received by Luis de Mendoza, the treasurer of the fleet, in [the form of] 40 ducats⁴, for the things that had to be bought in the Canary Islands.
- [Sub-total: 143,400 Maravedis]

1 Ed. note: No doubt the itemized list included some horns and bugles as well.

2 Ed. note: Also called cinnabar, mercuric sulphide, the principal ore of mercury. This was part of the trade goods carried by the ship (See list below).

3 Ed. note: The Inspector-general of the fleet.

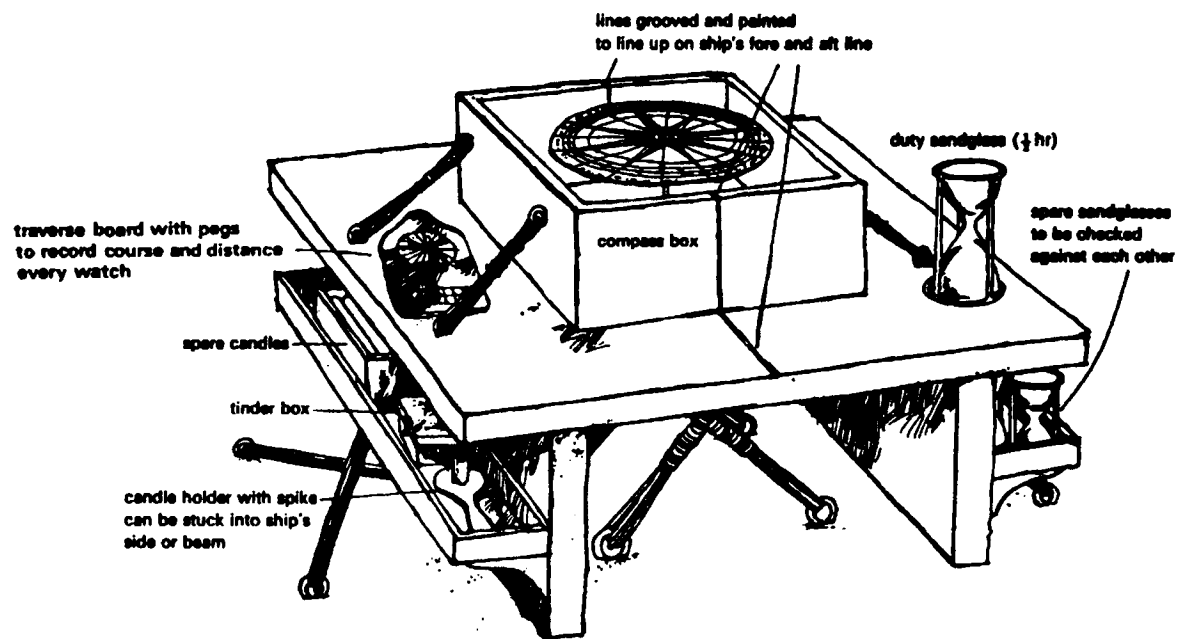
4 Ed. note: This item confirms that 1 ducat was then worth 375 Maravedis.

8. Merchandise carried by the fleet, and wages that have been paid to the crews of the fleet.

1,154,504 Ms. was paid in **wages** to the 237 persons of the fleet as an advance for 4 months.¹

1,679,769 Ms. was the value of the **merchandise** which the fleet took along for trade purposes and of the silk, clothes and other things to be used as gifts.²

Sub-total: 2,834,273 Maravedis.



9. Charts, quadrants, astrolabes, compass needles and hour-glasses given to the fleet.

68,182 Ms. was expended for nautical charts and quadrants, as follows:

1,125 Ms. went to Nuño García [de Torreño] to buy parchments to make the charts;

900 Ms. for a dozen parchment skins that were given to the above-mentioned;

1 Ed. note: This represents an average salary of about 15,000 Maravedis per man per year. This figure is a good yard-stick by which we can appreciate the real value of the Maravedi at that time. \$15,000 per year would seem like a reasonable average salary.

2 Ed. note: See detailed list given below.

864 Ms. for another dozen skins that were given to the said Nuño García;

13,125 Ms. for 7 nautical charts that he made at the order of Ruy Falero, at 5 ducats each;

11,250 Ms. paid to Nuño García for 11 nautical charts that he made at the order of Fernando Magallanes;

13,500 Ms. for 6 other nautical charts that Ruy Falero had made, one of which was sent to His Majesty;

1,121 Ms. for 6 wooden quadrants that Ruy Falero [had] made;

750 Ms. coming from a wooden astrolabe that Ruy Falero ordered made;

4,500 Ms. paid by Captain Magellan for a **globe** he ordered made for His Majesty;

4,500 Ms. that were paid to the said Magellan for 6 metal astrolabes, with their ruled lines;

4,080 Ms. paid to him also for 15 magnetic needles;

1,875 Ms. paid to him for 15 wooden quadrants, bronzed;

476 Ms. for some gilded compass cards in a box, along with the letter that he [Magellan] sent to His Majesty;

340 Ms. for a leather box that he had made in order to pack the globe;

612 Ms. for 12 hour-glasses bought by the Captain;

750 Ms. for 2 magnetic needles that the said Captain has with him;

600 Ms. for 6 pairs of compasses;

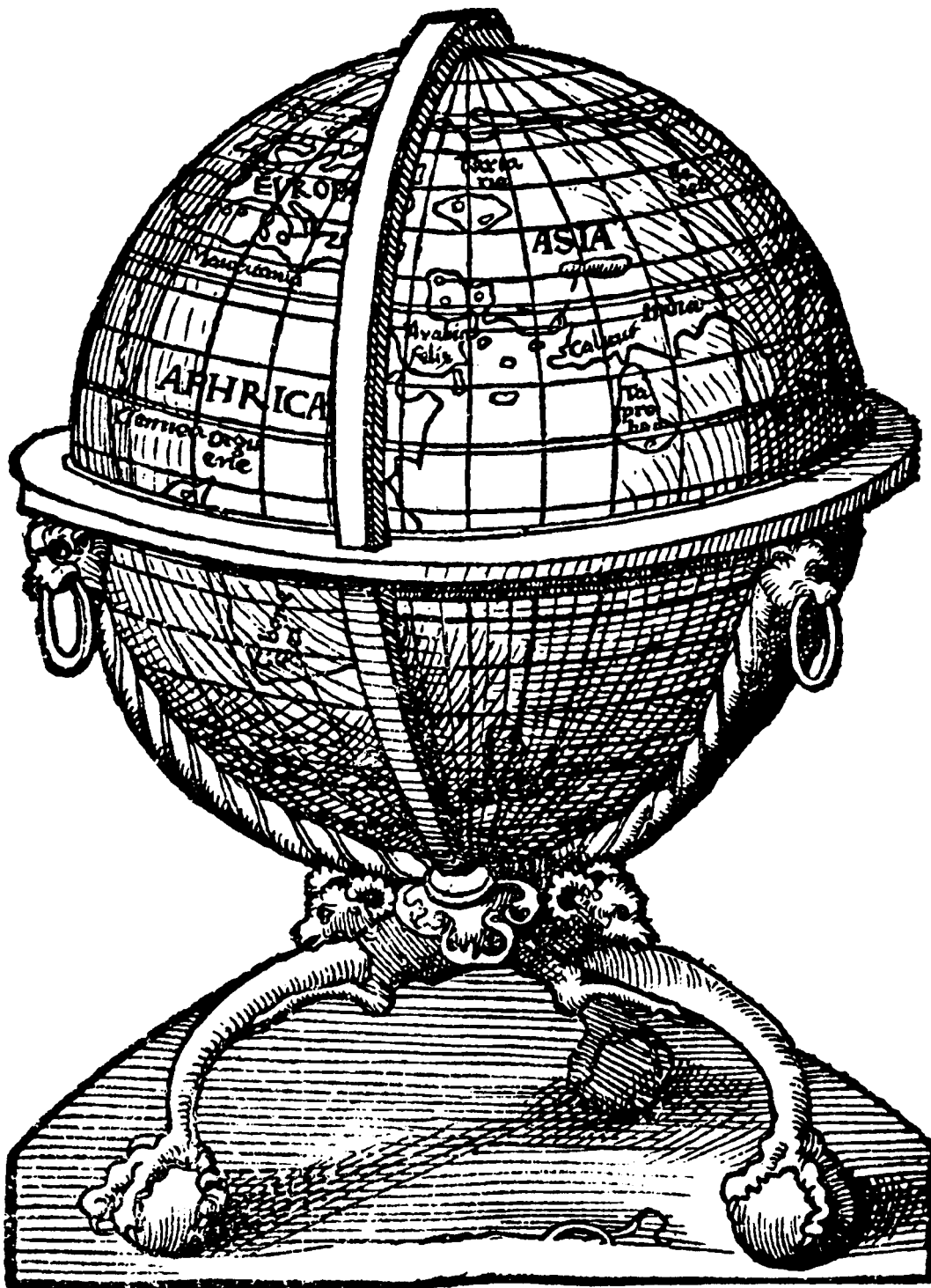
750 Ms. paid to Nuño García for 2 magnetic needles;

136 Ms. paid for the correction of a damaged magnetic needle;

884 Ms. was the cost of 4 big boxes for 4 magnetic needles that Ruy Falero had made;

6,094 Ms. for 16 magnetic needles and 6 hour-glasses sent by Bernardino del Castillo from Cádiz.

[Sub-total: 68,232 (not 68,182) Maravedis]



Magellan presented a similar globe to the King. (From *Schöner's Opusculum geographicum*, Nuremberg, 1533)

10. Summary of the total costs of the fleet.

3,912,241 Ms. [sic] was the cost of the 5 ships of the fleet with their equipment, ordnance, powder, armor, crossbows, arquebuses, lances, etc., which means that 5 ships had a total of 445 net tons, plus or minus 5 tons, which were outfitted at an **average cost of 8,791-1/2 Ms. per ton.**

415,060 Ms. [sic] for pharmaceuticals, copperware, fishing equipment, and courier service while the fleet was being prepared; and the nautical charts, quadrants, astrolabes, compasses, hour-glasses, magnetic needles, and other small but necessary articles for the said fleet.

1,589,551 Ms. [sic] for the biscuit, wine, oil, fish, meat, cheese, vegetables, as well as the casks, wine boots and butts, for the wine and water.

1,154,504 Ms. paid out as [advanced] wages for 237 persons with the captains and officers aboard the said fleet.

1,679,769 Ms. was the cost of the merchandise for trading, and the silk and woven clothes, and the other things for gifts, carried in the said fleet.

Total: **8,751,125 Ms.** [sic] expended for the said fleet.¹

Minus 416,790 Ms. which must be deducted for the things that were left from the fleet and were stored at Seville, hence:

Net total: **8,334,335 Ms.** actually spent for the said fleet, of which:

6,454,209 Ms. was contributed by His Majesty [i.e. 77%], and

1,880,126 Ms. was contributed by Christopher de Haro [i.e. 23%].

Merchandise to be traded for spices.²

20 quintals of quick-silver [mercury],

30 quintals of vermilion [cinnabar],

100 quintals of alum,

30 units of colored cloth³, at a unit cost of 40 Ms.,

20 pounds of saffron,

3 units [of fine fabric] at 20 reales each, silvered, colored and yellow,

1 Ed. note: Accounts are understated by 3,530 Ms. Anticipating future events, it can be mentioned at this point that the spice cargo of the only ship that returned to Spain was almost 21 metric tons of cloves; this was enough to cover the total costs of the fleet, and yield a profit of 346,212 Maravedis.

2 Ed. note: This list is not part of the above document, but comes from an order given by the King to the House of Trade, as published by Navarrete, *op. cit.*, p. 9, citing AGI Seville: *Casa de Contratación, legajo 2º, Libros de registros de Reales Cédulas y órdenes, libro 2º (1518-1522)*.

3 Ed. note: Probably of the calico type.

1 unit of *grana* [fine cloth] from Valencia,
10 quintals of ivory,
2 units of colored velvets,
200 simple colored bonnets,
200 colored *sejias*¹,
10,000 fish-hooks,
1,000 Maravedis worth of combs,
200 quintals of copper ingots,
10,000 mallets of yellow *matamundo*²,
2,000 brass bracelets,
2,000 copper bracelets,
200 small brass vessels of two types,
2 dozen large vessels,
20,000 jingle bells of three types,
400 dozen knives from Germany, of low quality,
40 units of colored buckram,
50 dozen scissors,
1,000 small mirrors, [but] 100 of them large ones,
100 quintals of lead,
500 pounds of crystalline [i.e. glass beads], which are [like] diamonds of all colors.

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- 1 Ed. note: Unknown word, which could be a transcription error. Some guesses as to its meaning include: cheap serges, gaudy kerchiefs, sun-shades.
- 2 Ed. note: Literally “people killer”. Actual meaning unknown. Not found in any dictionary. Could be cheap brass.



Captain General Magellan on deck at the time of departure. (*Lithograph by C. W. Andrews in "La Ilustración Filipina", Manila, 1 May 1860*)