

The Portuguese pavement: drawings from the archives

A calçada portuguesa: desenhos em arquivo

Denise Santos

ABSTRACT

As they can be easily adapted to meet the requirements of architecture, engineering and a range of different sociocultural contexts, geological materials have become an essential element in the construction of cities due to their various characteristics and properties. Ever since it first began to appear in Lisbon in the mid-nineteenth century, the so-called “Portuguese pavement” has called for a special art of working the stone, resulting in a unique application that is greatly admired. This *Documenta* offers a selection of sources from the Lisbon Municipal Archive relating to the design of Portuguese pavements, dividing the various patterns into two large groups: those that are purely decorative; and those of an informative or commercial nature. The examples presented here testify to the different material and symbolic manifestations of the image of the city, seeking in this way to help preserve its memory.

RESUMO

Fruto da capacidade de utilizar e manipular os materiais de acordo com as exigências arquitetónicas, de engenharia e dos contextos socioculturais, os materiais geológicos têm sido um elemento essencial na construção das cidades pelas diferentes características e propriedades que possuem. Realizada através de uma singular aplicação e resultado de uma arte de trabalhar a pedra, a denominada “calçada portuguesa” tem sido objeto de admiração desde as primeiras aplicações em Lisboa, em meados do século XIX. Nesta *Documenta* divulga-se uma seleção de fontes do Arquivo Municipal de Lisboa, referentes ao desenho da calçada portuguesa, dividindo-as em dois grandes grupos: de cariz decorativo e de âmbito informativo ou comercial. Os exemplos que se apresentam são testemunhos de manifestações materiais e simbólicas da imagem da cidade que se pretende sublinhar e cuja memória se deseja recuperar.

KEYWORDS

Portuguese pavement; Commercial drawings; Ornamental drawings; Lisbon

PALAVRAS-CHAVE

Calçada portuguesa; Desenhos comerciais; Desenhos ornamentais; Lisboa

As a city, Lisbon has been built with light-coloured materials that reflect and scatter the light, making its appearance a more intense sight for our eyes. The houses are painted in pinks, yellows and ochres, warm colours reflecting onto the ground, where the Portuguese pavement is the predominant feature, creating the impression that the light also comes from the ground itself (Monteiro and Bastos, 2015, p. 36).

Cities are built with countless different materials, applied in a wide variety of ways imagined by human beings in accordance with their needs, the result being that their final appearance is dictated by technological advances, the geographical and economic availability of raw materials, the capacity existing for their production, and their thermal properties, as well as their resistance and flexibility, and their acoustic and other characteristics. The combination of these factors, together with the human ability to manipulate the materials in accordance with the requirements of architecture, engineering and different sociocultural contexts, has helped to shape the image of the city and its urban landscape over time.

Due to their intrinsic characteristics and properties, geological materials in their multiple varieties and combinations have been an essential element in the construction of the various infrastructures that form an integral part of cities. We can find them used in different shapes and forms in buildings, monuments, bridges, tunnels and a variety of other urban structures, as well as in pedestrian areas.

Because of its uniqueness, the so-called “Portuguese pavement” has been greatly admired ever since its first productions began to appear in Lisbon, later spreading to other cities from the late nineteenth century onwards. It was precisely with the widespread use of this type of construction in public and private spaces (Bairrada, 1985, p. LXVII; Miranda, 2017a, p. 38) that artistic paving of this nature gradually became a common feature of Portuguese towns and cities, further defined and consolidated by the drawing of figures, words, symbols and shapes created through the contrasting patterns of small black and white stones (Bairrada, 1985, p. XLVII; Miranda, 2017a; Matos, 2011).

Not always well preserved, because of the changes that were taking place in the city, but also due to a certain amount of neglect, the Portuguese pavement has recently regained the attention of public opinion and the institutional powers, among others, through the proposal for the inscription of the “Arte e saber-fazer da calçada portuguesa” (Art and know-how of the Portuguese pavement) in the national inventory of intangible cultural heritage, presented by the *Associação da Calçada Portuguesa* (Portuguese Pavement Association). The application process was opened in March 2021, and the approval of the proposal was published in *Diário da República* nº 141/2021¹, resulting in the intangible heritage file being incorporated into the national inventory of the *Direção-Geral do Património Cultural* (DGPC – Directorate-General for Cultural Heritage) (Inventory Number: INPCI_SU_2021_001)².

The Portuguese pavement has been the subject of various publications relating, above all, to matters of a historical, technical and geological nature, linked to questions of heritage and engineering, among other topics (Bairrada, 1985; Cabrera and Nunes, 1998; Matos, 1999, 2004, 2006, 2009, 2011 and 2018; Castela and Dornella, 2006; Ferreira, 2007b; Miranda, 2017; Henriques, Moura and Santos, 2009; Silva, 2016; Fernandes, Bugalhão and

¹ Anúncio nº 172/2021. *Diário da República*. II Série. 141 (2021-07-22) p. 31. Available on the internet at: <https://dre.pt/application/conteudo/168043488>

² Ficha de Património Imaterial. Denominação: Arte e saber-fazer da calçada portuguesa. Nº de inventário: INPCI_SU_2021_001. MatrizPCI: Inventário Nacional do Património Cultural Imaterial. [Consulted [02/09/2021]. Available on the internet at: <http://www.matrizpci.dgpc.pt/MatrizPCI.Web/InventarioNacional/DetalheFicha/756?dirPesq=0>

Fernandes, 2017)³. There is, however, still a shortage of studies and publications examining the pavement from sociological and anthropological perspectives, as well as from the point of view of urban studies. It is not our purpose here to summarise what other authors have written on this subject, although we have made use of some of their works in order to contextualise the theme.

Accordingly, the aim of this *Documenta* is to disseminate a group of drawings kept at the Lisbon Municipal Archive which lay at the origin of ideas and proposals for decorative and commercial pavements at different places in the city. Some of these drawings are relatively unknown, while others have never previously been published; many of them were approved by the Lisbon Municipal Council (Câmara Municipal de Lisboa – CML), or produced by the council's own technicians, and were reproduced and materialised in the city's pavements. Most of the selection that is presented here no longer exists in material terms, so that these drawings almost always constitute the sole testimony to the realisation of their patterns in Lisbon's pavements.

THE CITY, ITS SPACES AND INDIVIDUALS

As it is the place where human interactions occur, the urban space reflects the communication of individuals with that same space, with its configuration, infrastructures, design, ambivalences, potentialities and limitations. In this sense, a city's places describe the visions of different times, including their ideological, political, commercial, social, economic or cultural motivations (Lousada, 2017, p. 45). But, as Gato (2010) stated, some autonomy may also be conceded to the space. The city's arteries represent a territory where its inhabitants come into contact with one another, where the physical and symbolic space is enhanced, enjoyed and worked upon in accordance with its characteristics. The "pavement asserts itself in a polysemic way as an area where the technical reality of the materials encounters the multiple social, cultural and civilisational readings that emanate from them" (Simões and Diogo, 2017, p. 17). So, "the city is an open space, in a state of constant change and therefore permeable to artistic movements, economic, social and political transformations and needs, subject to naturally occurring constraints – the city is essentially the place where these multiple factors converge" (Cabrera and Nunes, 1998, p. XIII).

In this way, human action and intervention can be noted through a more attentive look at the city's symbolic dimension: such aspects indicate how individuals can alter the way in which that space is enjoyed and appropriated in keeping with the changes that are made and managed over time.

The idea of urban symbolic ecology was conceived and introduced in response to questions linked to the study of the distribution of symbolic and ritual structures in the urban space (Nas, 1993). Bearing in mind that it is possible to characterise these spatial units either as a whole or in part, when thinking about the city's cultural dimension we may certainly consider this idea if we look closely at the symbolic inscription of memory in material marks⁴. We therefore find a wide range of elements that characterise the urban space and which, when combined with one another, enable us to gain access to its identity. This is the case with architecture, urban design, statues, place names, urban furniture and equipment, and urban art, among which we can, and should, include the Portuguese pavement.

³ Several scholars of the city of Lisbon have addressed the theme of the Portuguese pavement in their works, such as Júlio de Castilho, for example, in *Lisboa Antiga* (1879-1890) and *A Ribeira de Lisboa* (1893).

⁴ These marks can also be intangible, as is the case with commemorations, processions, myths, literary production and films.

THE PAVEMENT: MATERIAL, SYMBOLIC AND OPERATIONAL CONNECTIONS

In the late nineteenth and early twentieth centuries, urban planning in Europe was the subject of several proposals, made in accordance with the different schools of thought that were beginning to emerge at that time and which suggested various ways of responding to the city's growth and increasing density. Together with the possible solutions proposed for the problems that were identified, there was also increasing interest in the aesthetics and symbolism of the city's infrastructures, with special attention being given to the details of significant urban landmarks, whether these were avenues, buildings or public squares. Their design was intended to develop a special identity for the city through the creation of significant symbolic and artistic elements, such as streetlamps, fountains, gardens, urban furniture and statues, and, of course, the pavements. In fact, particular importance was paid to the design and conception of the public space, in keeping with a vision of monumentality that would create a sequence of forms and artefacts intended to shape the city's appearance, ranging from buildings and avenues to urban equipment, which would become distinct and memorable when compared with other similar spaces, both in Portugal and abroad. Throughout the twentieth century, these mechanisms were transformed by the public powers into criteria, rules or even specific legislation, in this way rethinking the design of the urban space, making the public areas distinctly unique and endowing them with their own singular identity closely linked to the rest of the city.

This identity could be easily recognised and applied on a microscale to the various types of public spaces and their paved areas. Because they contain a material, symbolic and operational meaning, these promenades and other Portuguese stone pavements could also be considered places of memory (Nora, 1984), just like other similar areas already decorated with public sculpture and urban art.

Due to their complex versatility and the different possibilities existing for their composition, urban public spaces have a wide-ranging potential; that is why these squares, plazas and streets attract the population to them, displaying a mixed use that has become customary given the hybrid nature of their characteristics (Coupland, 1996; Lousada, 2017), whether for leisure or out of necessity, and in this way contributing to their identity. The different types of pedestrian pavements in a city are indicative of the hierarchical organisation of the various spaces and their constitution, providing information – for example through their format, dimension, composition, design, or even their state of conservation – that affects the way in which individuals perceive them and move over them, generating different expectations for their users (Cabrera and Nunes, 1998). Thus, when we consider urban practices, or, in other words, when we think about the combination of the theoretical reference system and the material devices that produce the symbolic image of a space or a city, as well as the meta-narratives shared by the population in relation to its places, we may regard the promenades and footpaths, in their idealisation and materialisation in the form of the Portuguese stone pavement, as an identification resulting from the mixture of formal and spatial elements that are also aesthetic and symbolic, utilitarian, informative and normative.

Thus, if a pavement presents decorative patterns or graphic information, such visual information is indicative of the improvement and development of a specific space, of a transition between areas, or of its formal or institutional identification, whether because of its ownership, because of its quality, its purpose or even because of its status, making it “a fundamental mediator in the architecture of mobility/ies” that changes “in accordance with the actors participating in it and their agendas” (Simões and Diogo, 2017, p. 17). It should be noted that, in the Portuguese capital, most of the designs made for pavements were produced by anonymous or amateur artists, technicians working for the local authority, or even resulted from combinations that the paviours themselves conceived in their adaptation to the space (Cabrera and Nunes, 1998, p. XLVII). However, up till now, their authorship has resulted, in part, from the invitation addressed to painters such as Abel Manta or Maria Keil, as well as to architects such as Ventura Terra, Cassiano Branco or Pardal Monteiro (Cabrera and Nunes, 1998, p. XLVII).

THE PORTUGUESE PAVEMENT IN LISBON: ANTECEDENTS AND DEVELOPMENTS

In the bibliography on the subject, there is general agreement that the construction of the first ornamental pavement in Portugal made of small black and white cobbles was the idea of Lieutenant-General Eusébio Cândido Cordeiro Pinheiro Furtado, who, in 1842, was the governor of the prison at Castelo de São Jorge. Making use of the labour provided by the prisoners, he designed and built the pavement of the courtyard at the entrance to the castle, the gutters and the parade ground of the headquarters of the Battalion of Hunters stationed there (Matos, 2011, p. 185). The work that they produced caused quite a sensation and, 41 years later, a journalist from the *Diário de Notícias* confirmed that this same pavement still “exists there in a perfect state of conservation” (*apud* Matos, 2011, p. 185).

Later, at the instigation of Lisbon Municipal Council, the same idea was to be replicated on a much larger scale in order to pave the square of Rossio. Júlio de Castilho (1937, pp. 110-111) tells us that after the buildings around Rossio had been constructed and the layout of the square planned in November 1845, closing it to vehicle and animal traffic, the Council “decided, in April 1848, that, with the completion of the work of paving the entrance to the *Passeio Público* (Public Promenade), the central section of Rossio should begin to be paved with stones”. The work followed the same principles as Eusébio Furtado had already used, proposing “an original and eye-catching design, which could be built by the prisoners from Castelo de São Jorge” (Castilho, 1937, p. 111). Three months later, in July, the Council “approved the project, asking for the wooden formwork to be made and for the municipal coffers to provide the necessary resources”. The following year, in June 1849, the work still continued “with some reductions in the number of prisoners working on it and was finally completed with the municipality’s own paviours” (Castilho, 1937, p. 111).

The work took more than 16 months to be completed, and calculations at that time estimated its cost at roughly three hundred thousand *réis* just for the payment of the prisoners, a large sum of money that justified the statement made in a text of the *Diário de Notícias* newspaper of July 1883, namely that “at that price, there is no Council that will ever have a mosaic pavement again” (*apud* Castilho, 1937, p. 112).

When we talk about paving streets in a general sense, it is important to distinguish between the street – a space used for the circulation of people, animals and means of transport – and the pavement or sidewalk used only by people. Bearing this distinction in mind, we now present a brief examination of what the documentation tells us about the interventions made to Lisbon’s roads and pavements.

With the appearance of the motor car at the turn of the nineteenth to the twentieth century, the individuals who previously had been “accustomed to enjoying the almost exclusive use of the streets” were increasingly consigned to the sidewalks, becoming somewhat “dazed by the increasing road traffic and the advent of the new means of locomotion” (Cabrera and Nunes, 1998, p. XXIII), such as trams, or, later, buses and motorcycles.

However, the need to pave the streets, equipping them with better conditions for the circulation of traffic, while also improving their conservation and hygiene, already dated back to previous centuries. We are obviously not talking about the technical and material solution known by the name of “the Portuguese pavement”, which was used in the case of footpaths and squares from the late nineteenth century onwards, but rather other solutions for the paving of streets, made possible by the ready availability of raw materials and the necessary technical skills.

The early recourse to the use of geological materials in order to meet building requirements in Lisbon, involving the regulation and mediation between the king and the city’s authorities, was evident from the beginning of the Early Modern Era. In a document dating from the early fifteenth century, King João I authorised the quarrying of stone for building works from the city’s outskirts (in areas that are nowadays probably within its boundaries),

possibly for the construction of buildings, pavements and infrastructures⁵. Following the improvements that the cities were progressively benefiting from, the monarchs devoted special attention to the use of stone as a covering for streets in order to improve the circulation of people, animals and vehicles. For example, in 1498, King Manuel I stressed the importance of continuing with the paving works in Lisbon, which shows that there had already been some kind of previous covering and also highlighted the king's commitment to extending such pavements to new streets⁶. In the same year, the king also determined that the costs of this work should be charged to the city, not even exempting the nobility and the clergy, which underlines the importance of the works and the diligence and commitment of the sovereign. In 1515, the same king further authorised the Council to prosecute those who did not contribute to the paving of Rua Nova dos Mercadores (*Os passeios de Lisboa*, 1939, p. 81). It was, therefore, a matter of paving the roads and never a question of paving the sidewalks.

A hundred years later, in the reign of King Filipe II, we find an official notice of the Lisbon Council relating to the officers who were responsible for supervising the construction of pavements, although it is not clear what type of pavement it would be nor where its specific location was, but in which special attention was given to its construction, since the works were supposed to be monitored by the councillor responsible for public works, the city's ombudsman and an attorney for the craftsmen, whose task it was to undertake the measurements and carry out other legal formalities⁷. In another document, also dating from the reign of King Filipe II, about the need for repairs to various "pavements", it is stated that these were to be undertaken in the city of Lisbon, although no other type of information was provided. Although there were various villages and other population centres within the city's boundaries, it does not seem that this document related specifically to any so-called urban pavement⁸. Moving one more century further forward in time, we find another document relating to the need to repair "pavements" in the first months of 1720, in which the Lisbon Council consulted the Senate in order to know how much money would be needed to "mend" the pavements of the municipality⁹.

There is no doubt that Lisbon's prime central area was endowed with some type of pavement, increasingly subject to wear and tear due to its intense use and requiring regular conservation and repair work. Such attention was clearly afforded to the pavements in late 1738, when the Lisbon Council and Senate exchanged various documents relating to the "mending of the pavements of Lisbon streets, mainly those over which carriages pass"¹⁰. This statement highlights the fact that the subject-matter of these documents was the surface of the streets themselves, over which the different means of transport passed, in such large numbers and with such great frequency that they caused serious damage.

Since the stone pavement was regarded as a surface for the circulation of pedestrians, municipal orders and ordinances became frequent and commonplace throughout the twentieth century, calling for the construction of pavements of this type, composed of small white stones, to which other black ones were added when the intention

⁵ Arquivo Municipal de Lisboa (AML), [King João I authorises the extraction of stone from the quarries], 1406-07-06, PT/AMLSB/CMLSBAH/CHR/005/025/0105.

⁶ AML, [King Manuel I decides upon paving works], 1498-08-22, PT/AMLSB/CMLSBAH/CHR/005/011/0025.

⁷ AML, [Notice about the guidelines for constructing pavements], 1611-03-06, PT/AMLSB/CMLSBAH/CHC/015/004/0025.

⁸ AML, [Notice about the repair of the city's pavements], 1618-05-08, PT/AMLSB/CMLSBAH/CHC/015/004/0209.

⁹ AML, [Consultation about the expenditure on the repair of pavements], 1720-02-09 - 1720-04-26, PT/AMLSB/CMLSBAH/CHR/010/0039/016.

¹⁰ AML, [Notice about the budget for the mending of pavements], 1738-11-03, PT/AMLSB/CMLSBAH/CHR/010/0044/0004. Following on from the publication of this notice, see also: AML, [Consultation about the auctioning of the contract for the mending of pavements], 1738-11-07 - 1738-11-28, PT/AMLSB/CMLSBAH/CHR/010/0044/0003, and AML, [Consultation about the auctioning of the contract for the mending of pavements], 1738-12-04 - 1738-12-04, PT/AMLSB/CMLSBAH/CHR/010/0044/0002. Perhaps because the damage was considerable and beginning to accumulate, this concern had already been addressed in the previous year with a consultation for the auctioning of the contract to repair the streets, the order for which took more than seven months to be issued: AML, [Consultation about the auctioning of the contract for the mending of pavements], 1737-02-01 - 1737-09-16, PT/AMLSB/CMLSBAH/CHR/010/0043/014.

was to produce drawings of geometrical, anthropomorphic, zoomorphic, botanical, symbolic and iconographical figures as a way of decorating urban pedestrian areas.

From the late nineteenth century onwards, and throughout the twentieth century, the systematic recourse to this type of construction for Lisbon's pavements highlights the constant need for raw material – the geological resources, their characteristics and origin – in order to respond to the high rate of their consumption. We know that, in Lisbon and its surrounding area, there were countless quarries that, over time, provided the various types of stone that were used extensively, firstly in the construction of buildings and the paving of streets, and, later, in the paving of sidewalks and promenades (Matos, 2011). Pinto (2005, p. 29) identified 248 quarries that existed in the Lisbon municipality from 1927 onwards, most of which were intensely exploited from the late nineteenth until the mid-twentieth century to provide the resources needed, above all, for the construction of buildings. The geological materials produced by these quarries have been divided by the author of this article into four groups: sandpits, limestone, clay pits and basalt.

Although the data collected by Pinto (2005) only date from 1927 onwards, it is possible to find references to quarries that had existed in Lisbon in previous centuries. For the second half of the nineteenth century, there are several documents issued or received by the Council, referring to various matters related with quarries in Alcântara, Alcolena and Benfica¹¹, areas that are identified with the extraction of limestone (Pinto, 2005, pp. 34-35), one of the materials most commonly used in masonry constructions, the manufacture of lime and the laying of stone pavements. Away from these areas of the city, we find mention of the intention to open a quarry in Campo de Santa Clara, in the second half of the nineteenth century, related with the need to obtain raw material in order to continue building the local monastery, and only for a period of four months¹².

Another fundamental resource required for making the Portuguese pavement was basalt: black in colour (later black limestone was used as it was easier to cut and work with), it was essential for drawing geometrical patterns, due to the contrast that it made with the white limestone. It is known that this type of stone was quarried in Lisbon, although on a significantly smaller scale (Pinto, 2005, pp. 36 and 38). Even so, in 1939, it was stated in the *Revista Municipal* that “even the raw material used in the art of paving comes from Lisbon too”, since “the limestone comes from Monsanto, from the old quarries of Sabido, Campolide, or Fonte Santa. There is also good limestone in Odivelas and Paço de Arcos”. As for the basalt, this “comes almost exclusively from Monsanto, but there is also some in Odivelas. In some rare cases, basalt has been replaced by black limestone from Mem Martins” (*Os passeios de Lisboa*, 1939, p. 82).

As to the use of the artistic Portuguese pavement as a covering for the city's sidewalks, we know that, ever since the first project had been implemented in Rossio, these had been progressively paved with small stones of (white) limestone and (black) basalt, with the work proceeding at an increasingly faster pace throughout the first half of the twentieth century. Besides the ornamental and/or informative visual patterns drawn by the white and black stones (when this was the case), the advantage of paving with this material (whether this involved a combination of the two types of stones or just the use of the white limestone) was one of the points stressed by the Lisbon authorities. In 1895, the Lisbon Municipal Council's Commission for Improvements considered that “even some sidewalks of the Avenida da Liberdade could be covered with a pavement of small stones, which enables the rainwater to drain away easily and does not crumble into fine dust”, whereas, on the contrary, “concrete pavements have these inconveniences” (*Empedrados e mosaicos*, 1895). As far as the long-term disadvantages were concerned, the commission also noted that “after more than half a century of such intense use, there is bound to

¹¹ AML, [Description of the stone extracted from the quarry in Alcolena], 1860-06-12 - 1860-07-28, PT/AMLSB/CMBLM/GOMU/001/0005/0095; AML, [Request for measures relating to the quarries of Alcântara], 1867-08-07 - 1867-08-09, PT/AMLSB/CMBLM/GOMU/001/0005/0161; AML, [Request for railings at the quarries of Alcântara], 1867-04-20 - 1867-05-10, PT/AMLSB/CMBLM/GOMU/001/0005/0158; AML, [Renting of a quarry and purchase of a windmill in Benfica], 1868-01-11 - 1868-01-20, PT/AMLSB/CMLSBAH/CHR/013/005/0159. Alcolena was located in the then Council of Belém.

¹² AML, [Consultation about the opening of a quarry in Campo de Santa Clara], 1688-08-12 - 1688-09-11, PT/AMLSB/CMLSBAH/CHR/010/0023/028.

be a certain amount of polishing, which, due to the slope of the pavement, sometimes makes it slippery”, although, however, “the paving work remains perfectly cohesive and solid” (*Os passeios de Lisboa*, 1939, pp. 82-83).

In fact, the paving of the city’s sidewalks and squares continued at a steady pace, contributing to the embellishment and development of its prime central areas. In the nineteenth century, stone pavements were constructed in Largo do Carmo (1863), Largo de Camões (1867), Jardim da Patriarcal (1870), Praça do Município (1876), Largo de São Julião (1876), Praça do Duque da Terceira (1877), Largo do Chiado (1886), Rua Garrett (1888), the two central promenades of Avenida da Liberdade (1889, and from 1900 to 1908), Rua António Maria Cardoso (1893), Jardim de São Pedro de Alcântara (1894), Praça do Comércio (1907), and the two pedestrian islands of Praça do Marquês de Pombal (1910) (*Os passeios de Lisboa*, 1939, pp. 81-82).

The consumption of these two types of stone in the paving of Lisbon’s sidewalks, especially those made of limestone, was such that, between 1947 and 1949, roughly 500,000m² were paved each year, including sidewalks, squares, plazas and gardens, which was equivalent to 300,000 tons of stone in three years. In the same period, the production of geological materials varied between one and two million tons per year, of which more than 80% was limestone (Pinto, 2005, p. 55). In fact, a document issued by the Lisbon Municipal Council, in 1946, indicated the existence of roughly thirty quarries just in the area of Parque Florestal de Monsanto alone¹³.

None of this would have been possible without those who, through their hard work and mastery of their art, were able to realise the drawing made on paper in the form of a pavement: the paviours. Their work became so sophisticated that their ability to lay the stone with perfection and to join its little pieces together with enough consistency and unity to consolidate the pavement was handed down by the master craftsmen to their apprentices; such knowledge was essential in order to progress in the profession, which was rapidly transformed into an art, the “art of paving. That was certainly the thinking behind the Municipal Council’s decision to create the category of *paviour-artists*” among its professional staff (*Os passeios de Lisboa*, 1939, p. 79). The painstaking rigour and detail that this implied, based on a lifetime’s acquisition of the necessary technical skills and know-how, became so specific that the master paviours left their own small marks in the stone, a kind of artist’s signature to indicate the authorship of the work. These small marks were different from one another and readily recognisable in the workshop milieu. Accordingly, “almost all the most important decorative patterns, (such as, for example, the fleurons of the Avenida da Liberdade) are *signed*”, in such a way that one master paviour “will place a stone in the shape of an acute-angled triangle in the centre of his fleuron; another one will sign his work with a square-shaped stone; while yet another will sign with a piece of limestone that he has cut into the shape of a hexagon or a shell. And that stone shape will then represent a signature that the paviours will maintain – and recognise – thereafter” (*Os passeios de Lisboa*, 1939, p. 85; Matos, 2006).

Besides the identification of the master paviour, the pavement could also contain symbolic and textual references to commercial and industrial businesses, to the Council itself and its services, to the Church, to professional orders or organisations, such as the freemasonry, or even to the owners of the buildings next to the sidewalk, as, for example, the stars known as “*As estrelas do Milhões*” (The Stars of Mr Millions), in a reference to the “opulent capitalist Carvalho Monteiro [1848-1920], the owner of countless buildings (in Praça de Camões, Largo do Barão de Quintela, etc.) [who] signalled the presence of his properties by ordering that the pavements be marked with stars” (*Os passeios de Lisboa*, 1939, p. 85). In the field of religious interpretation, we also have the example of the eight-pointed star, the symbol of regeneration and an allusion to Mary, the mother of Jesus (Matos, 2011, p. 183).

The novelty and success of this peculiar way of paving the sidewalks and the paviour’s “art” itself gained such visibility that, in the first few decades of the twentieth century, interest was aroused in foreign cities “where the services of our paviours have arrived as an interesting novelty”, such as Paris (1900), Manaus (1905), Rio de

¹³ AML, PT/AMLSB/CMLSBAH/PURB/002/04033, [Sundry documentation relating to quarries located in Parque Florestal de Monsanto], 1946-10-22.

Janeiro (1906), Cape Town (1909), Genoa and Naples (1913), Seville (1929), with a total of 47 paviments being commissioned and sent to work in these cities (*Os passeios de Lisboa*, 1939, p. 80; Matos, 2009). Almost a hundred years later, the Portuguese pavement was to enjoy a new lease of life, both in Portugal and abroad, one such example being the case of Expo 98, with various design projects being implemented with the aid of contemporary architects and visual artists, such as José de Guimarães, Júlio Resende, Fernando Conduto, Xana, Rigo and Pedro Proença, who were contracted to embellish the areas around the various pavilions and structures (Matos, 2004, p. 63). More recently, in 2019, Alexandre Farto (Vhils) designed the effigy of Amália Rodrigues which a team from the Lisbon Municipal Council's School of Paviments produced on a vertical wall in Alfama.

THE PORTUGUESE PAVEMENT IN LISBON: DRAWINGS FROM THE ARCHIVES

The art of paving replaces the mainly decorative meaning with an essentially utilitarian one; it works without *colour*, making use only of *contrast*; it superimposes the suggestiveness of the drawing over the rigorousness of the ornate; it is more concerned with the vast dimension, rather than limiting itself to small motifs. The art of the mosaic focuses on the minutiae of the detail; the art of paving makes the detail a mere element of the overall effect that one is seeking to achieve (*Os passeios de Lisboa*, 1939, p. 80).

We were inspired by the words quoted above to select the drawings from the archives that are shown in this *Documenta*, dividing them into two large groups: those of a decorative or ornamental nature; and those of an informative or commercial nature. The examples that are presented here, and which are the work of various authors, are mostly unknown: the vast majority of these designs were produced in Lisbon's pavements from the late nineteenth century onwards and many of them survived until the late twentieth and the early twenty-first century. However, due to a variety of circumstances, they no longer exist, resulting in the disappearance from the city's pavements of these material and symbolic manifestations that, we are seeking to highlight here and whose memory we wish to recover.

DECORATIVE OR ORNAMENTAL DRAWINGS

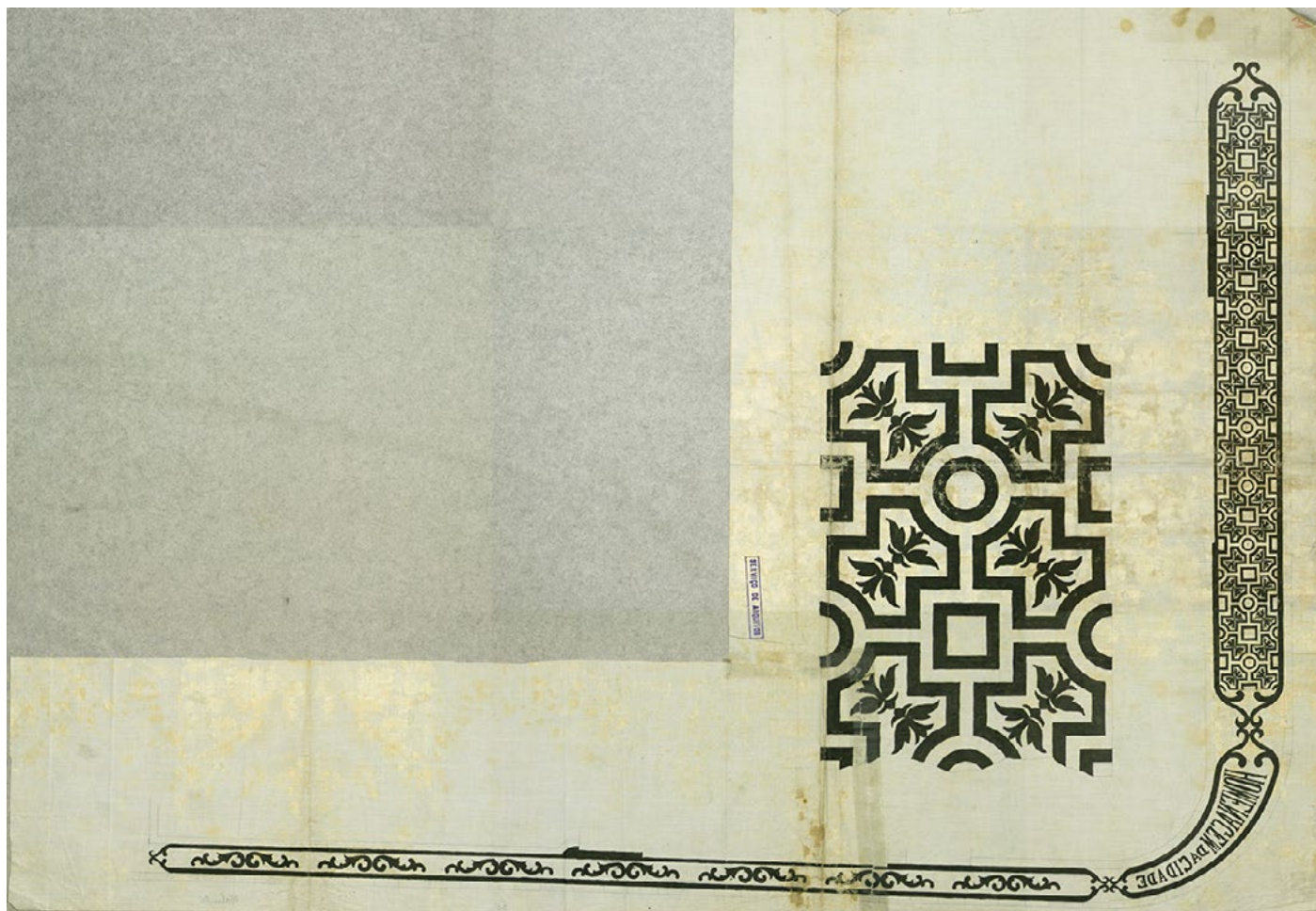


Figure 1 Drawing of the stone pavement between Avenida Visconde de Valmor and Rua Ressano Garcia with the caption “Homage of the City”, s.d.

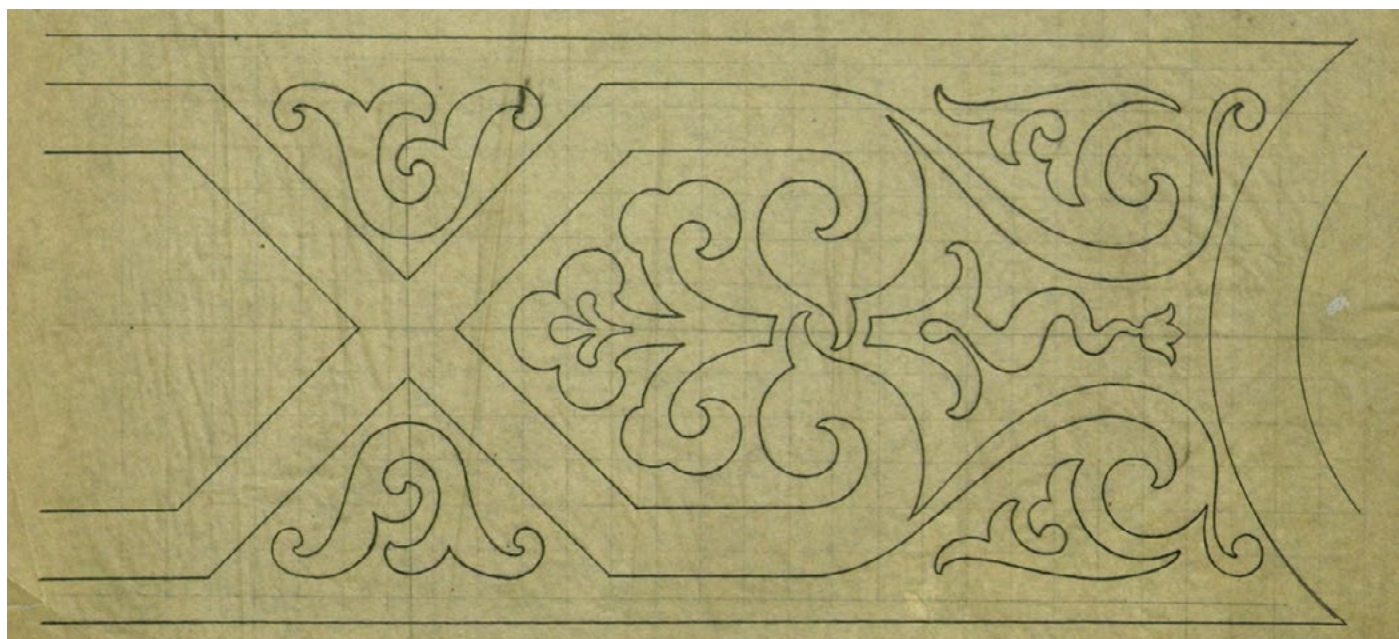


Figure 2 Drawings of stone pavements in Lisbon, s.d.



Figure 3 Drawings of stone pavements in Lisbon, indicating the measurements, s.d.



Figure 4 Drawing of the stone pavement in Largo do Município next to the Pillory, s.d.

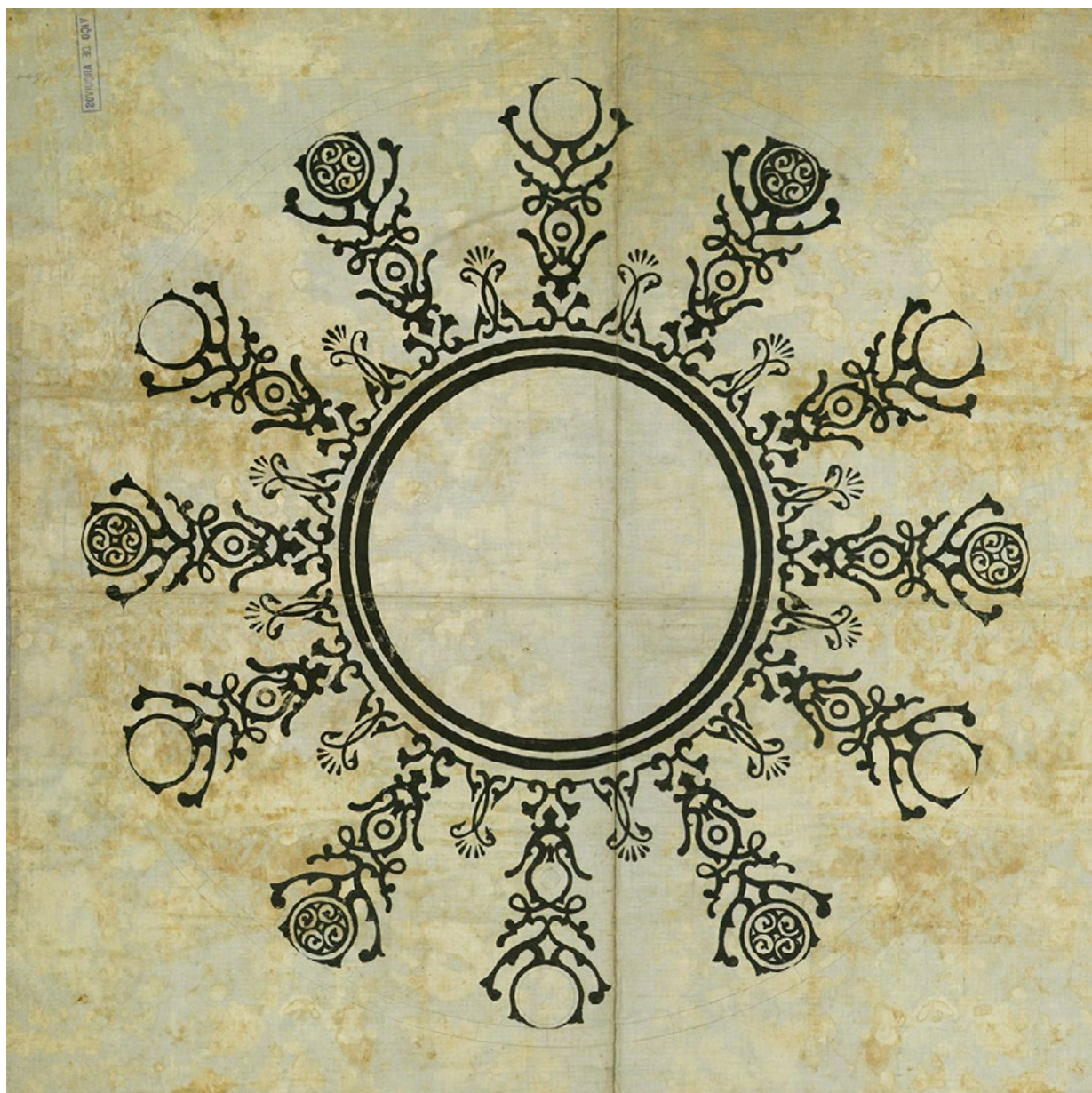


Figure 5 Drawing of a mosaic pavement, s.d.



Figure 6 Drawing of the mosaic pavement "Design No. 6", s.d.

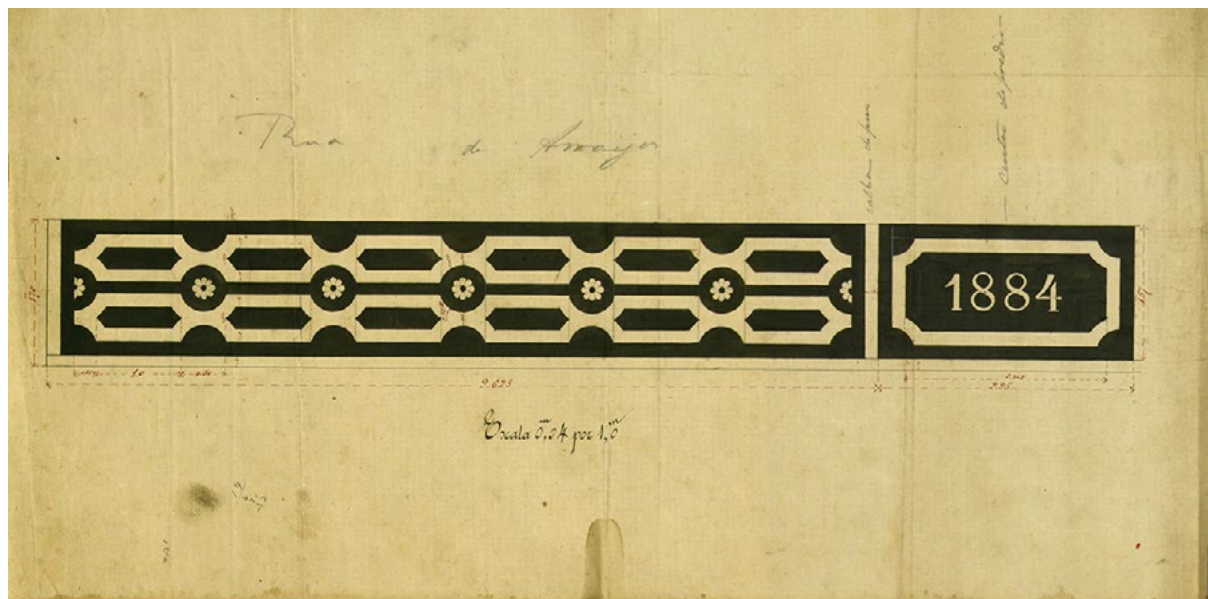


Figure 7 Drawing of a mosaic pavement indicating the date “1884”, in Rua de Arroios, unknown location, [1884].



Figure 8 Drawing of types 1 to 3 of the mosaic design for the pavements in Rua Garrett, 1887-03-28.

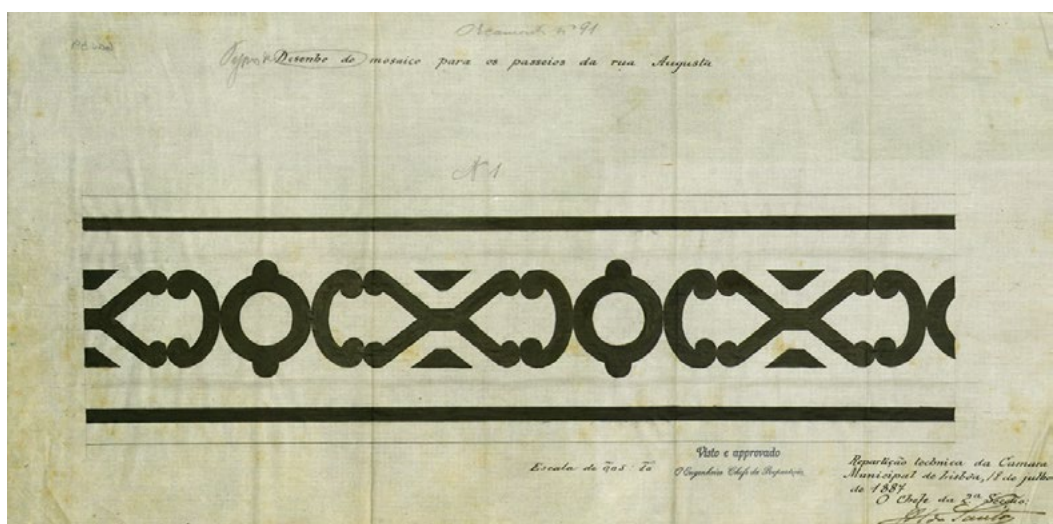


Figure 9 Drawing of the mosaic pavements in Rua Augusta, 1887-07-18.

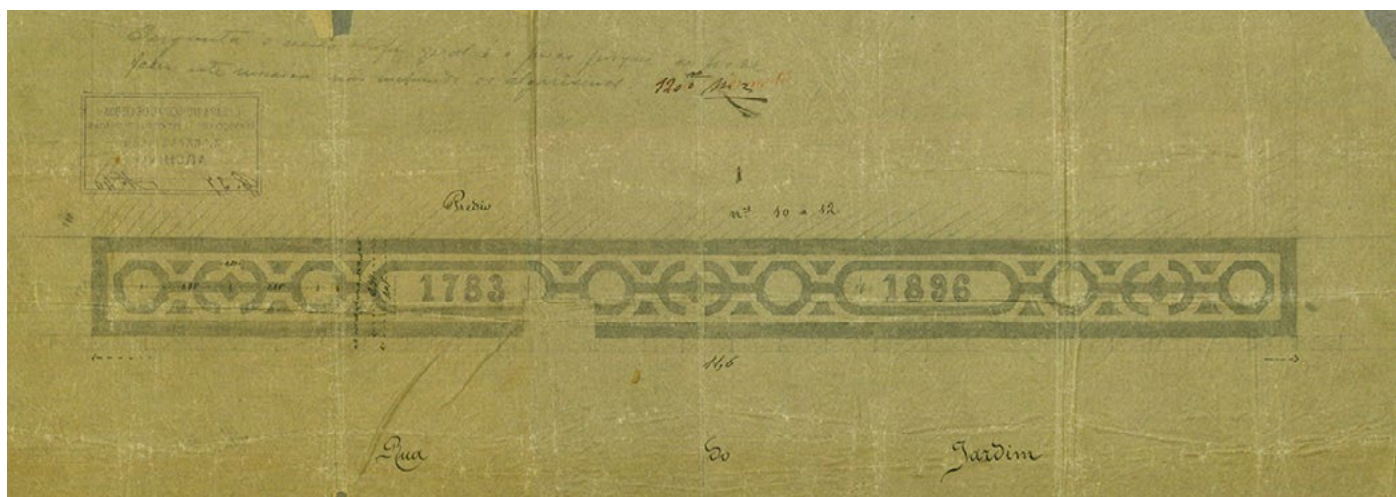


Figure 10 Drawing of the stone pavement in front of Nos. 16 to 16B, in Rua do Jardim à Estrela, [1896].

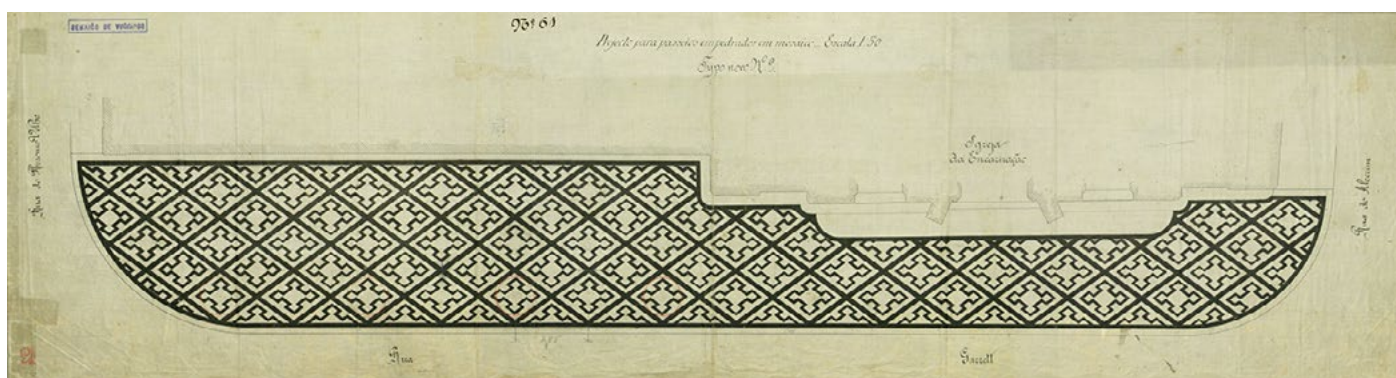


Figure 11 Design for mosaic pavements in Largo do Chiado, [19-].

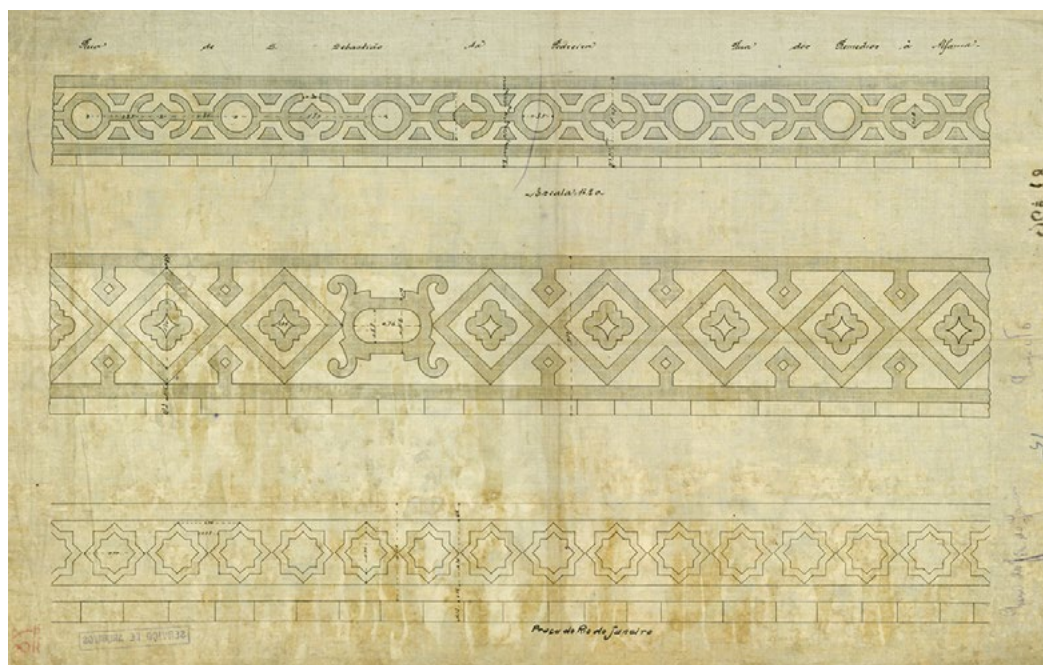


Figure 12 Drawings of stone pavements in Rua de São Sebastião da Pedreira, Rua dos Remédios in Alfama, and Praça Rio de Janeiro, [19--].

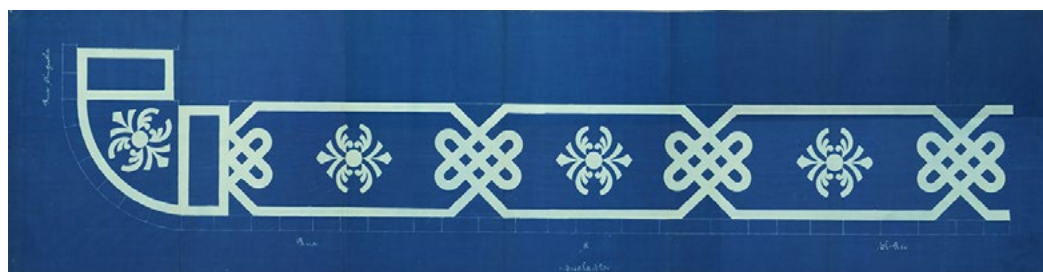


Figure 13 Drawing of the mosaic pavement in the former Rua Nova d'El Rei, now Rua do Comércio, turning into Rua Augusta, [19--].

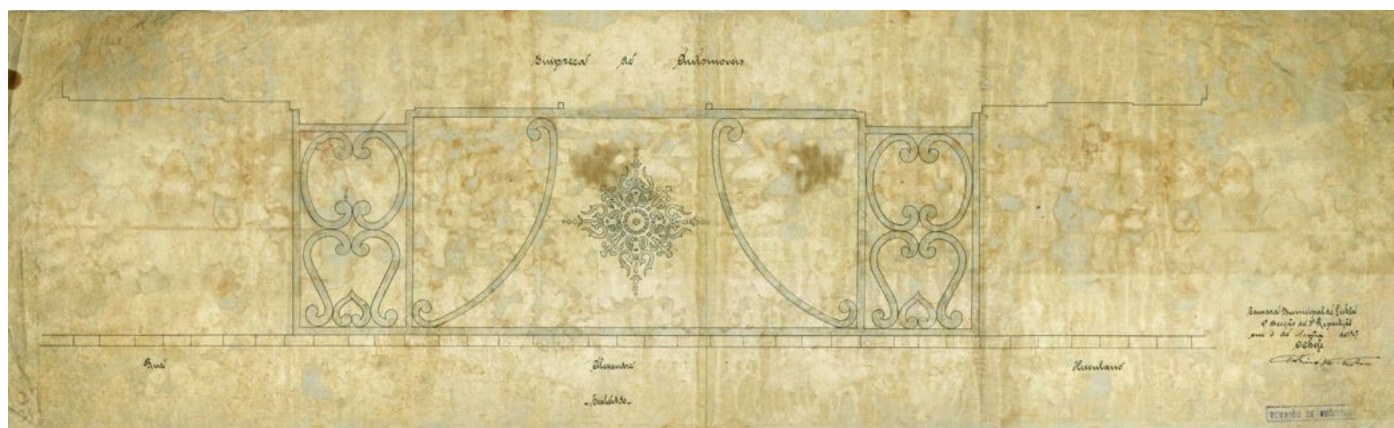


Figure 14 Drawing of the stone pavement in front of a motor-car show room in Rua Alexandre Herculano, 1907-05-03.



Figure 15 Design proposed for the mosaic of the central pavement in Praça Duque de Saldanha, 1909.



Figure 16 Drawings of the mosaic pavements in front of No. 35, Praça Rio de Janeiro, now known as Príncipe Real, 1918-11-26.



Figure 17 Drawing of the stone pavements of Praça Dom Pedro IV and Praça dos Restauradores, 1927.



Figure 18 Drawing of the mosaic pavement in Largo do Município, [1930].

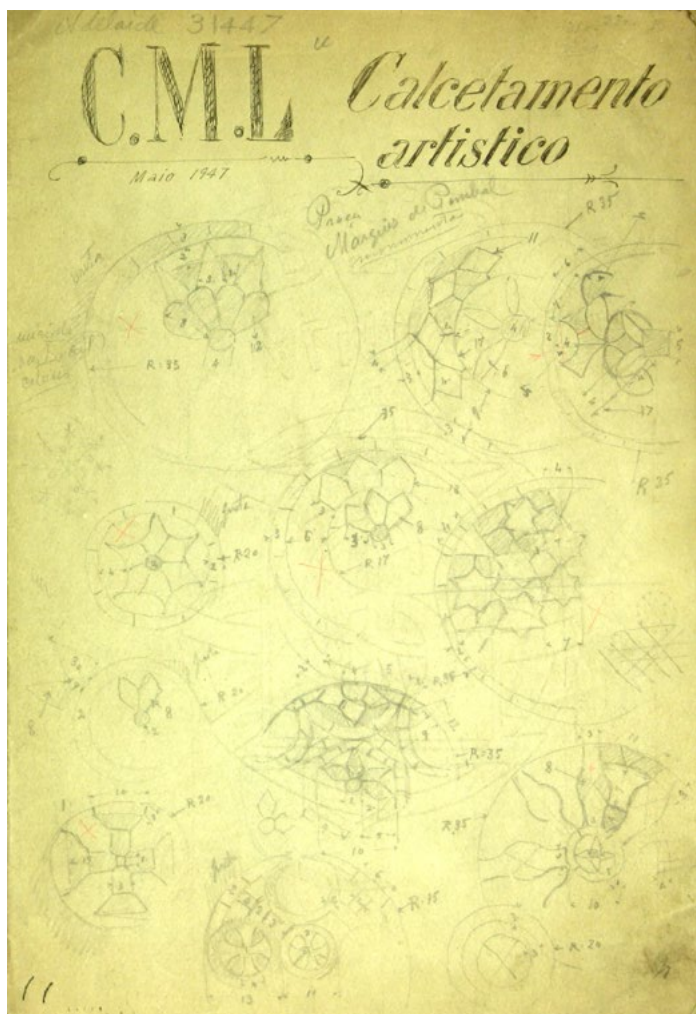


Figure 19 Set of drawings and sketches by technicians from Lisbon Municipal Council, for the artistic paving of Praça Marquês de Pombal, 1947-05.

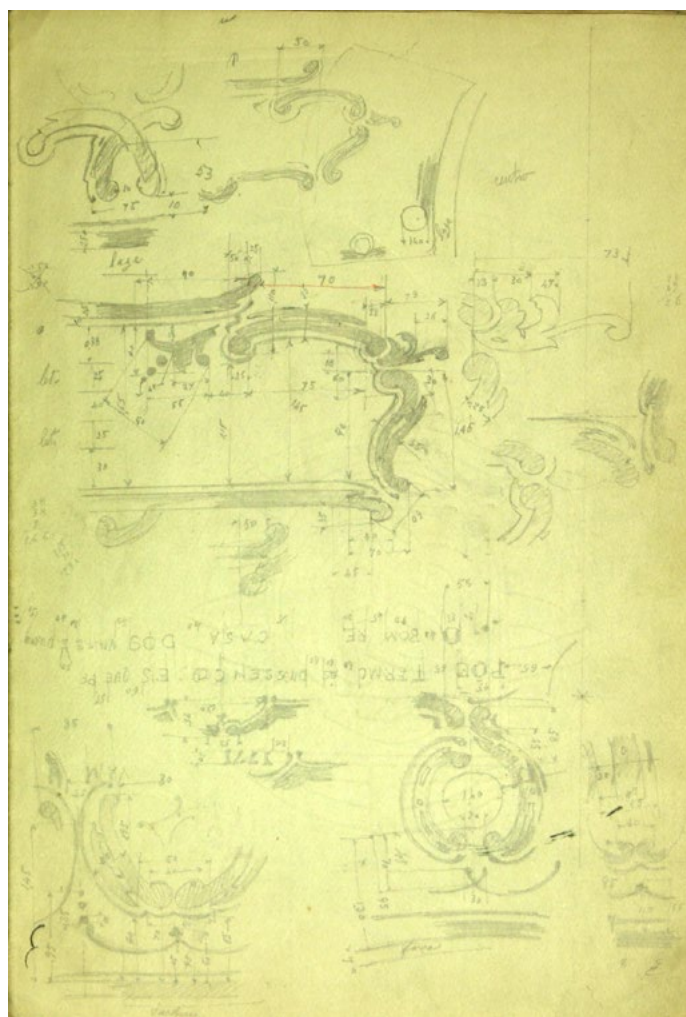


Figure 20 Set of drawings and sketches by technicians from Lisbon Municipal Council, for the artistic paving of Praça Marquês de Pombal, 1947-05.

Figure 21 Set of drawings and sketches by technicians from Lisbon Municipal Council, for the artistic paving of Praça Marquês de Pombal, 1947-05.

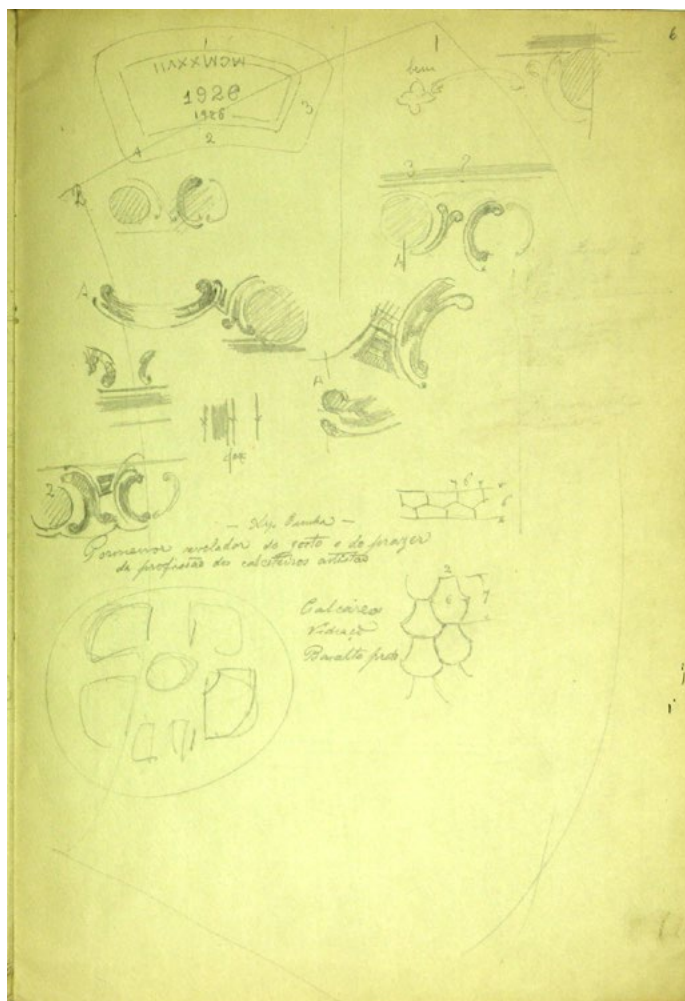
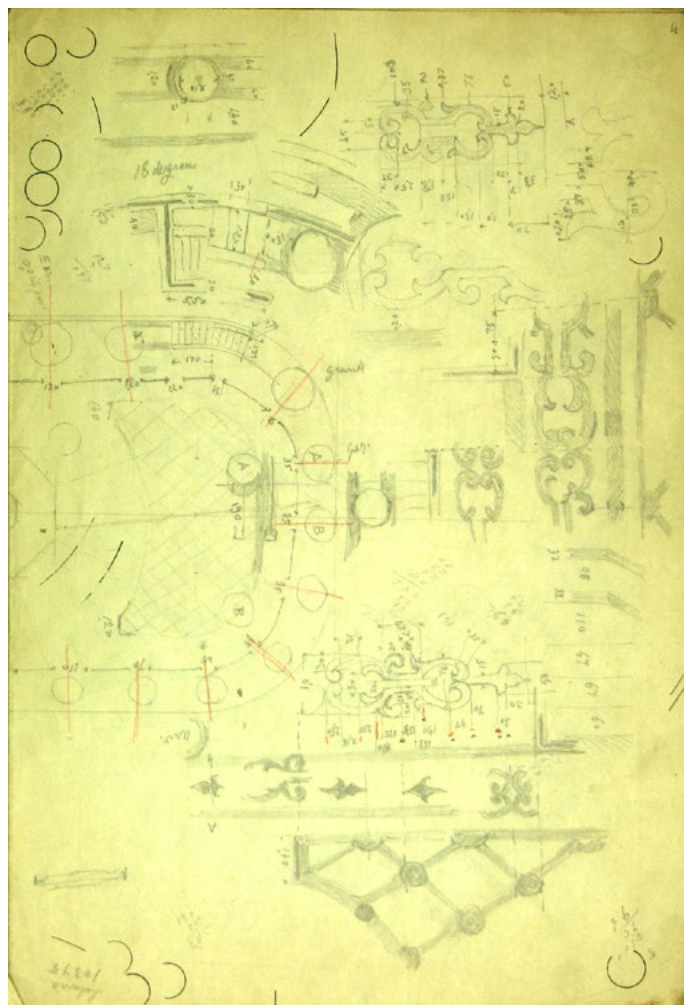


Figure 22 Set of drawings and sketches by technicians from Lisbon Municipal Council, for the artistic paving of Praça Marquês de Pombal, 1947-05.

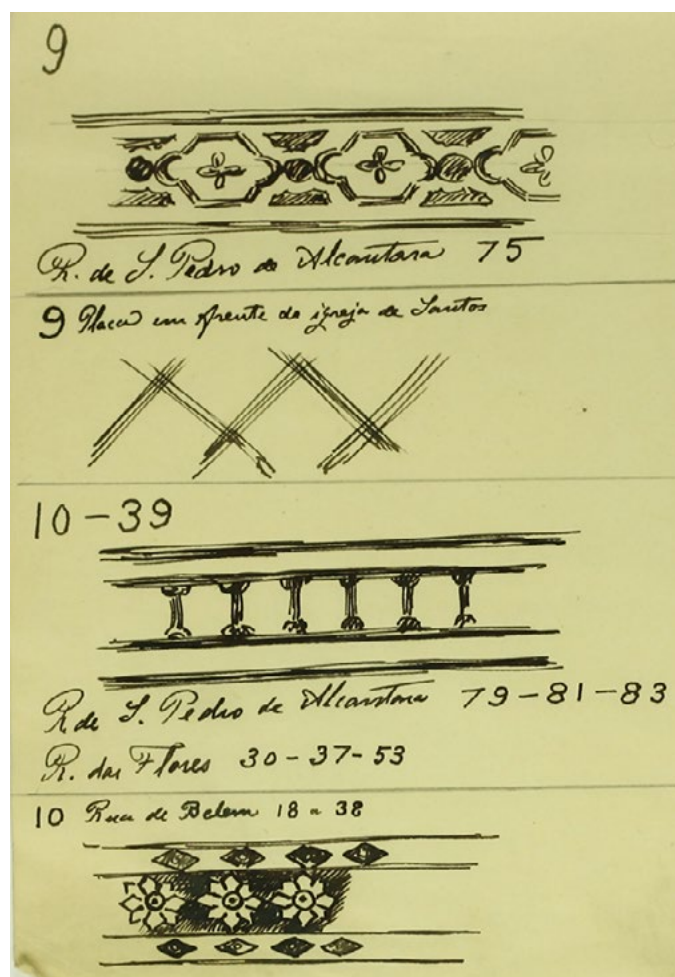


Figure 23 Drawings of the decorative pavements in Rua de São Pedro de Alcântara, Rua das Flores, Rua de Belém and the pavement in front of Igreja de Santos, gathered from a notebook attributed to the architect Eduardo Martins Bairrada, with drawings of stone patterns, their respective location and police number, in various areas of Lisbon, [1954-1987].

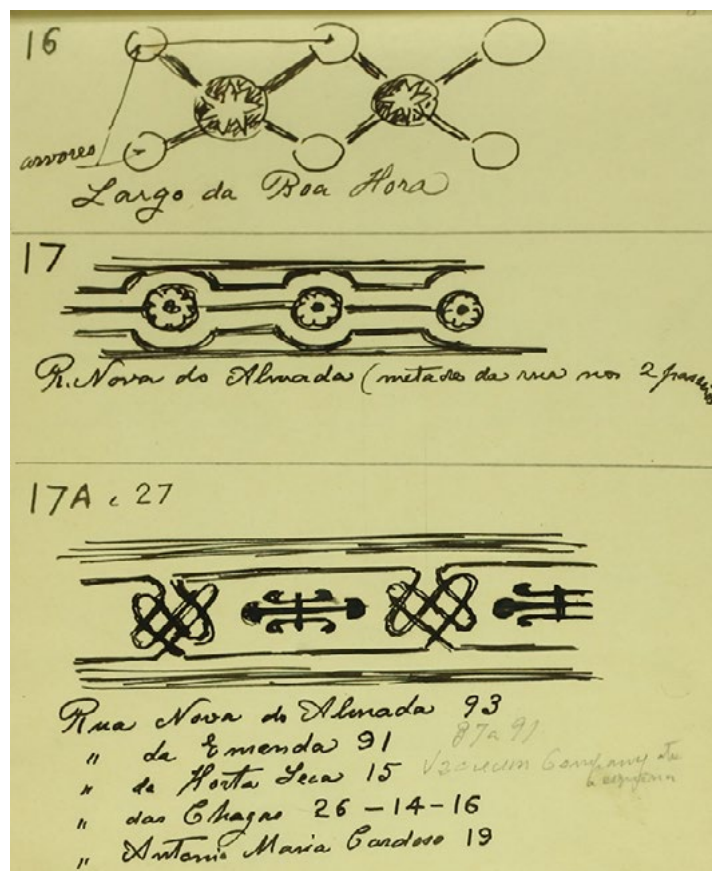


Figure 24 Drawings of the stone pavements in Largo da Boa Hora and Rua Nova do Almada, Rua da Emenda, Rua da Horta Seca, Rua das Chagas and Rua António Maria Cardoso, attributed to Eduardo Bairrada, [1954-1987].

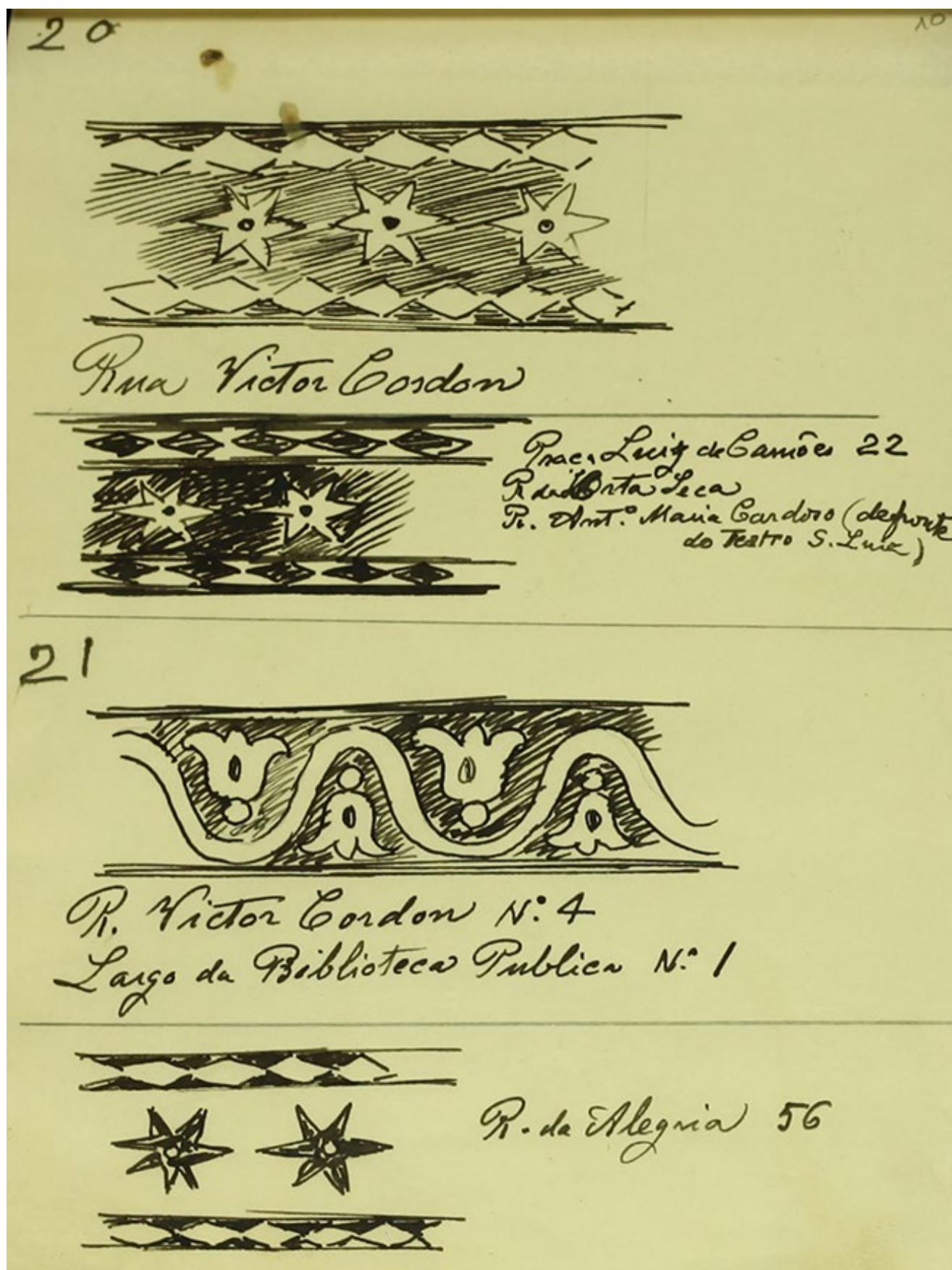


Figure 25 Drawings of the stone pavements in Rua da Horta Seca, Rua Vítor Cordon, Rua António Maria Cardoso, Rua da Alegria, Praça Luís de Camões, and Largo da Biblioteca Pública, attributed to Eduardo Bairrada, [1954-1987].

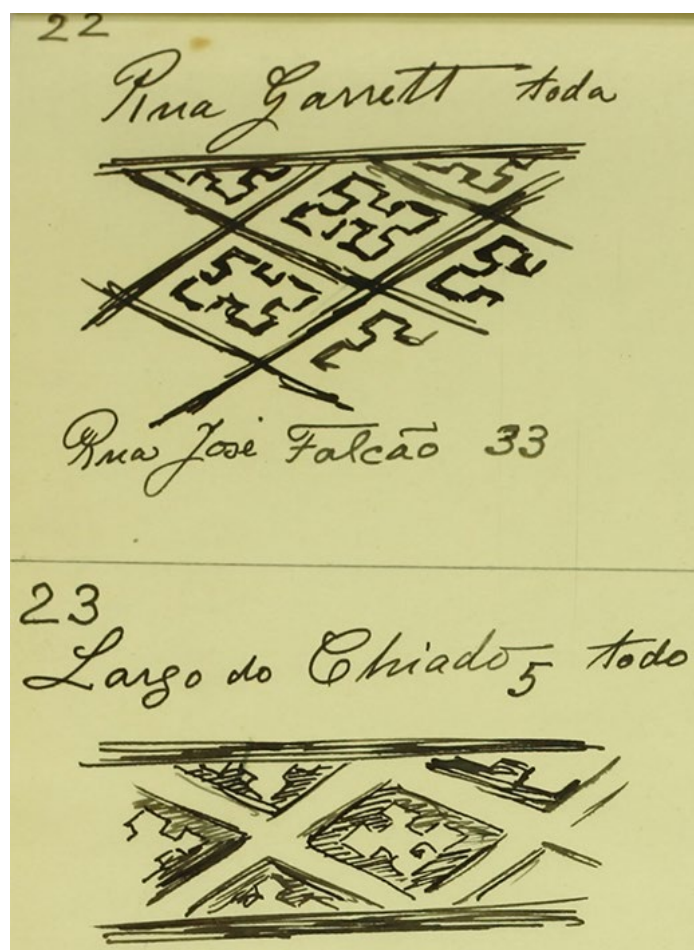


Figure 26 Drawings of the stone pavements in Rua Garrett, Rua José Falcão, and Largo do Chiado, attributed to Eduardo Bairrada, [1954-1987].

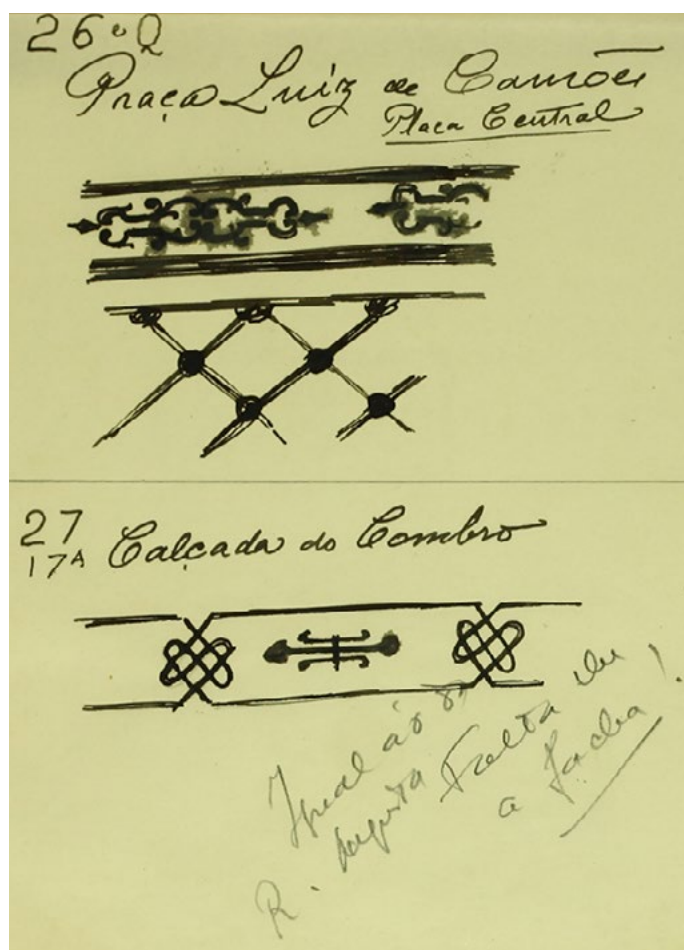


Figure 27 Drawings of the stone pavements in Praça Luís de Camões and Calçada do Combro, attributed to Eduardo Bairrada, [1954-1987].

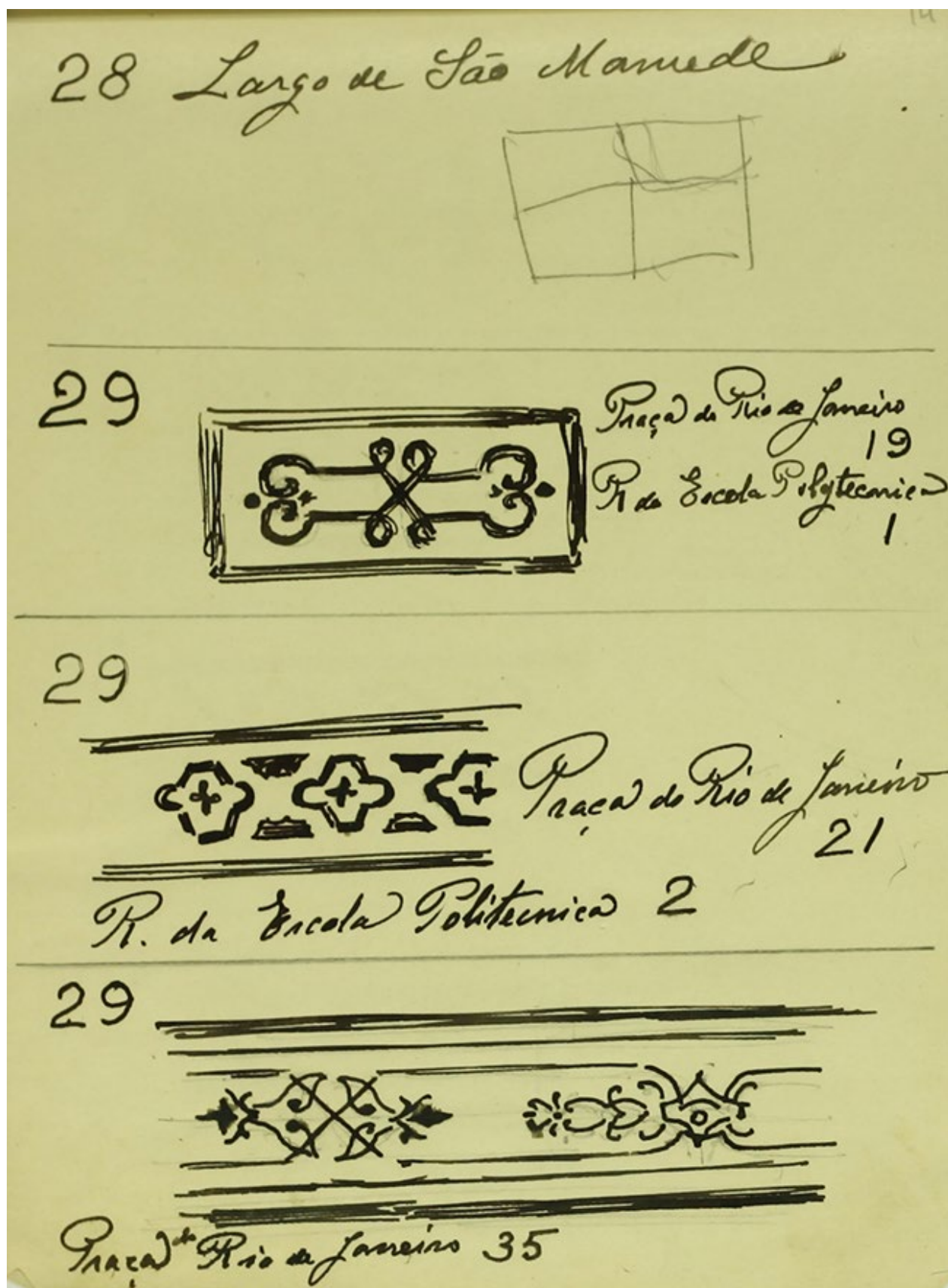


Figure 28 Drawings of the stone pavements in Largo de São Mamede, Praça do Rio de Janeiro, and Rua da Escola Politécnica, attributed to Eduardo Bairrada, [1954-1987].

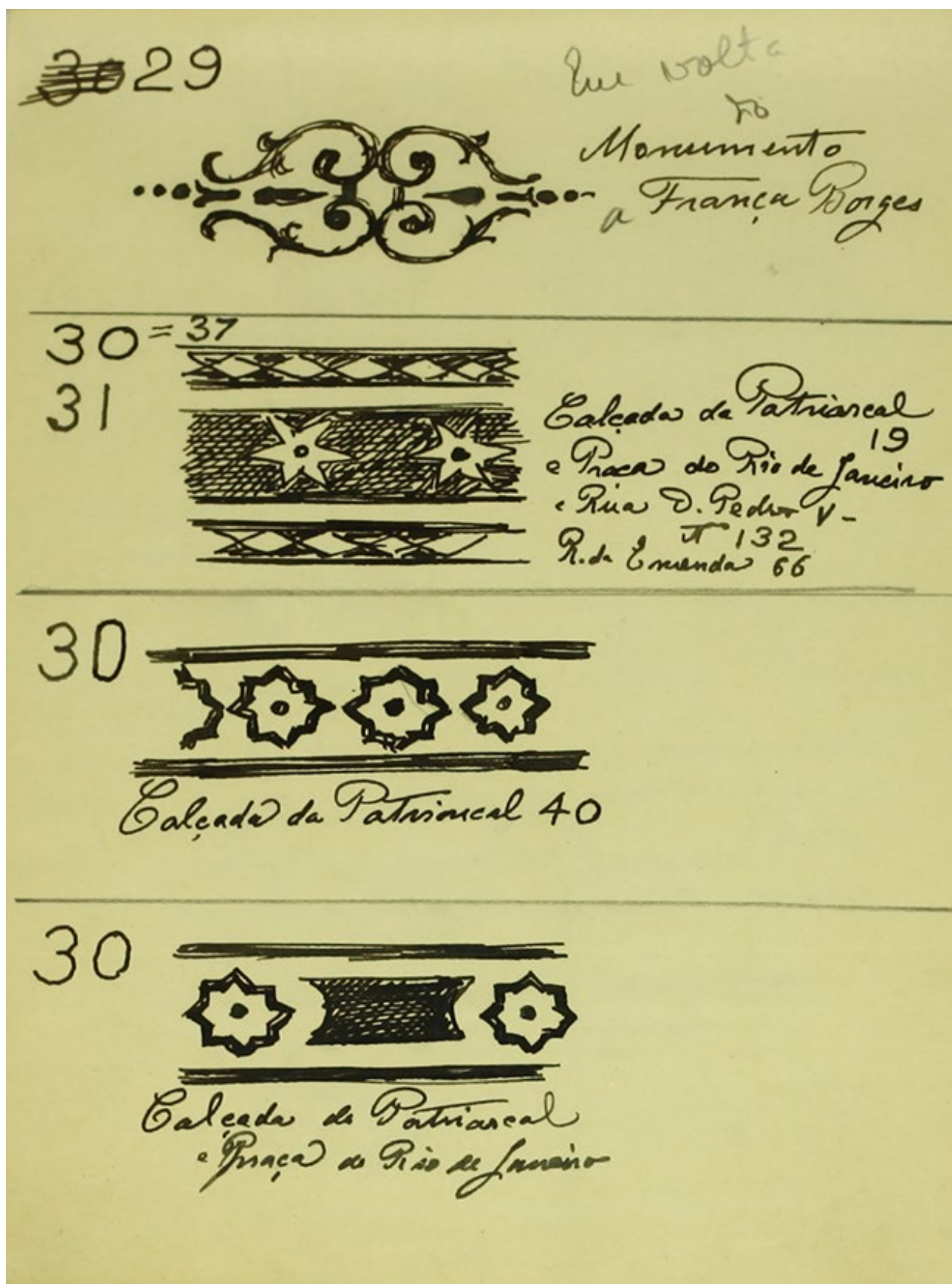


Figure 29 Drawings of the stone pavements in Calçada da Patriarcal, Praça do Rio de Janeiro, at the monument to França Borges, and in Rua Dom Pedro V and Rua da Emenda, attributed to Eduardo Bairrada, [1954-1987].

Figure 30 Drawings of the stone pavements in Rua and Jardim de São Pedro de Alcântara, attributed to Eduardo Bairrada, [1954-1987].

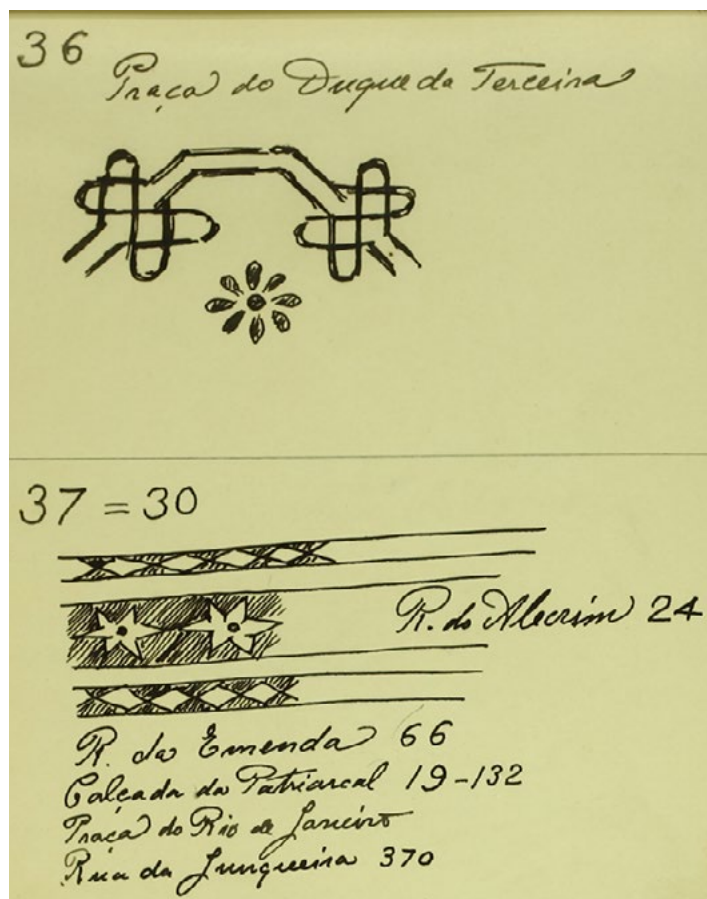
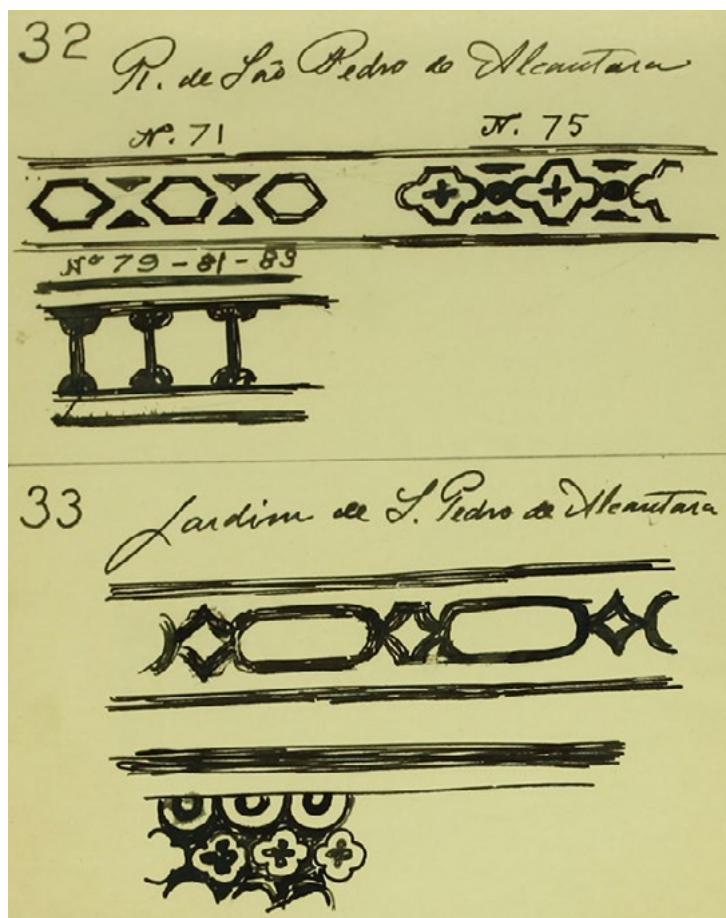


Figure 31 Drawings of the stone pavements in Praça do Duque de Terceira and Praça do Rio de Janeiro, Calçada da Patriarcal, Rua do Alecrim, Rua da Emenda, and Rua da Junqueira, attributed to Eduardo Bairrada, [1954-1987].

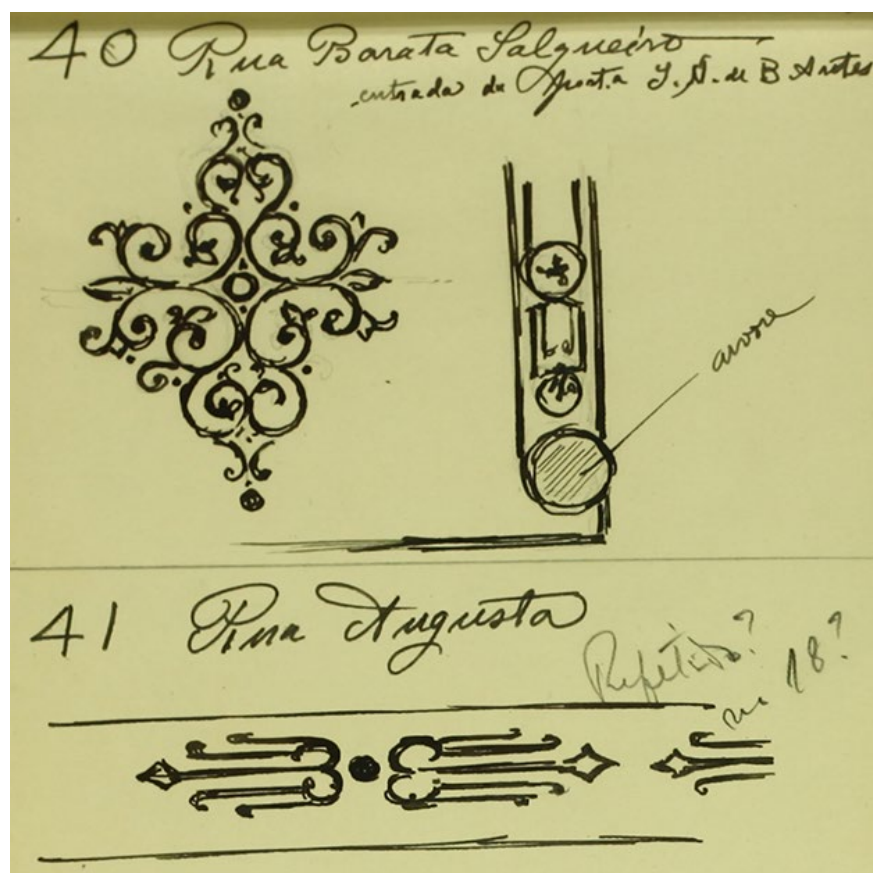


Figure 32 Drawings of the stone pavements in Rua Barata Salgueiro and Rua Augusta, attributed to Eduardo Bairrada, [1954-1987].

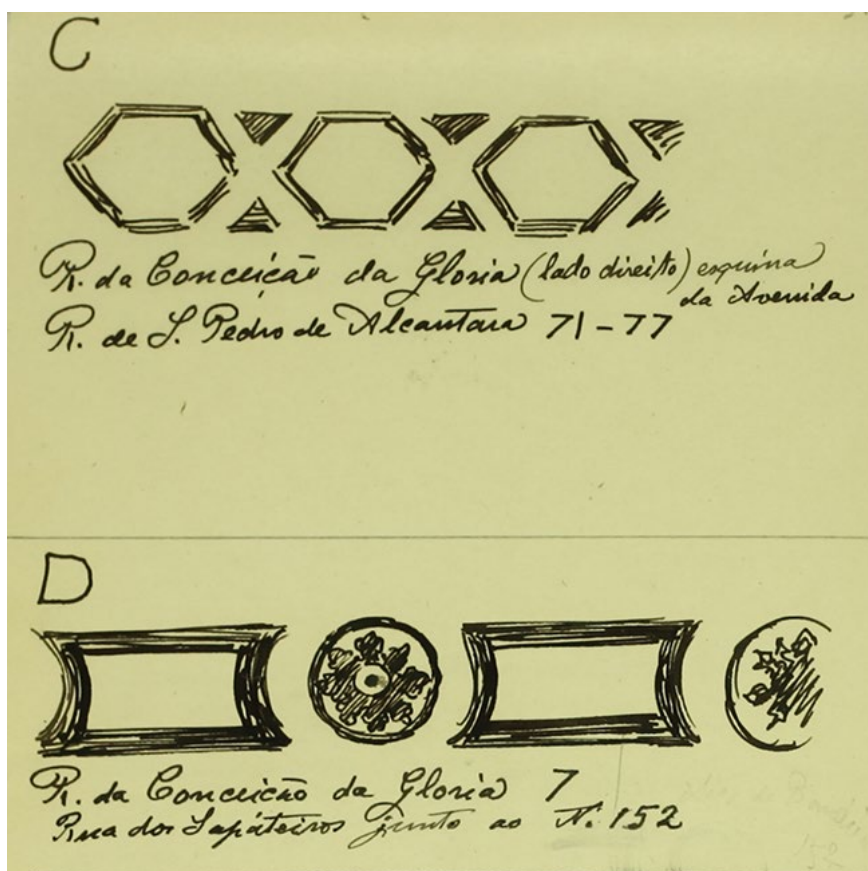


Figure 33 Drawings of the stone pavements in Rua da Conceição da Glória, Rua de São Pedro de Alcântara, and Rua dos Sapateiros, attributed to Eduardo Bairrada, [1954-1987].

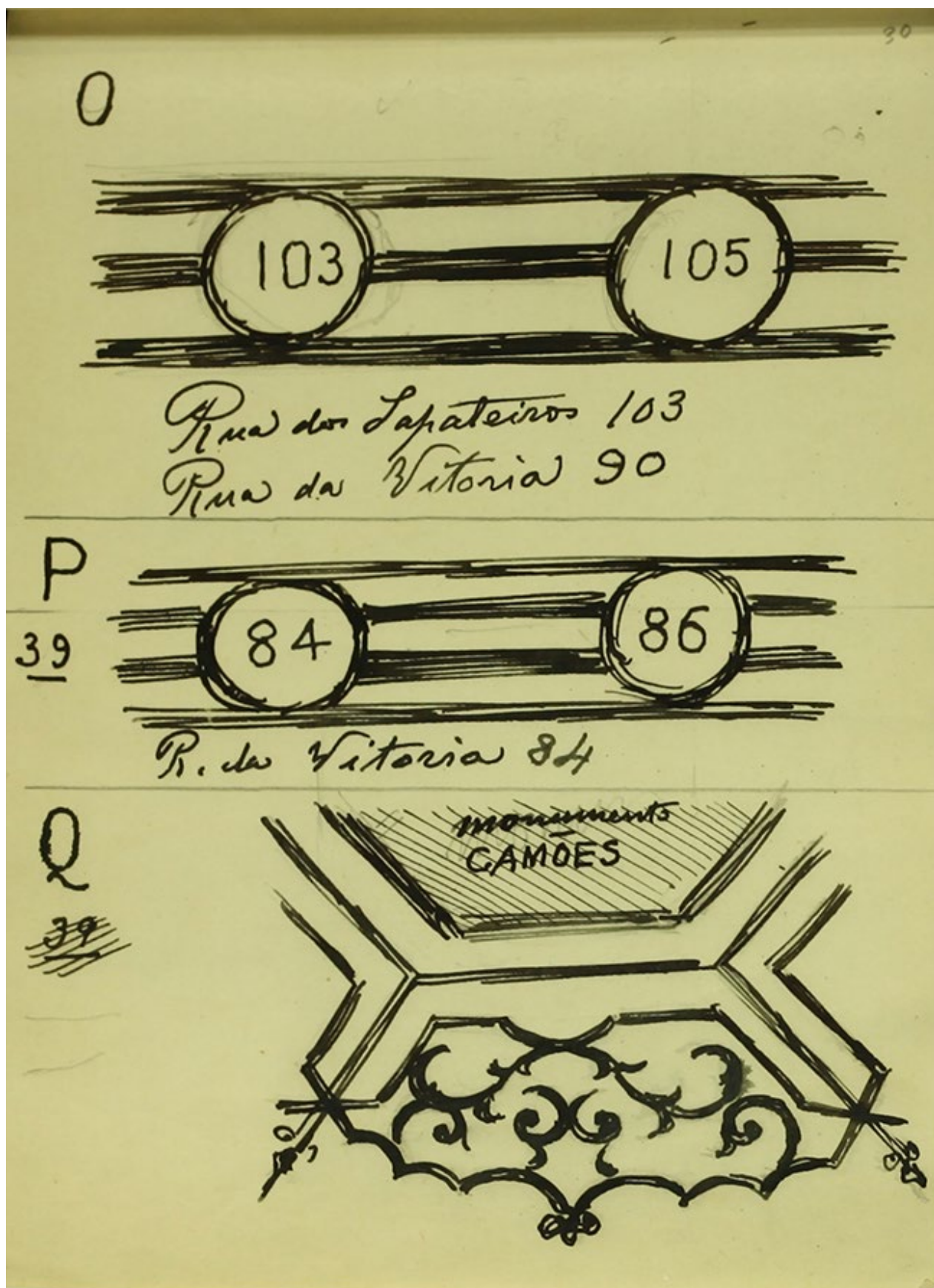


Figure 34 Drawings of the stone pavements in Rua dos Sapateiros and Rua da Vitória, and at the monument to Luís de Camões, attributed to Eduardo Bairrada, [1954-1987].

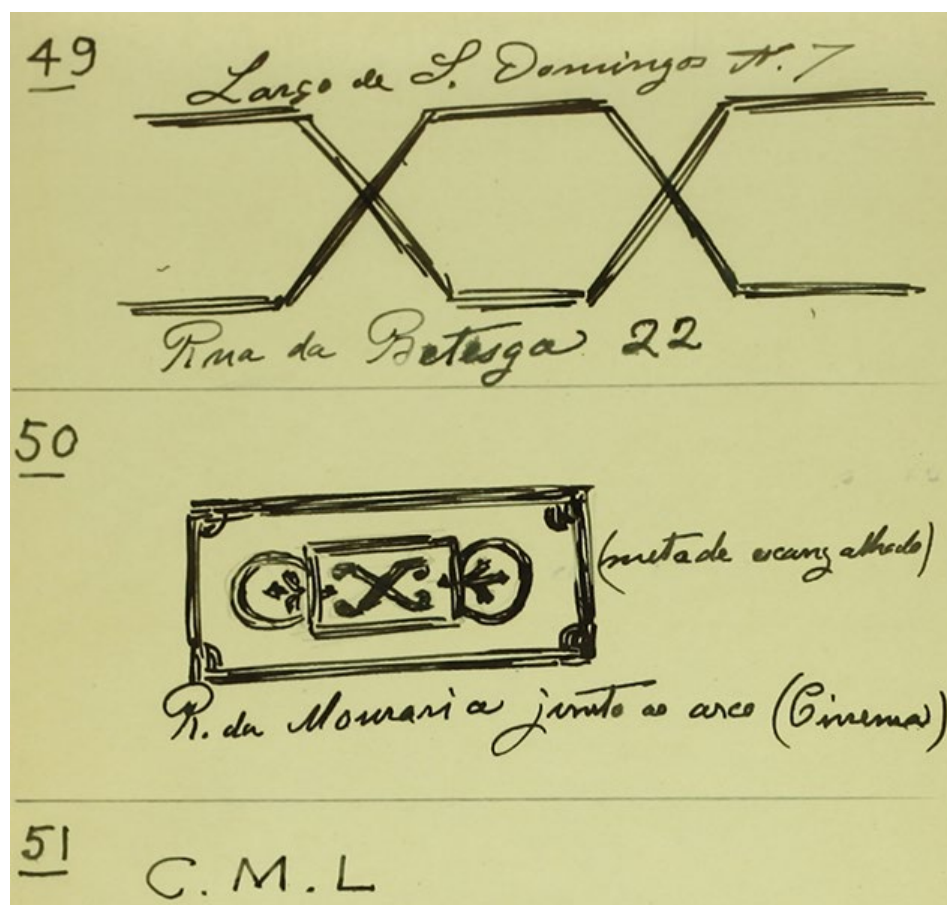


Figure 35 Drawings of the stone pavements in Largo de São Domingos, Rua da Betesga and Rua da Mouraria, attributed to Eduardo Bairrada, [1954-1987].

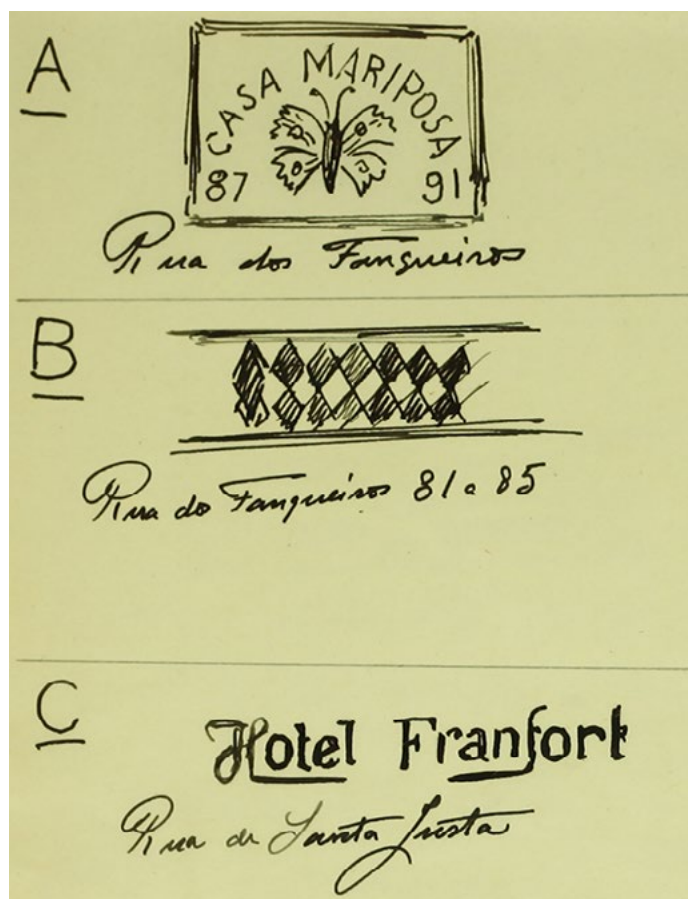


Figure 36 Drawings of the stone pavements in Rua dos Fanqueiros and Rua de Santa Justa, attributed to Eduardo Bairrada, [1954-1987].

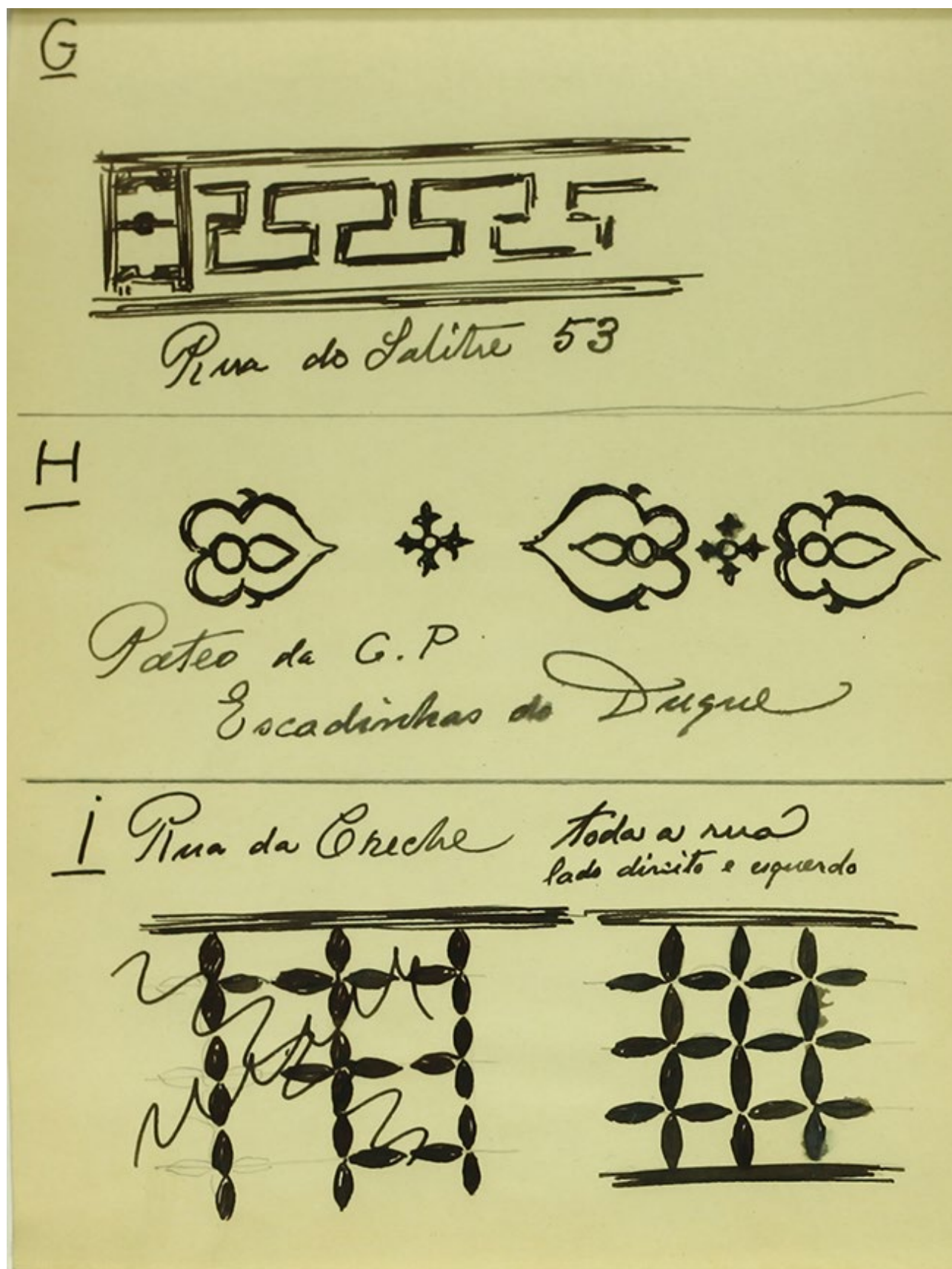


Figure 37 Drawings of the stone pavements in Rua do Salitre, Rua da Creche and Escadinhas do Duque, attributed to Eduardo Bairrada, [1954-1987].

COMMERCIAL OR INFORMATIVE DRAWINGS



Figure 38 Drawing of the pavement at the Estrella d'Ouro dairy, Rua da Graça, Nos. 22 to 26, s.d.

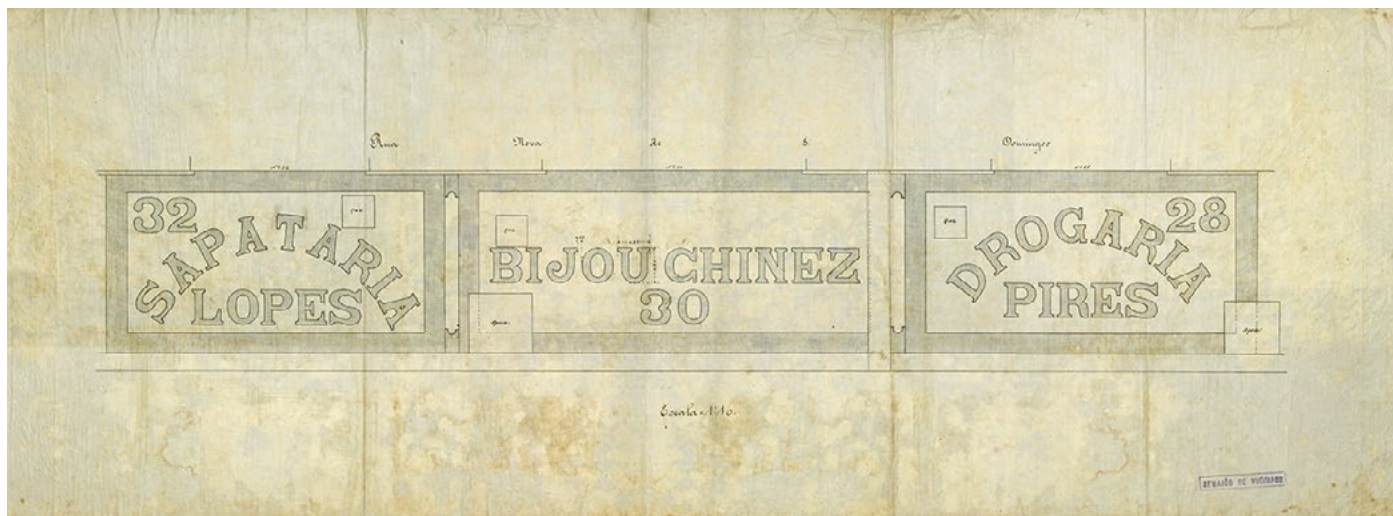


Figure 39 Drawings of the pavements in Rua Nova de São Domingos Nos. 28 to 32, for the shops "Sapataria Lopes", "Bijou Chinez" and "Drogaria Pires", s.d.

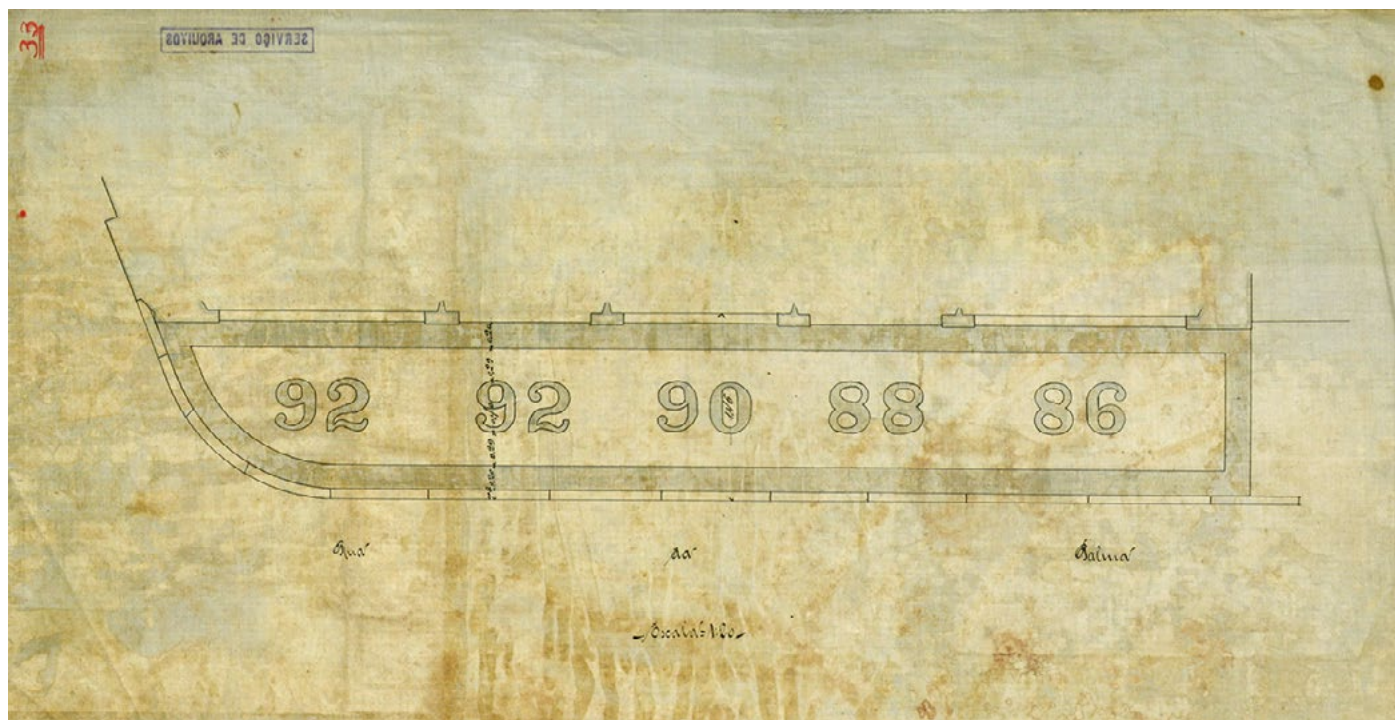


Figure 40 Drawing of the stone pavement in Rua da Palma, in front of Nos. 86, 88, 90 and 92, s.d.



Figure 41 Drawing of the stone pavement in front of the Tavares Rico restaurant in Rua da Misericórdia, No. 37, s.d.



Figure 42 Drawing of the stone pavement in front of the “Estrella de Ouro” dairy, Rua Bela da Rainha Nos. 285 to 291, the present-day Rua da Prata, s.d.



Figure 43 Drawing of the stone pavement situated between Largo de Dona Estefânia No. 9 and Rua de Dona Estefânia No. 143, s.d.

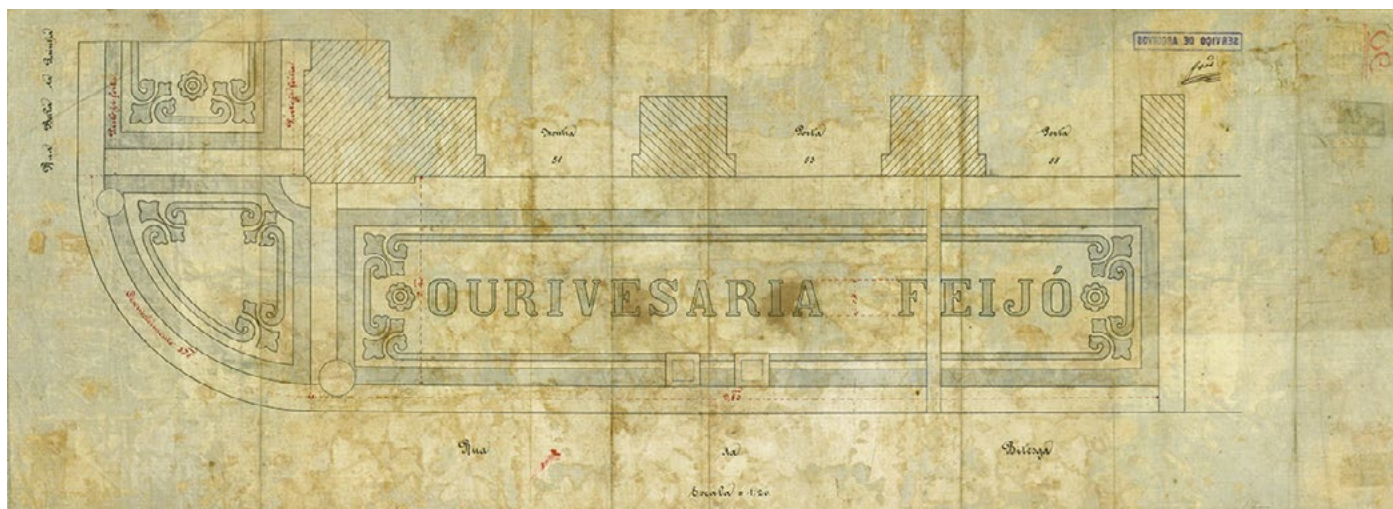


Figure 44 Drawing of the mosaic pavement for the Feijó jeweller's shop, Rua da Betesga Nos. 51 to 55, on the corner with Rua Bela da Rainha, the present-day Rua da Prata, s.d.



Figure 45 Drawing of the pavement for the inscription of "Nova Companhia de Carruagens Fidelidade", in Rua de São Bento, 1893-12-12.

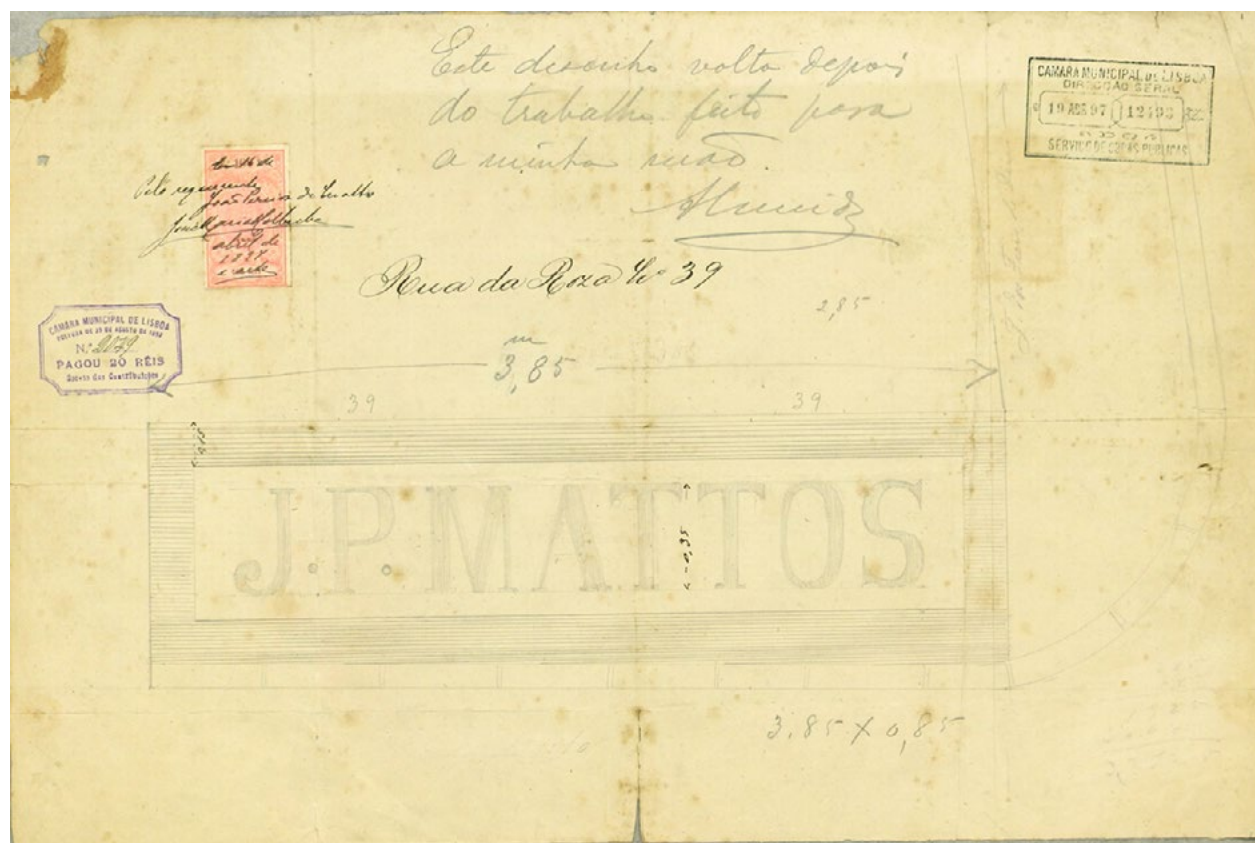


Figure 46 Drawing of a mosaic pavement for Rua da Rosa No. 39, in front of the J. P. Mattos shop, 1897-04-19.

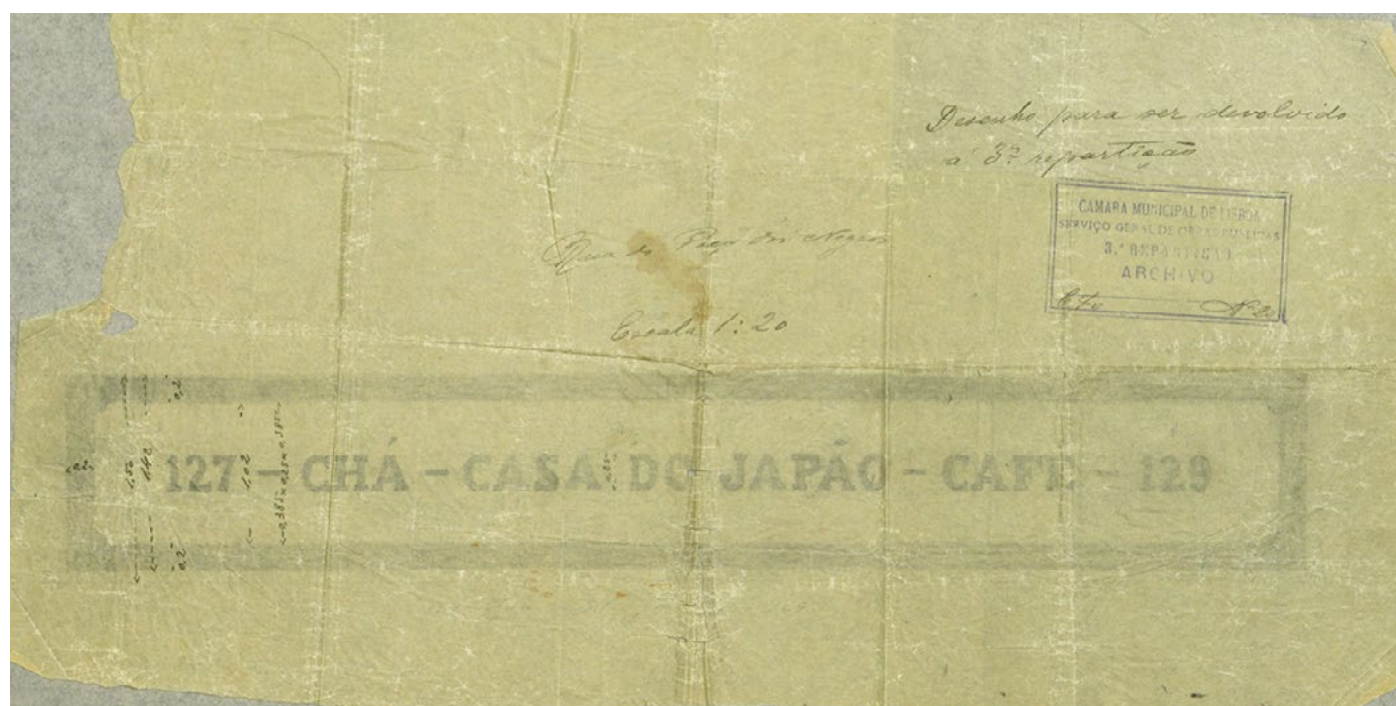


Figure 47 Drawing of the stone pavement in front of the shop Casa do Japão, Chá e Café in Calçada do Poço dos Negros, Nos. 127 to 129B, 1898-01-02.



Figure 48 Drawing of the pavement to be laid in front of the doors of Nos. 20, 22 and 24 Travessa de São Domingos, the present-day Rua Barros Queirós, 1900-02-06.



Figure 49 Drawing of the stone pavement in front of the money-exchanger Testa, situated in Rua do Arsenal No. 78, [19-].

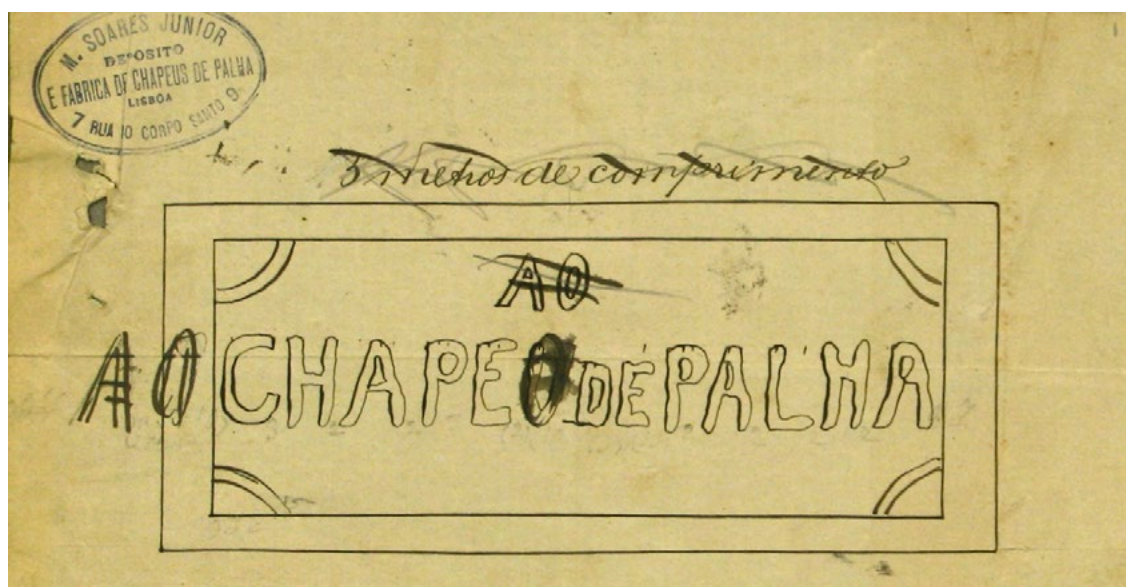


Figure 50 Drawing of the stone pavement for the store and factory of straw hats, “Ao Chapeu de Palha”, Rua do Corpo Santo Nos. 7 and 9, [19-].

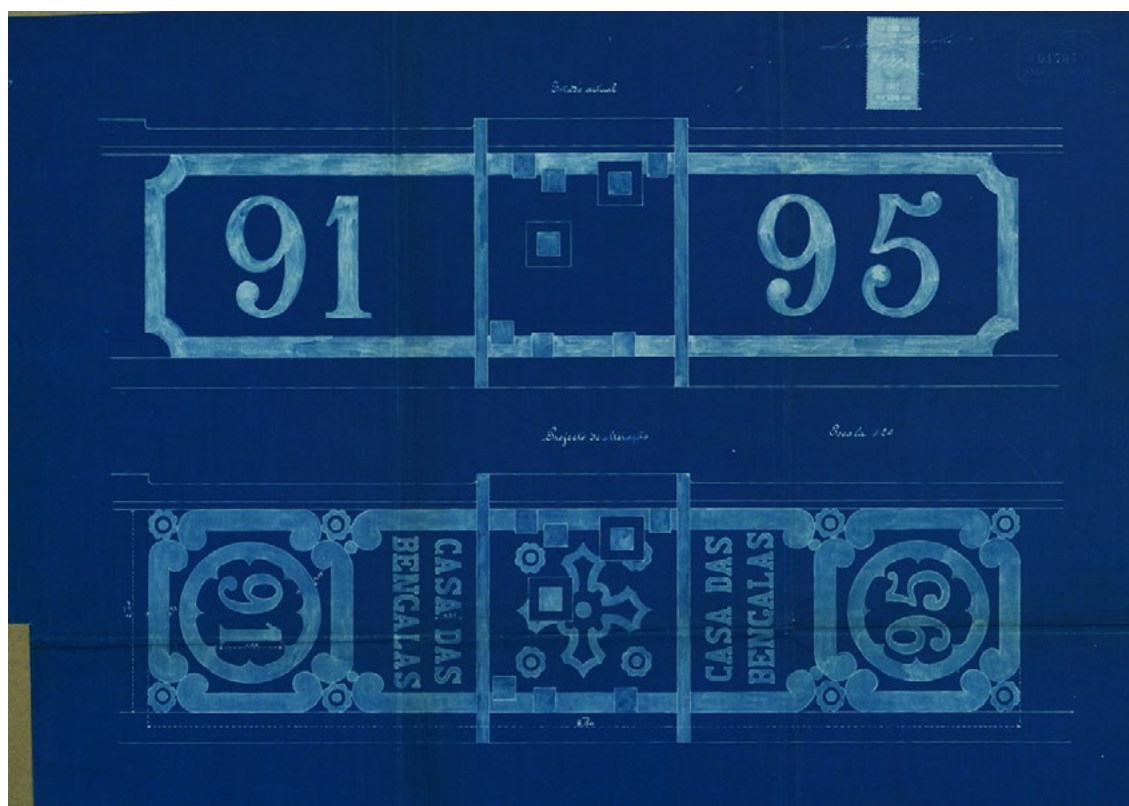


Figure 51 Drawings of the pavements for Casa das Bengalas, in the former Rua Bela da Rainha Nos. 91 to 95, the present-day Rua da Prata, [19-].



Figure 52 Drawings of the pavements for Casa das Bengalas, in the former Rua Bela da Rainha, Nos. 91 to 95, the present-day Rua da Prata, [19-].

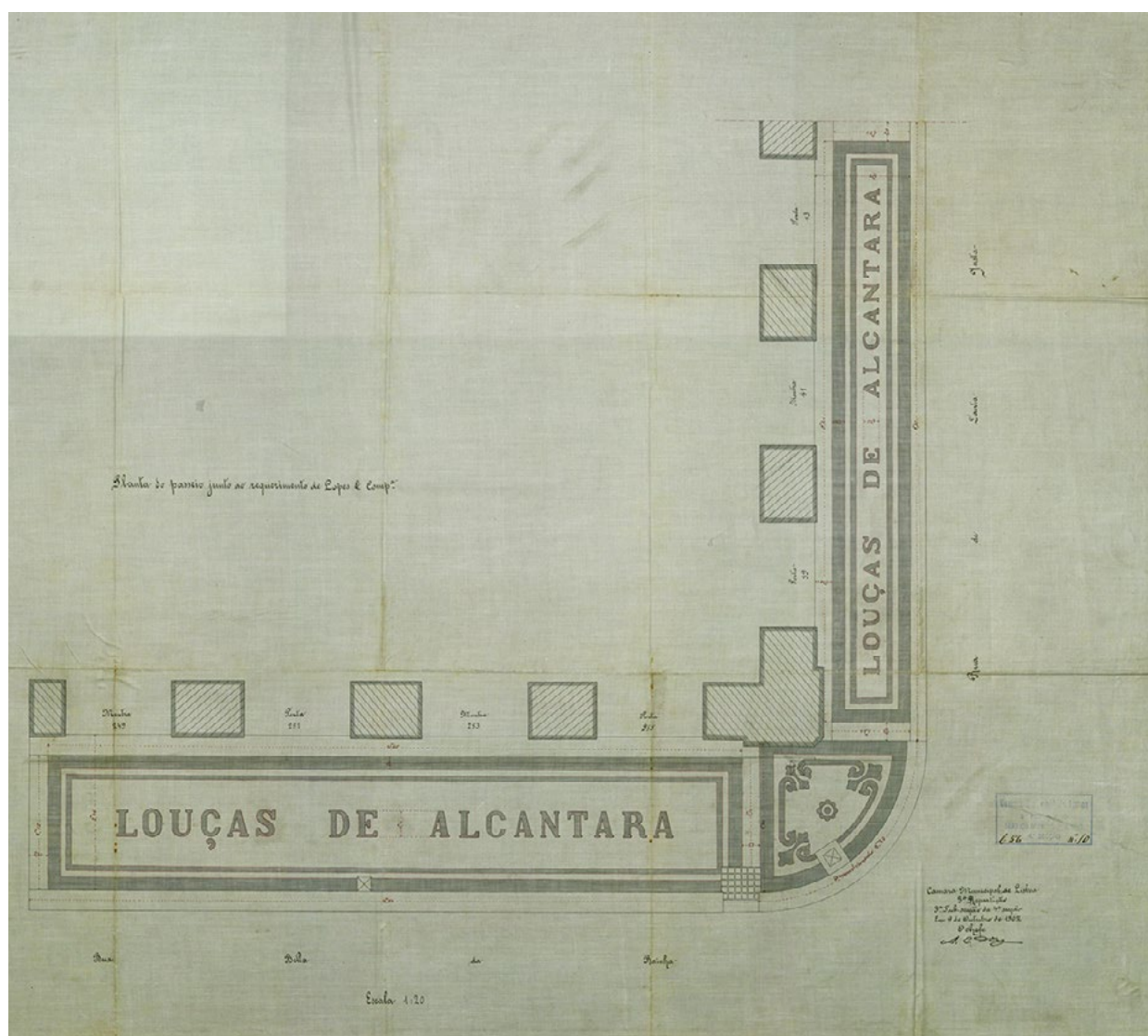


Figure 53 Drawing of the stone pavement in front of the shop Louças de Alcântara, in Rua Bela da Rainha Nos. 249 to 255, the present-day Rua da Prata, and Rua de Santa Justa, Nos. 39 to 43, 1902-10-09.

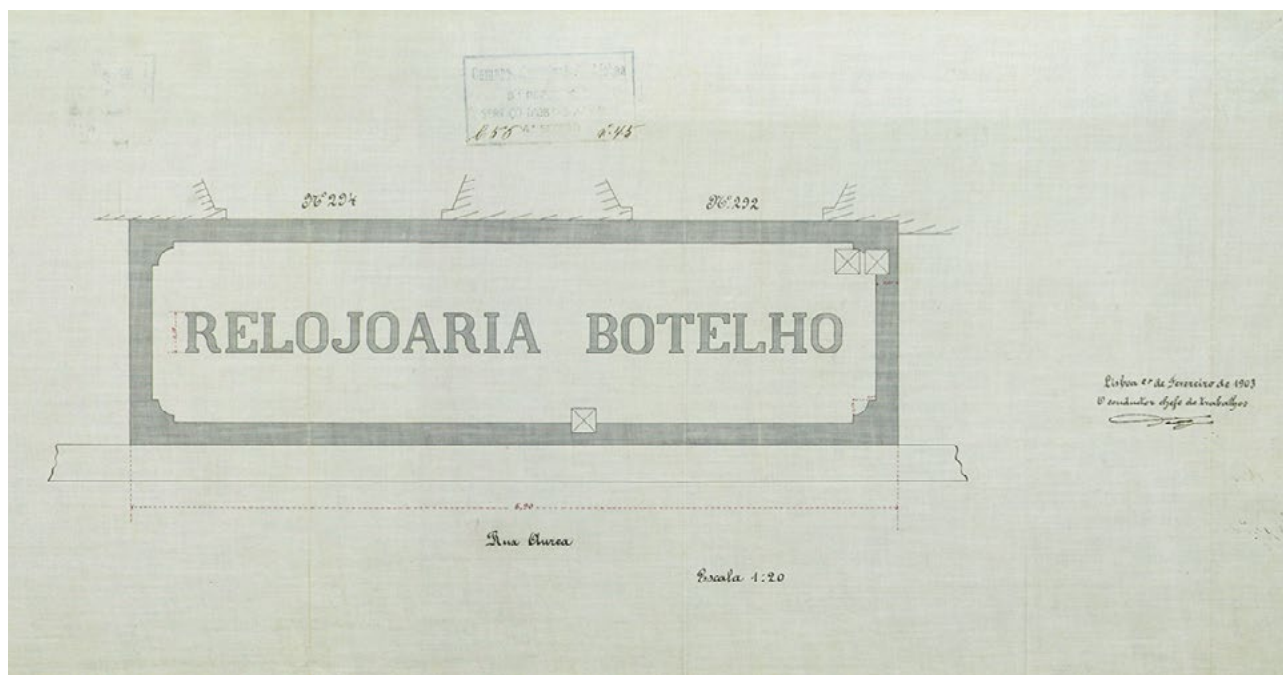


Figure 54 Drawing of the stone pavement in front of the shop Relojoaria Botelho, in Rua Áurea Nos. 292 and 294, the present-day Rua do Ouro, 1903-02-27.



Figure 55 Drawing of the stone pavement in Rua do Arsenal, Nos. 86, 88 and 90, and the pavement for Broomfields English Bakery, in Largo de São Julião Nos. 8 and 9, 1907-06-18.

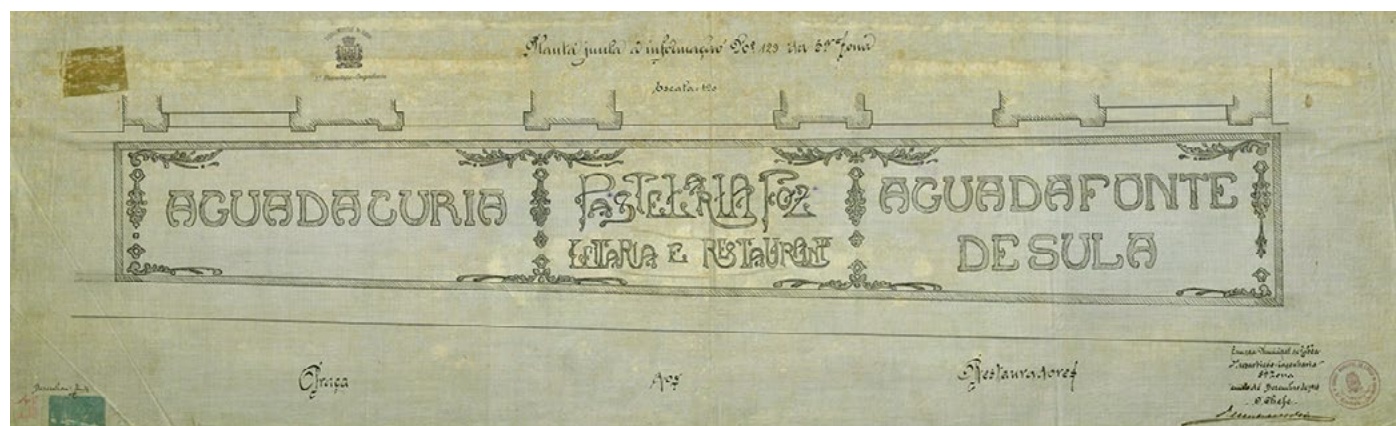


Figure 56 Drawing of the stone pavement in front of Pastelaria Foz, a dairy and restaurant, in Praça dos Restauradores, 1916-12-20.

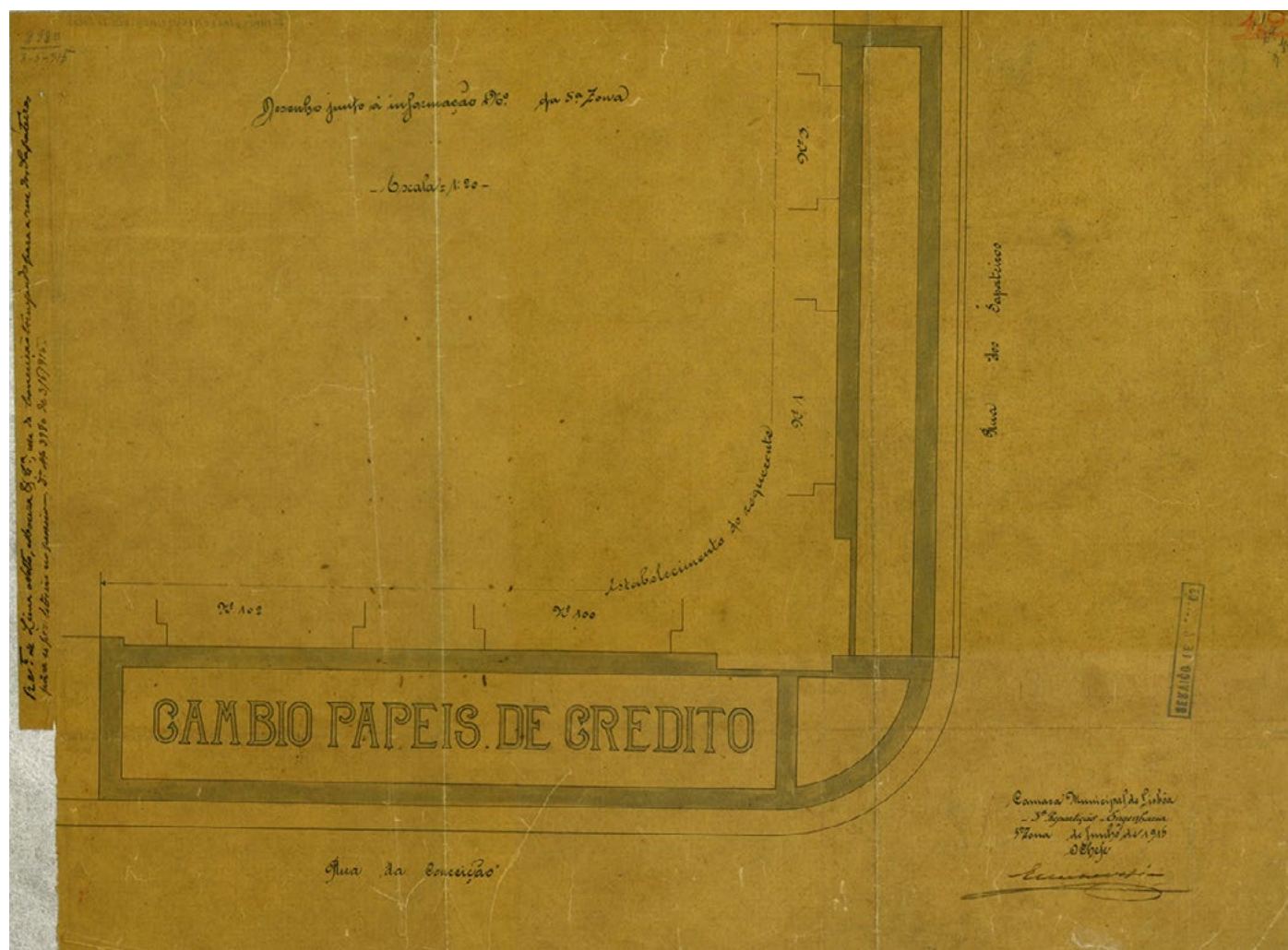


Figure 57 Drawing of the stone pavement for Cambio Papeis de Credito, in Rua Conceição, No. 100 to 102, on the corner with Rua dos Sapateiros Nos. 1 to 3, 1915-06.

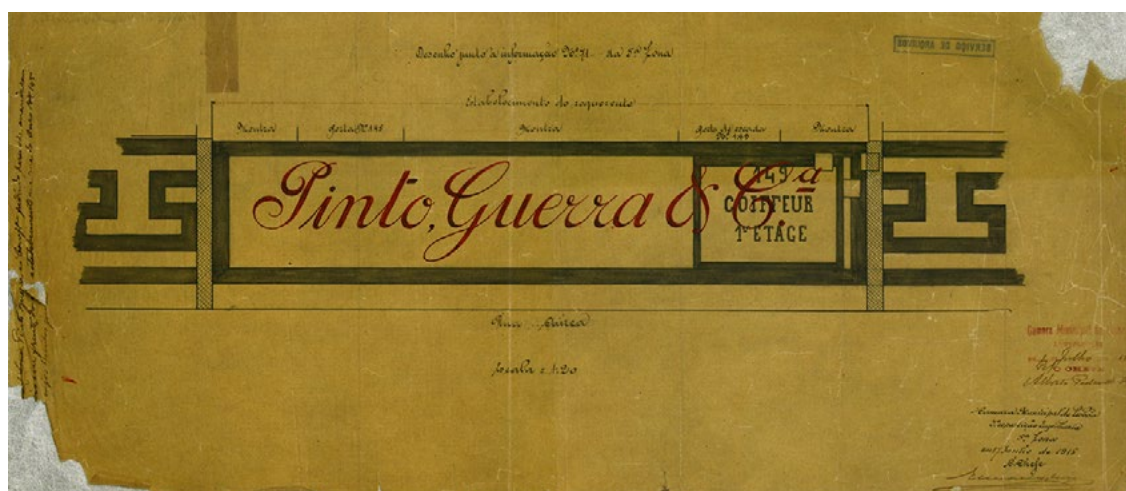


Figure 58 Drawing of the stone pavement in front of the shop Pinto Guerra e Companhia, located in Rua Aurea, Nos. 145 and 149, the present-day Rua do Ouro, 1915-06-17.



Figure 59 Drawing of the stone pavement in front of the shop Chapéus Petit Paris, located in Rua do Carmo No. 33, 1918-12-31.



Figure 60 Drawing of the stone pavement in front of the shop Casa Mariposa, located in Rua dos Fanqueiros No. 89, 1921-11-25.

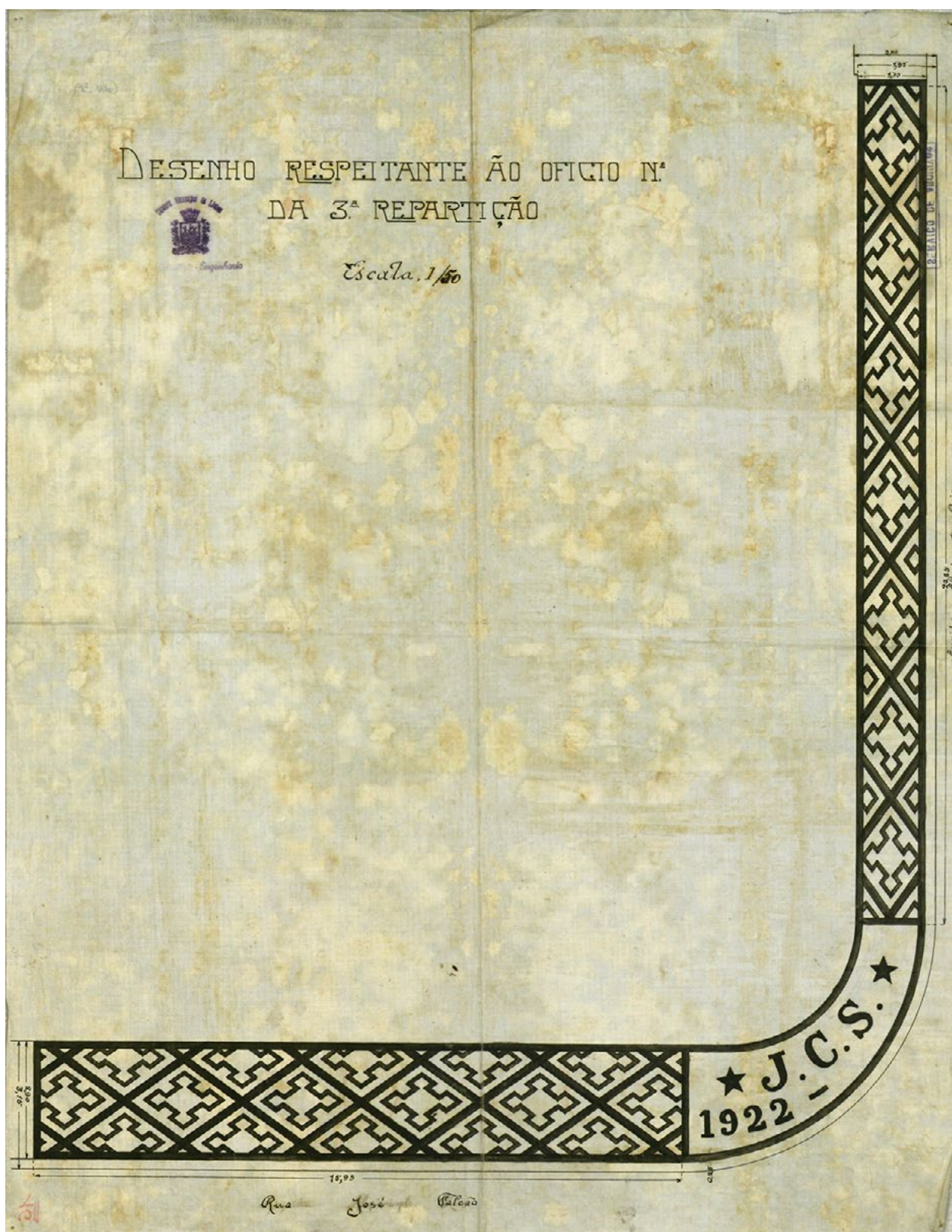


Figure 61 Drawing of a mosaic pavement with the name "JCS - 1922", located in Rua José Falcão on the corner with Avenida Almirante Reis, 1922.



Figure 62 Design of the stone pavement for the shop “Casa Infantil de Alcântara”, located in Rua de Alcântara No. 21, 1924-11-17.



Figure 63 Drawing of the stone pavement for a barber's shop located in Rua Primeiro de Dezembro No. 9, 1927-06-16.

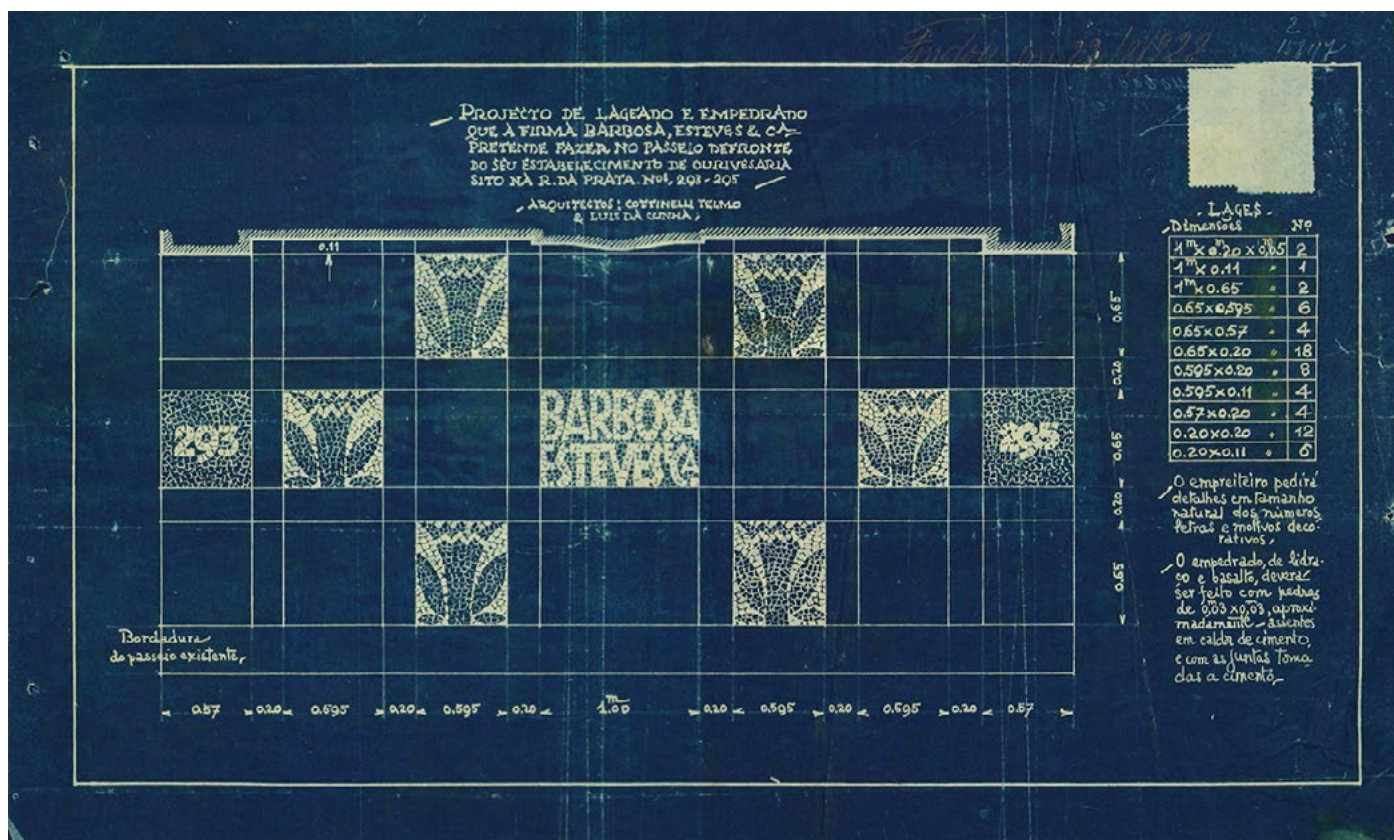


Figure 64 Design of the stone slabs and cobbles for the pavement in front of the jeweller's shop Barbosa, Esteves e Companhia, located in Rua da Prata Nos. 293-295. 1928-08-22.

INDEX OF THE IMAGES

Figure 1 Drawing of the stone pavement between Avenida Visconde de Valmor and Rua Ressano Garcia with the words “Homenagem da cidade” (Homage of the city), canvas, scale 1:50, 700 x 970 mm, s.d. AML, PT/AMLSB/CMLSB/UROB-PU/11/676. Now non-existent.

Figure 2 Drawings of stone pavements for the streets of Lisbon, with an indication of the measurements, s.d. AML, PT/AMLSB/CMLSB/UROB-PU/11/659, page 1.

Figure 3 Drawings of stone pavements for the streets of Lisbon, with an indication of the measurements, s.d. AML, PT/AMLSB/CMLSB/UROB-PU/11/659, page 2.

Figure 4 Drawing of the stone pavement located in Largo do Município next to the Pillory, paper, scale 1:20, 570 x 288 mm, s.d. AML, PT/AMLSB/CMLSB/UROB-PU/11/705. Now non-existent.

Figure 5 Drawing of a mosaic pavement, canvas, 604 x 675 mm, s.d. AML, PT/AMLSB/CMLSB/UROB-PU/11/693.

Figure 6 Drawing of the mosaic pavement “Design No. 6”, canvas, scale 1:20, 680 x 573 mm, s.d. AML, PT/AMLSB/CMLSB/UROB-PU/11/695.

Figure 7 Drawing of a mosaic pavement with the indication of the year 1884, in Rua de Arroios, location unknown, paper, scale 1:004, 550 x 285 mm, [1884]. AML, PT/AMLSB/CMLSB/UROB-PU/11/723. Now non-existent.

Figure 8 Drawing of types 1 to 3 of the mosaic pavements for Rua Garrett, made by the Technical Department of Lisbon Municipal Council, Augusto César dos Santos, tracing paper, scale 1:20, 1400 x 310 mm, 1887-03-28. AML, PT/AMLSB/CMLSB/UROB-PU/11/647.

Figure 9 Drawing of the mosaic pavements for Rua Augusta made by the Technical Department of Lisbon Municipal Council, canvas, scale 1:100, 600 x 300 mm, 1887-07-18. AML, PT/AMLSB/CMLSB/UROB-PU/11/713. Now non-existent.

Figure 10 Drawing of the stone pavement in front of Nos. 16 to 16B, in Rua do Jardim à Estrela, mentioning the dates of 1783 and 1896, tracing paper, 700 x 285 mm, [1896]. AML, PT/AMLSB/CMLSB/UROB-PU/11/680. Still partly existing, with the dates having been altered.

Figure 11 Design of mosaic pavements, of the new type 2 in Largo do Chiado, between the former Rua do Tesouro Velho, Rua Garrett, Igreja de Nossa Senhora da Encarnação and Rua do Alecrim, canvas, scale 1:50, 1010 x 305 mm, [19--]. AML, PT/AMLSB/CMLSB/UROB-PU/11/669.

Figure 12 Drawings of the stone pavements for Rua de São Sebastião da Pedreira, Rua dos Remédios in Alfama, and Praça Rio de Janeiro, canvas, scale 1:20, 590 x 380 mm, [19--]. AML, PT/AMLSB/CMLSB/UROB-PU/11/730. Now non-existent.

Figure 13 Drawing of the mosaic pavement in the former Rua Nova d’El Rei, the present-day Rua do Comércio, on the corner leading to Rua Augusta, made by the 4th Section of the 3rd Department of Lisbon Municipal Council, marion, scale 1:20, 1140 x 290 mm, [19--]. AML, PT/AMLSB/CMLSB/UROB-PU/11/658. Still existing.

Figure 14 Drawing of the stone pavement in front of a car show room in Rua Alexandre Herculano, canvas, scale 1:50, 900 x 300 mm, 1907-05-03. AML, PT/AMLSB/CMLSB/UROB-PU/11/725. Now non-existent.

Figure 15 Drawing of the mosaic proposed for the central pavement in Praça Duque de Saldanha, around the monument, paper, scale 1:100, 610 x 603 mm, 1909. AML, PT/AMLSB/CMLSB/UROB-PU/11/697. Now non-existent.

Figure 16 Drawings of the mosaic patterns that Francisco Manuel da Costa Pereira submitted to Lisbon Municipal Council for approval, requesting to be allowed to insert them in the pavement in front of his property and shop at No. 35, located in Praça Rio de Janeiro, the present-day Praça do Príncipe Real, 1918-11-26. AML, PT/AMLSB/CMLSB/UROB-PU/11/681, page 1. Now non-existent.

Figure 17 Drawing of the stone pavement in Praça Dom Pedro IV and Praça dos Restauradores, tracing paper, scale 1:20, 318 x 150 mm, 1927. AML, PT/AMLSB/CMLSB/UROB-PU/11/677. Now non-existent.

Figure 18 Drawing of the mosaic pavement in Largo do Município, paper, scale 1:25, 750 x 450 mm, [1930]. AML, PT/AMLSB/CMLSB/UROB-PU/11/706. Now non-existent.

Figure 41 Drawing of the stone pavement in front of the Tavares Rico restaurant in Rua da Misericórdia, s.d.

for the artistic paving of Praça Marquês de Pombal, including details and measurements for the various sections, paper, 8 f., 1947-05. AML, PT/AMLSB/CMLSB/UROB-PU/11/675, page 1.

Figure 20 (*idem*). AML, PT/AMLSB/CMLSB/UROB-PU/11/675, page 3.

Figure 21 (*idem*). AML, PT/AMLSB/CMLSB/UROB-PU/11/675, page 4.

Figure 22 (*idem*). AML, PT/AMLSB/CMLSB/UROB-PU/11/675, page 6.

Figure 23 Drawings of the decorative pavements in Rua de São Pedro de Alcântara, Rua das Flores, Rua de Belém and the central island in front of Igreja de Santos, collected from a notebook attributed to the architect Eduardo Martins Bairrada, with drawings of stone pavements, their respective location and police number, in various areas of Lisbon, paper, 92 f., 200 x 128 mm, [1954-1987]. AML, PT/AMLSB/CMLSB/UROB-PU/11/651, page 4.

Figure 24 Drawings of pavements in Largo da Boa Hora, Rua Nova do Almada, Rua da Emenda, Rua da Horta Seca, Rua das Chagas and Rua António Maria Cardoso, attributed to Eduardo Bairrada, paper, 200 x 128 mm, [1954-1987]. AML, PT/AMLSB/CMLSB/UROB-PU/11/651, page 8.

Figure 25 Drawings of pavements in Rua da Horta Seca, Rua Vítor Cordon, Rua António Maria Cardoso, Rua da Alegria, Praça Luís de Camões and Largo da Biblioteca Pública, attributed to Eduardo Bairrada, paper, 200 x 128 mm, [1954-1987]. AML, PT/AMLSB/CMLSB/UROB-PU/11/651, page 10.

Figure 26 Drawings of pavements in Rua Garrett, Rua José Falcão and Largo do Chiado, attributed to Eduardo Bairrada, paper, 200 x 128 mm, [1954-1987]. AML, PT/AMLSB/CMLSB/UROB-PU/11/651, page 11.

Figure 27 Drawings of pavements in Praça Luís de Camões and Calçada do Combro, attributed to Eduardo Bairrada, paper, 200 x 128 mm, [1954-1987]. AML, PT/AMLSB/CMLSB/UROB-PU/11/651, page 13.

Figure 28 Drawings of pavements in Largo de São Mamede, Praça do Rio de Janeiro and Rua da Escola Politécnica, attributed to Eduardo Bairrada, paper, 200 x 128 mm, [1954-1987]. AML, PT/AMLSB/CMLSB/UROB-PU/11/651, page 14.

Figure 29 Drawings of pavements in Calçada da Patriarcal, Praça do Rio de Janeiro, at the monument to França Borges and in Rua Dom Pedro V and Rua da Emenda, attributed to Eduardo Bairrada, paper, 200 x 128 mm, [1954-1987]. AML, PT/AMLSB/CMLSB/UROB-PU/11/651, page 15.

Figure 30 Drawings of pavements in Rua and Jardim de São Pedro de Alcântara, attributed to Eduardo Bairrada, paper, 200 x 128 mm, [1954-1987]. AML, PT/AMLSB/CMLSB/UROB-PU/11/651, page 16.

Figure 31 Drawings of pavements in Praça do Duque de Terceira, Praça do Rio de Janeiro, Calçada da Patriarcal, Rua do Alecrim, Rua da Emenda and Rua da Junqueira, attributed to Eduardo Bairrada, paper, 200 x 128 mm, [1954-1987]. AML, PT/AMLSB/CMLSB/UROB-PU/11/651, page 18.

Figure 32 Drawings of pavements in Rua Barata Salgueiro and Rua Augusta, attributed to Eduardo Bairrada, paper, 200 x 128 mm, [1954-1987]. AML, PT/AMLSB/CMLSB/UROB-PU/11/651, page 20.

Figure 33 Drawings of pavements in Rua da Conceição da Glória, Rua de São Pedro de Alcântara and Rua dos Sapateiros, attributed to Eduardo Bairrada, paper, 200 x 128 mm, [1954-1987].

Figure 34 Drawings of pavements in Rua dos Sapateiros and Rua da Vitória, and the central pavement of the monument to Luís de Camões, attributed to Eduardo Bairrada, paper, 200 x 128 mm, [1954-1987]. AML, PT/AMLSB/CMLSB/UROB-PU/11/651, page 30.

Figure 35 Drawings of pavements in Largo de São Domingos, Rua da Betesga and Rua da Mouraria, attributed to Eduardo Bairrada, paper, 200 x 128 mm, [1954-1987]. AML, PT/AMLSB/CMLSB/UROB-PU/11/651, page 35.

Figure 36 Drawings of pavements in Rua dos Fanqueiros and Rua de Santa Justa, attributed to Eduardo Bairrada, paper, 200 x 128 mm, [1954-1987]. AML, PT/AMLSB/CMLSB/UROB-PU/11/651, page 39.

Figure 37 Drawings of pavements in Rua do Salitre, Rua da Creche and Escadinhas do Duque, attributed to Eduardo Bairrada, paper, 200 x 128 mm, [1954-1987]. AML, PT/AMLSB/CMLSB/UROB-PU/11/651, page 41.

Figure 38 Drawing of the pavement of the Estrella d'Ouro dairy, in Rua da Graça Nos. 22 to 26, belonging to Agapito Serra Fernandes, canvas, scale 1:20, 606 x 270 mm, s.d. AML, PT/AMLSB/CMLSB/UROB-PU/11/716.

Figure 39 Drawings of the stone pavements located in Rua Nova de São Domingos Nos. 28 to 32, for the shops "Sapataria Lopes", "Bijou Chinez" and "Drogaria Pires", canvas, scale 1:10, 1023 x 372 mm, s.d. AML, PT/AMLSB/CMLSB/UROB-PU/11/736.

Figure 40 Drawing of the stone pavement in Rua da Palma, in front of Nos. 86, 88, 90 and 92, canvas, scale 1:20, 570 x 295 mm, s.d. AML, PT/AMLSB/CMLSB/UROB-PU/11/719.

Figure 41 Drawing of the stone pavement in front of the Tavares Rico restaurant in Rua da Misericórdia, No. 37, canvas, scale 1:10, 1004 x 385 mm, s.d. AML, PT/AMLSB/CMLSB/UROB-PU/11/731.

Figure 42 Drawing of the stone pavement in front of the Estrela d'Ouro dairy, in Rua Bela da Rainha Nos. 285 to 291, the present-day Rua da Prata, paper, scale 1:20, 810 x 410 mm, s.d. AML, PT/AMLSB/CMLSB/UROB-PU/11/688.

Figure 43 Drawing accompanying Process No. 10391 of the pavement with the inscription "Pharmacia", located between Largo de Dona Estefânia No. 9 and Rua de Dona Estefânia No. 143, canvas, scale 1:20, 880 x 470 mm, s.d. AML, PT/AMLSB/CMLSB/UROB-PU/11/702.

Figure 44 Design of the mosaic pavement for the jeweller's shop Feijó, located in Rua da Betesga Nos. 51 to 55, on the corner with Rua Bela da Rainha, the present-day Rua da Prata, with an indication of the development and the parts already completed, canvas, scale 1:20, 790 x 290 mm, s.d. AML, PT/AMLSB/CMLSB/UROB-PU/11/704.

Figure 45 Drawing of the sign of "Nova Companhia de Carruagens Fidelidade", to be inscribed in the stone pavement in front of door No. 46 of Rua de São Bento, marion, scale 1:10, 490 x 285 mm, 1893-12-12. AML, PT/AMLSB/CMLSB/UROB-PU/11/684.

Figure 46 Design of the mosaic to be inserted in the stone pavement at Rua da Rosa No. 39 in front of the shop J. P. Mattos, on the corner with Travessa dos Fiéis de Deus, at the request of João Pereira de Carvalho, paper, 416 x 275 mm, 1897-04-19. AML, PT/AMLSB/CMLSB/UROB-PU/11/666.

Figure 47 Drawing of the mosaic pattern and sign for the pavement in front of the shop Casa do Japão, Chá e Café, located in Calçada do Poço dos Negros, Nos. 127 to 129B, 1898-01-02. AML, PT/AMLSB/CMLSB/UROB-PU/11/665, page 2.

Figure 48 Drawing of the mosaic pattern for the sign to be inserted in the pavement in front of doors Nos. 20, 22 and 24 located in Travessa de São Domingos, the present-day Rua Barros Queirós, for a jeweller's and watchmaker's shop, marion, scale 1:10, 860 x 305 mm, 1900-02-06. AML, PT/AMLSB/CMLSB/UROB-PU/11/679.

Figure 49 Drawing of the mosaic pavement in front of the money exchanger Testa, in Rua do Arsenal No. 78. Contains an indication of the measurements, the area of the pavement and the number of letters, marion, scale 1:10, 523 x 350 mm, [19-]. AML, PT/AMLSB/CMLSB/UROB-PU/11/657.

Figure 50 Sketch for the stone pavement of "Ao Chapeo da Palha", the shop belonging to M. Soares Júnior, store and factory of straw hats, located in Rua do Corpo Santo Nos. 7 and 9, paper, 217 x 125 mm, [19-]. AML, PT/AMLSB/CMLSB/UROB-PU/11/650/03.

Figure 51 Drawings of the stone pavements for Casa das Bengalas, requested by António and Ricardo da Costa, for the sidewalk in front of their shop, located in Rua Bela da Rainha Nos. 91 to 95, the present-day Rua da Prata, [19-]. AML, PT/AMLSB/CMLSB/UROB-PU/11/686, page 1.

Figure 52 Drawings of the stone pavements for Casa das Bengalas, located in Rua Bela da Rainha Nos. 91 to 95, the present-day Rua da Prata, [19-]. AML, PT/AMLSB/CMLSB/UROB-PU/11/686, page 2.

Figure 53 Drawing of the stone pavement in front of the shop Louças de Alcântara, located in Rua Bela da Rainha Nos. 249 to 255, the present-day Rua da Prata and Rua de Santa Justa Nos. 39 to 43, requested by the firm Lopes e Companhia, Augusto César Dias (supervisor of building works), canvas, scale 1:20, 1003 x 820 mm, 1902-10-09. AML, PT/AMLSB/CMLSB/UROB-PU/11/687.

Figure 54 Drawing of the stone pavement in front of Relojoaria Botelho, located in Rua Áurea Nos. 292 and 294, the present-day Rua do Ouro, canvas, scale 1:20, 625 x 303 mm, 1903-02-27. AML, PT/AMLSB/CMLSB/UROB-PU/11/673.

Figure 55 Drawing of the stone pavement for Rua do Arsenal Nos. 86, 88 and 90 and the pavement of Broomfields English Bakery, in Largo de São Julião Nos. 8 and 9, with an indication of the budget for the letters, material and store, canvas, scale 1:20, 635 x 395 mm, 1907-06-18. AML, PT/AMLSB/CMLSB/UROB-PU/11/718.

Figure 56 Drawing of the stone pavement in front of Pastelaria Foz, a dairy and restaurant, in Praça dos Restauradores, with advertising for Água da Curia and Água da Fonte de Sula, designed by the Engineering Department of Lisbon Municipal Council, scale 1:20, 1916-12-20. AML, PT/AMLSB/CMLSB/UROB-PU/11/668, page 2.

Figure 57 Drawing of the stone pavement for Cambio Papeis de Credito, requested by the owner of the shop Lima Neto Moura, in Rua da Conceição Nos. 100 to 102, on the corner with Rua dos Sapateiros Nos. 1 to 3, marion, scale 1:20, 595 x 440 mm, 1915-06. AML, PT/AMLSB/CMLSB/UROB-PU/11/700.

Figure 58 Drawing by Álvaro Pedro da Silva next to Information Post No. 71 of the fifth area of Pinto Guerra e Companhia, whose applicant wished to have a pavement made for the front of his shop with the name Coiffeur 1er. etage, located in Rua Aurea Nos. 145 and 149, the present-day Rua do Ouro, canvas, scale 1:20, 700 x 305 mm, 1915-06-17. AML, PT/AMLSB/CMLSB/UROB-PU/11/722.

Figure 59 Drawing of the pavement in front of the shop Chapéus Petit Paris, in Rua do Carmo No. 33, as requested by Henriqueta Moreira e Companhia, scale: 1:10, 1918-12-31. AML, PT/AMLSB/CMLSB/UROB-PU/11/671, page 1.

Figure 60 Drawing of the stone pavement, in front of the shop Casa Mariposa in Rua dos Fanqueiros No. 89, scale 1:20, 1921-11-25. AML, PT/AMLSB/CMLSB/UROB-PU/11/655, page 1.

Figure 61 Design for a mosaic pavement with the name “JCS - 1922”, relating to an official request of the 3rd Department of Engineering, located in Rua José Falcão, on the corner with Avenida Almirante Reis, canvas, scale 1:50, 600 x 466 mm, 1922. AML, PT/AMLSB/CMLSB/UROB-PU/11/703. Still partly existing.

Figure 62 Design of the mosaic with the sign that Mário Mengo requested Lisbon Municipal Council to make in the pavement of his shop “Casa Infantil de Alcântara”, located in Rua de Alcântara No. 21, with an indication of the measurements of the shop window, door and banner, marion, scale 1:10, 850 x 292 mm, 1924-11-17. AML, PT/AMLSB/CMLSB/UROB-PU/11/652, page 1.

Figure 63 Drawings of the stone pavement for a barber’s shop in Rua Primeiro de Dezembro No. 9, scale 1:10, 1927-06-16. AML, PT/AMLSB/CMLSB/UROB-PU/11/654, page 2.

Figure 64 Design of the stone pavement that the firm Barbosa, Esteves e Companhia wished to insert in the pavement in front of their jeweller’s shop in Rua da Prata Nos. 293-295. It includes the dimensions of the slabs and the stones to be used in the pavement, Cottinelli Telmo and Luís da Cunha, marion, 435 x 263 mm, 1928-08-22. AML, PT/AMLSB/CMLSB/UROB-PU/11/733.

BIBLIOGRAPHICAL REFERENCES

PRINTED SOURCES

Empedrados e mosaicos. *Arte Portuguesa, Revista ilustrada de arqueologia e arte moderna*. A. I N.º 2 (1895), p. 42.

Os passeios de Lisboa. *Revista Municipal*. Ano I N.º 2 (1939), pp. 79-86.

STUDIES

ABREU, José Guilherme (2005) – Arte pública e lugares de memória. *Ciências e Técnicas do Património. Revista da Faculdade de Letras da Universidade do Porto*. I Série V. IV, pp. 215-234.

BAIRRADA, Eduardo Martins (1985) – *Empedrados artísticos de Lisboa: a arte da calçada-mosaico*. Lisbon: E. M. Bairrada.

CABRERA, Ana; NUNES, Marília (1998) – *Olhar o chão*. Lisbon: Imprensa Nacional Casa da Moeda.

CASTELA, Isabel; DORNELLAS, Luísa, coord. (2006) – *Técnicas de calçada: manual do formando*. Lisbon: Câmara Municipal.

CASTILHO, Júlio de (1937) – *Lisboa antiga: bairros orientais*. Lisbon: Câmara Municipal. vol. X.

COUPLAND, Andy, ed. (1996) – *Reclaiming the city: mixed use development*. London: Routledge.

FERNANDES, Lúdia; BUGALHÃO, Jacinta; FERNANDES, Paulo Almeida, coord. (2017) – *Debaixo dos nossos pés: pavimentos históricos de Lisboa*. Lisbon: Museu de Lisboa.

FERREIRA, José Miguel (2007) - *Pavimentos em espaços públicos urbanos: contribuição para a análise e concepção de soluções*. Lisbon: [s.n.]. Master’s degree dissertation, Instituto Superior Técnico.

GATO, Maria Assunção (2010) – *Pode o espaço ser agente de poder e de identidade(s)?* Lisbon: CIES. CIES e-working paper, No. 96.

HENRIQUES, António M. E.; MOURA, António A. C.; SANTOS, Francisco A. (2009) – *Manual da calçada portuguesa*. Lisbon: Direcção Geral de Energia e Geologia.

LOUSADA, Maria Alexandre (2017) – Uma cidade em mudança: população e sociabilidades em Lisboa, finais do século XVIII - início do século XX. In FERNANDES, Lúdia; BUGALHÃO, Jacinta; FERNANDES, Paulo Almeida, coord. – *Debaixo dos nossos pés: pavimentos históricos de Lisboa*. Lisbon: Museu de Lisboa. p. 40-47.

MATOS, Ernesto (2006) – *Assinaturas: um passeio poético pela calçada portuguesa*. [S.l. : s.n.].

MATOS, Ernesto (2011) – *Calçada portuguesa*. Lisbon: Sessenta e Nove Manuscritos.

MATOS, Ernesto (2009) – *Calçada portuguesa no mundo: per orbem terrarum et marem vastum*. [S.l.]: Sessenta e Nove Manuscritos.

MATOS, Ernesto (2018) – *Calçada portuguesa: scriptum in petris*. Lisbon: Sessenta e Nove Manuscritos.

MATOS, Ernesto (2004) – *Lisboa das calçadas*. Lisbon: Câmara Municipal.

MATOS, Ernesto (1999) – *Mesmo por baixo dos meus pés: uma viagem pela calçada portuguesa*. Lisbon: E. Matos.

MIRANDA, António (2017a) – As novas pavimentações na Lisboa dos séculos XIX e XX. In FERNANDES, Lúcia; BUGALHÃO, Jacinta; FERNANDES, Paulo Almeida, coord. – *Debaixo dos nossos pés: pavimentos históricos de Lisboa*. Lisbon: Museu de Lisboa. p. 36-39.

MIRANDA, José Luís da Costa (2017b) – A calçada comparada a outras metodologias de pavimentos. Porto: [s.n.]. Master's Degree Dissertation, Universidade do Porto.

MONTEIRO, Joana Sousa; BASTOS, Margarida Almeida, coord. (2015) – *A luz de Lisboa*. Lisbon: Câmara Municipal.

NAS, Peter J. M., ed. (1993) – *Urban symbolism*. Leiden: E. J. Brill.

NORA, Pierre, ed. (1984) – *Les lieux de mémoire*. Paris: Gallimard.

PINTO, Maria João Pereira Rebelo de Sousa (2005) – *Levantamento cartográfico de locais de pedreiras no concelho de Lisboa*. Lisbon: Câmara Municipal.

SILVA, Ana Cannas da (2016) – *Simetria passo a passo: calçadas de Portugal*. [S.l.]: Clube do Colecionador dos Correios.

SIMÕES, Ana; DIOGO, Maria Paula (2017) – O chão que Lisboa pisa? Debaixo dos nossos pés. In FERNANDES, Lúcia; BUGALHÃO, Jacinta; FERNANDES, Paulo Almeida, coord. – *Debaixo dos nossos pés: pavimentos históricos de Lisboa*. Lisbon: Museu de Lisboa. p. 21-25.

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Denise Raquel Fernandes dos Santos, Arquivo Municipal de Lisboa, Direção Municipal de Cultura,
Câmara Municipal de Lisboa, 1070-017 Lisboa, Portugal. denise.santos@cm-lisboa.pt
<https://orcid.org/0000-0003-0268-1914>

SANTOS, Denise (2022) – A calçada portuguesa: desenhos em arquivo.
Cadernos do Arquivo Municipal. 2ª Série Nº 17 (janeiro-junho), p. 218-267.
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