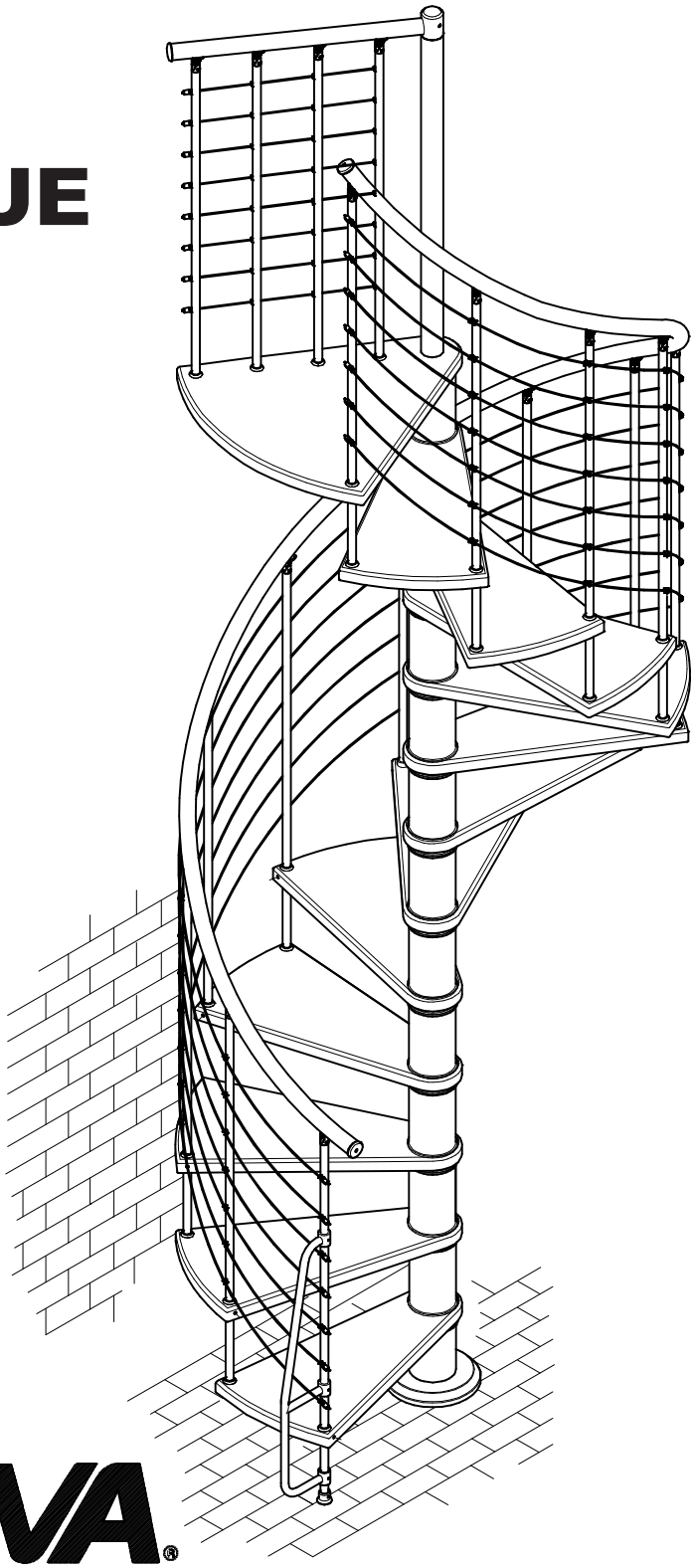
ASSEMBLY INSTRUCTIONS

GB

Mod. VOGUE



EHLEVA®

advanced mobular stair system

Code **MD.K.200**	Rev **0**	Edition **10/06**

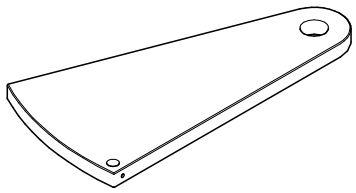
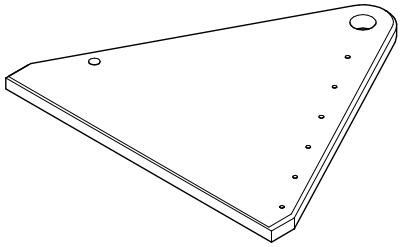
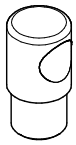
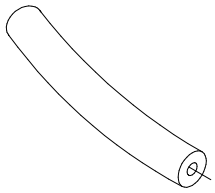
MC

CONTENTS

PART 1

WOODEN COMPONENTS

- Before proceeding to the various assembly stages, empty the cardboard package and arrange all parts on a flat surface to check that all components included in the list attached are present that no damaged parts are present.

Ref.	Draw	N. pcs
L11		12
L12		1
L13		1
L14		13

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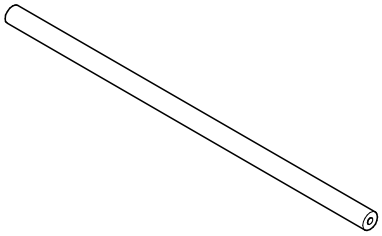
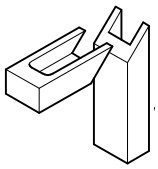
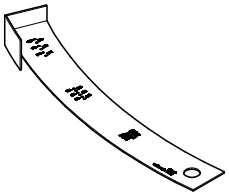
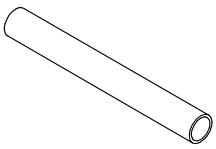
L15		1
L16		2
D1		1
K82		1

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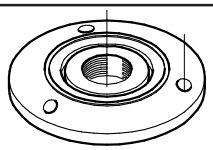
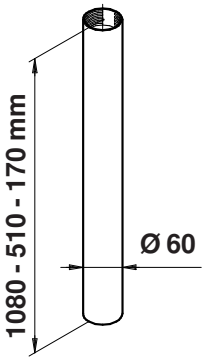
COMPONENTS

Ref.	Draw.	N. pcs.
K1		1
K2A	L. 510 	1
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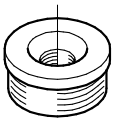
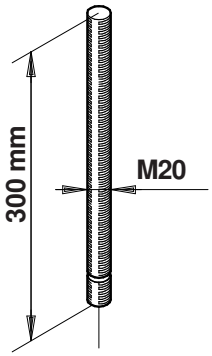
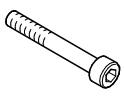
K2C	L. 1080	2
K4		1
K5		1
K6	**M10x70** 	3
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K15		1

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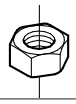
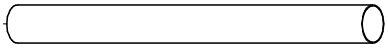
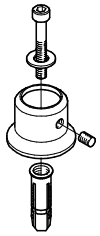
K16	**M20** 	1
K17		1
K18	**M6x70 M6x6 Ø6x12** 	1
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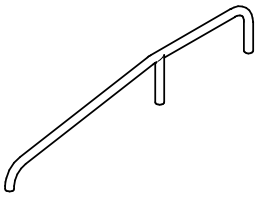
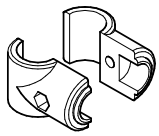
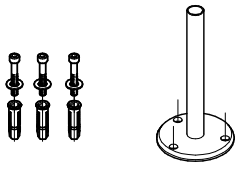
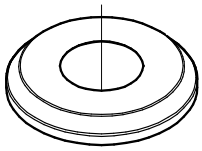
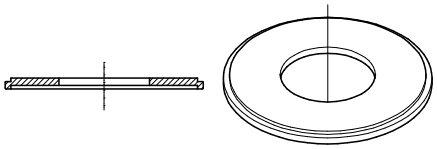
K33		1
K36		4
K38		1
K44		1
K45		100

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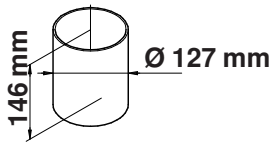
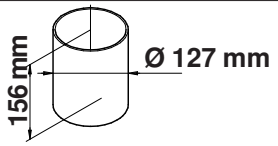
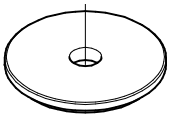
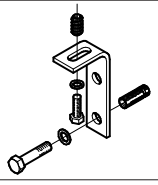
- VOGUE -

Ref.	Draw.	N. pcs.
K49		1
K50		12
K51		1
K58		2
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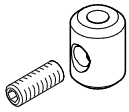
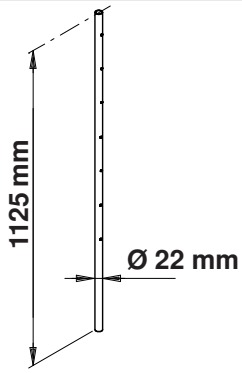
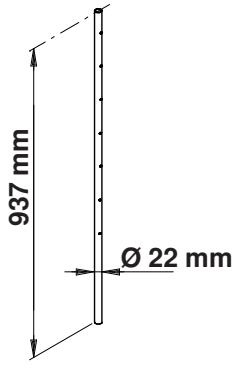
K60		32+32
K63		13
K64		4

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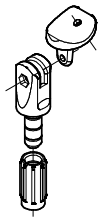
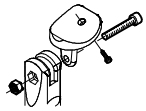
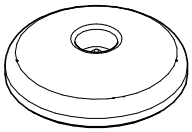
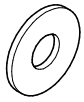
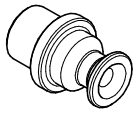
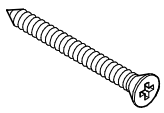
K65		18
K66		30+30
K68		3
K71		13
K72		12
K73	**5x80** 	13
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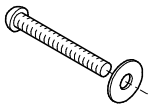
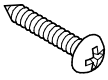
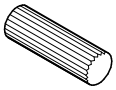
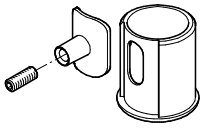
K75		30+30
K76		3
K77		3
K78		15

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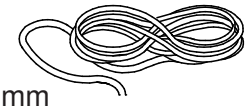
Ref.	Draw.	N. pcs.
K79		1
K80	**4.2x19** 	30
K81		2
K83	Lungh. 1000 mm 	8
K84	Lungh. 6500 mm 	7

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PART 2

SET-UP

- To assemble the staircase correctly, the precise number of steps, their rise and starting point must be identified so as to place the final top step in the correct position. A rule is attached hereto which, according to the **"H"** height that is to be reached, calculates the number of necessary steps and their **"A"** rise. The following pages will illustrate how to consult the rule correctly. Some set-ups are reported on this page.

  A – step rise
  H – staircase height

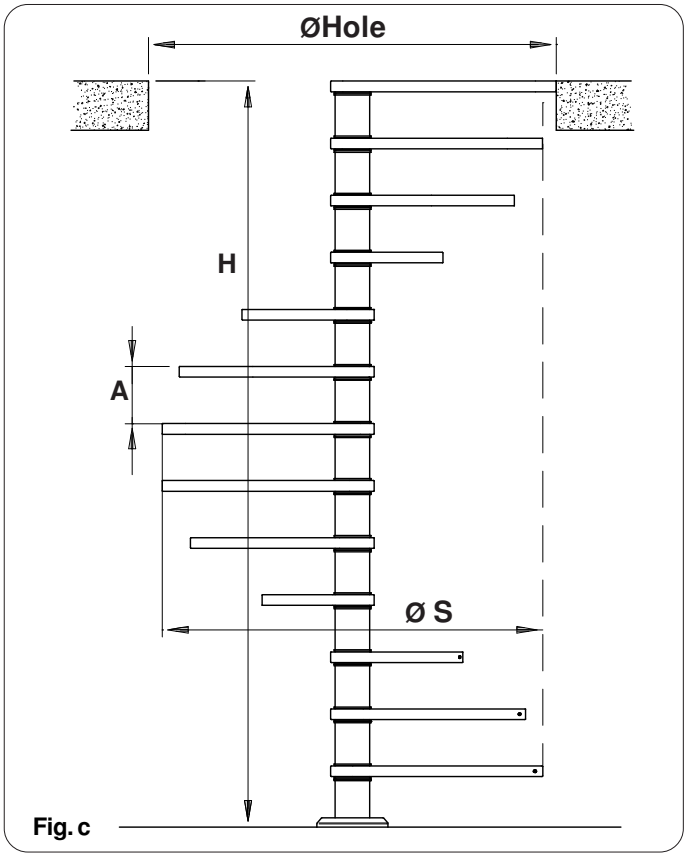

Fig. c

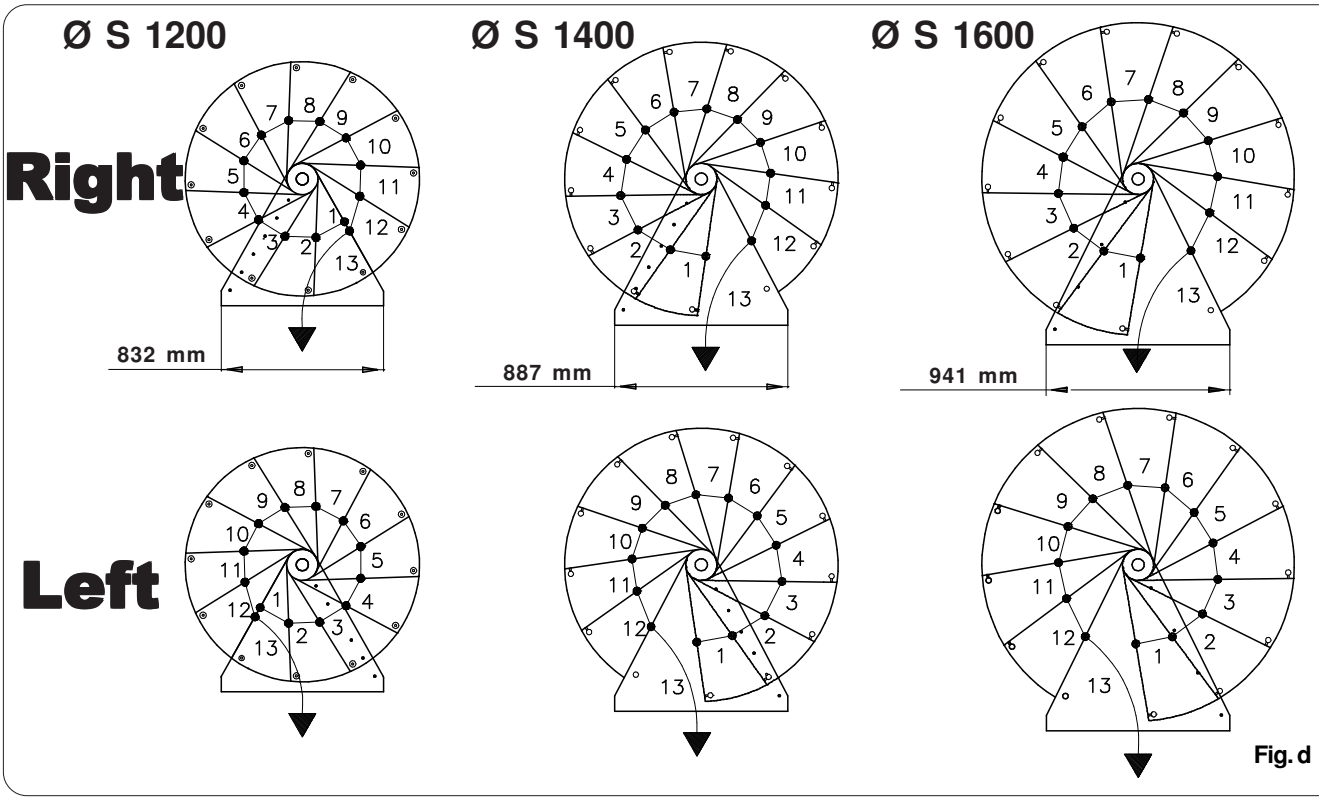

Fig. d

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USEFUL HEIGHT MEASUREMENT

- Measure the "**H**" height from the top ceiling to the bottom floor. In addition, measure the stairwell staircase. (Fig. 1)

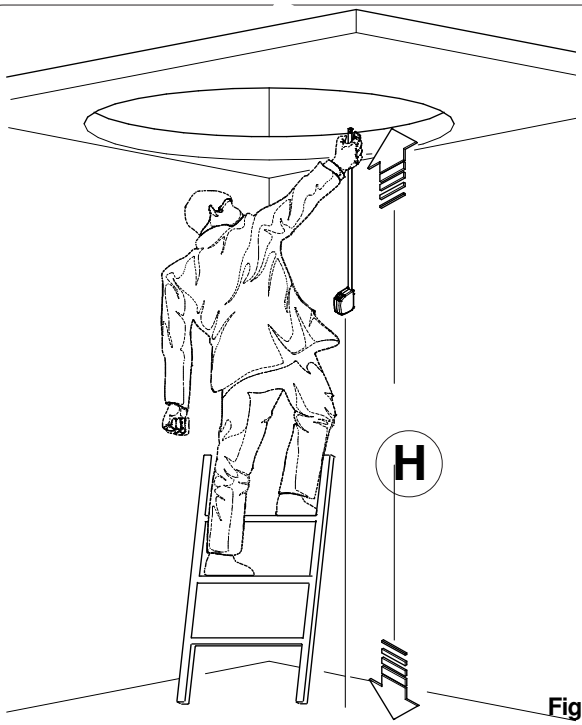

Fig. 1

USING THE RULE

The "Rule" is a parametric system necessary to calculate the number of certain components of the staircase:

- Pile components
- Step number
- number of spacers for each rise

- Column **"H"** Value of the measured rise to be set
  Column **"G"** Number of steps to be mounted.
  Section **"P"** Including three columns relating to the length and the number of piles to be used.
  The number of parts to be assembled must be derived from the references above.

  Section **"A"** Composed of six columns relating to the r ise value.
  Under each column, the boxes report how many rises need to be created.
  Moreover, the six columns report the number of spacers to be mounted to achieve their r espective rise.

  By sliding the mobile part of the rule, search the value of the measure "**H**" obtained, at the intermediate heights select the following "H" Height in the respective column. H. After having set up the value, the adjacent columns report the parameters that need to be complied with to assemble the staircase.
  In the example reported below, a "H" height value was set amounting to 2805 mm.
  The column **"G"** shows that thirteen steps are necessary.
  The section **"P"** shows that two 1080 mm long **K2C** piles and one 510 mm long **K2A** pile must be mounted.

  Section **"A"** shows the following parameters:
  N. 10 steps with 215 mm "A" rises with 4 **K45** spacers and the column size is:
  L1=1190 L2=1047 L3 =1118.
  N. 2 steps with 220 mm "A" rises with 5 **K45** spacers and the column size is:
  L1 =1190 L2 =1043 L3 =1117.

H	G	P			A					
(mm)	(n°)	1080	510	170	210	215	220	225	230	235
2805	13	2	1			10	2			
		K2C	K2A	K2B	3	4	5	6	7	8 K45
					L1=1190 L3=1120 L2=1050	L1=1190 L3=1118 L2=1047	L1=1190 L3=1117 L2=1043	L1=1190 L3=1115 L2=1040	L1=1190 L3=1113 L2=1037	L1=1190 L3=1112 L2=1033

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TRACING

- Find and project the centre of the stairwall staircase on the ground.
  To carry out this operation correctly, connect a plumb line to a ruler and place it on the opening of the top floor as shown in fig.2.

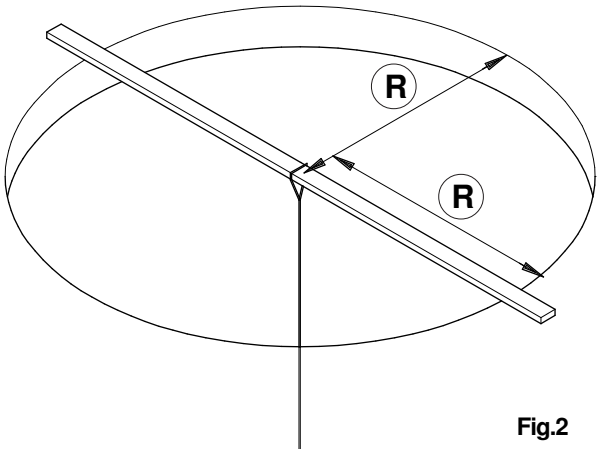

Fig.2

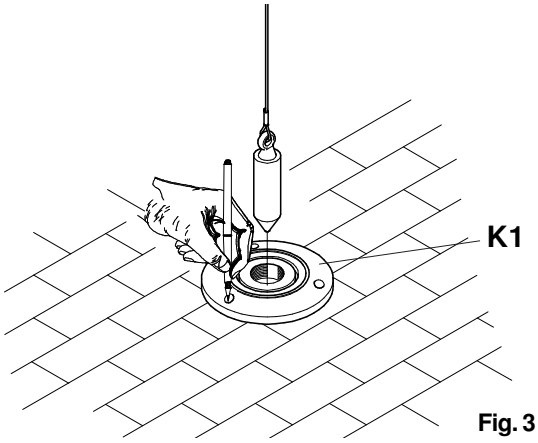

Fig. 3

- After completing the tracing operation, drill with a **Ø 12** mm drill, (fig. 4).
  Insert the **K7**brass small block, (fig. 4a).
  Place the **K1** flange and anchor by means of 3 **K6 screws** as shown in fig. 4b

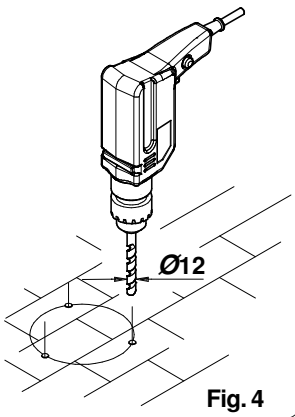

Fig. 4

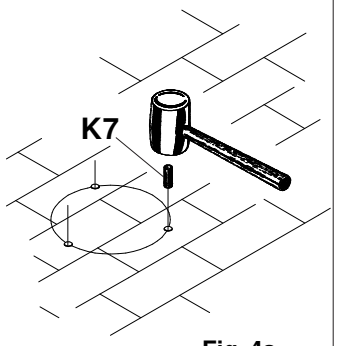

Fig. 4a

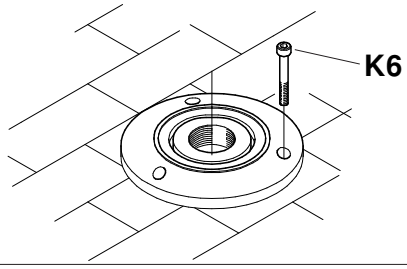

Fig. 4b

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CALCULATING THE NUMBER OF STEPS

- Proceed to calculate the number of elements that shall compose the central pile in a similar way to the procedure used to calculate the number of steps.
  By consulting the rule set at the “H” measure in mm, the number of elements is shown to compose the pile “P”.
  NB. in the case of a 2805 mm eight, n. 2 1080 mm elements and one 510 mm element are needs.

- Compose the post as shown in fig. 5. Start tightening the first **K2 (A-B-C)** pile component with the K1 flange. Avoid damaging the thread during the operation. Mount the **K2 (A-B-C)** segment that will compose the post.

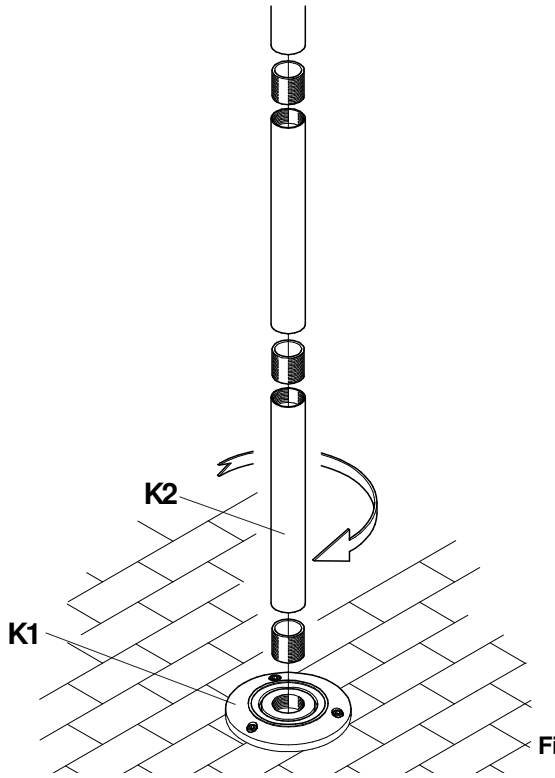

Fig. 5

PREPARING AND DRILLING THE STEPS

- Insert the **K82** reference pin into the existing hole. Place the **D1** template on the **L11** step by referring to the pin described above and the two opposite sides of the step as shown in fig.6.
  Small holes are present on the drilling template reporting the size of the “A” rise to which they refer.
  Identify the value of the **“A”** rise on the template and trace only the last point where the step needs to be drilled to be anchored to the column as shown in fig. 6.

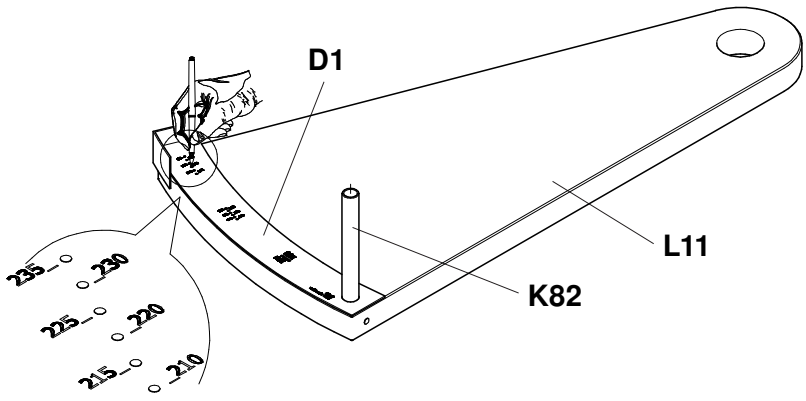

Fig. 6

H	G	P			A					
(mm)	(n°)	1080	510	170	210	215	220	225	230	235
2805	13	2	1			10	2			
		K2C	K2A	K2B	3	4	5	6	7	8 K45
					L1=1190 L3=1120 L2=1050	L1=1190 L3=1118 L2=1047	L1=1190 L3=1117 L2=1043	L1=1190 L3=1115 L2=1040	L1=1190 L3=1113 L2=1037	L1=1190 L3=1112 L2=1033

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- Proceed to drill in the previously traced point by using a **Ø11** wood drill.
  While drilling, make sure to place the step on a soft surface, preferably wood, so as to avoid damaging the drill at the end of the operation and obtain a hole free from scraps and chips. fig. 7

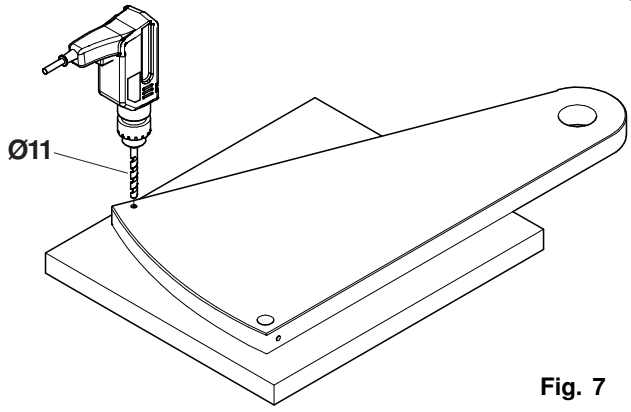

Fig. 7

ASSEMBLING THE STEPS

- Before completing the assembly of all the segments composing the pile, it is advisable to start also inserting the various elements that will compose the staircase (steps, spacers) by assembling them gradually as the assembly of the pile proceeds. First of all, insert the **K44** plate cover and the **K49** spacer (the only spacer 146mm tall), as shown in fig. 8

- Before inserting the **L11** step, mount the **K45** washer.
  Proceed to assemble the other steps and make sure that the **K45** centre washer is also assembled both above and below each step as shown in fig. 8
  The number of washers to be inserted needs to be calculated in the relevant column of the attached rule (see the various combinations in the table reported below. Fig. 9).

  NB. The need may emerge for combining two different sizes of the "A" rise. In this case, we suggest to group together those of the same size starting from above.

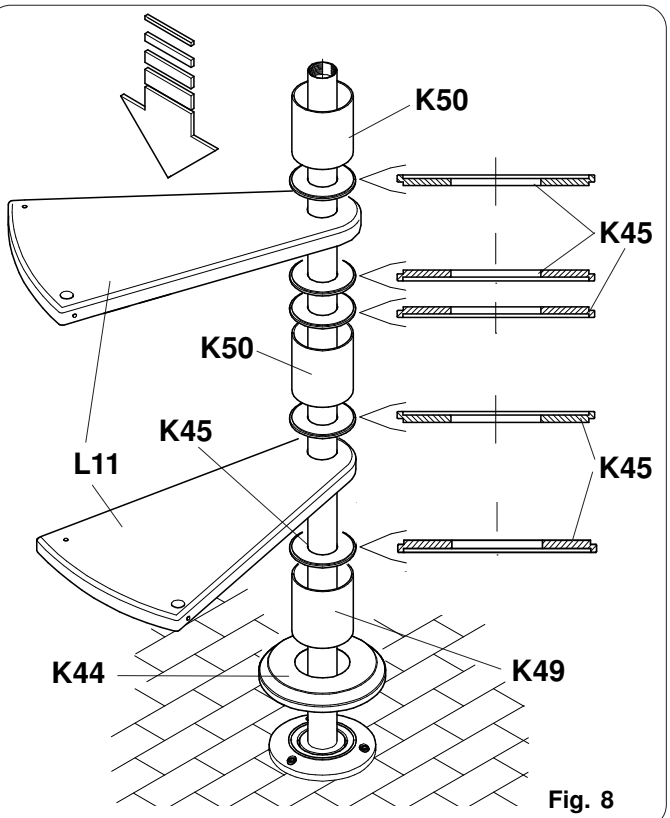

Fig. 8

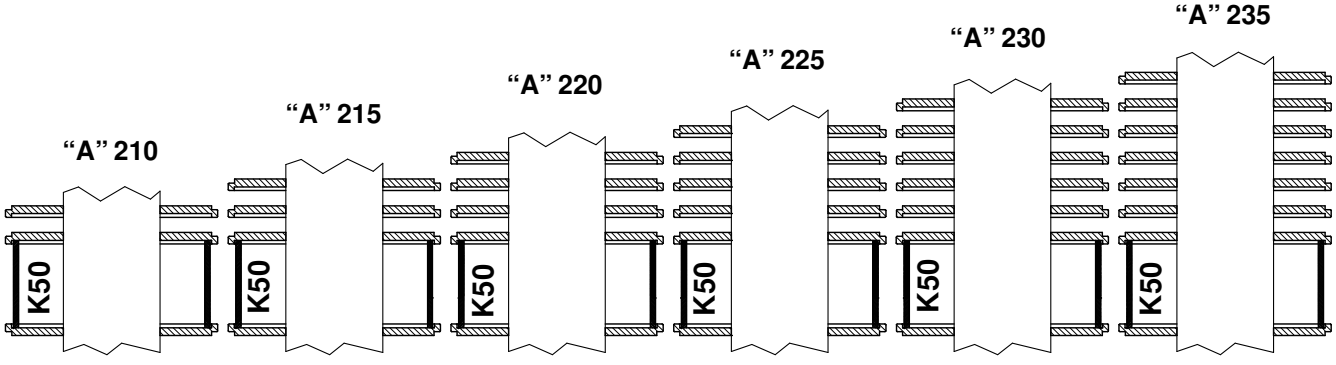

Fig. 9

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ASSEMBLING THE FINAL STEP

- After completing the operation and all steps, washers and spacers have been mounted and inserted into the pile, the **L12** final step must be prepared. The first operation to be carried out consists in shaping the step according to the opening/hole, which may either be round or rectangular.
  To cut precisely, insert the **L12** step into the **K5** screw as shown in fig. 10.

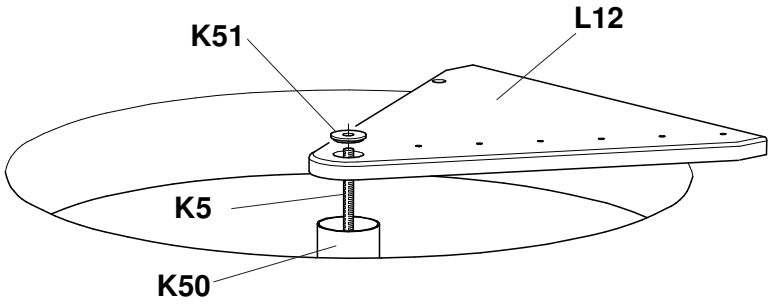

Fig. 10

To place the final step correctly, use the **K51** washer to centre it. (Fig.10)
Trace the bored of the hole by using the opening as a reference. (Fig.10a)

ATTENTION!!!
It is strictly forbidden to climb up and use the staircase before having completed the "Mounting the columns as anchoring the final step" stage.

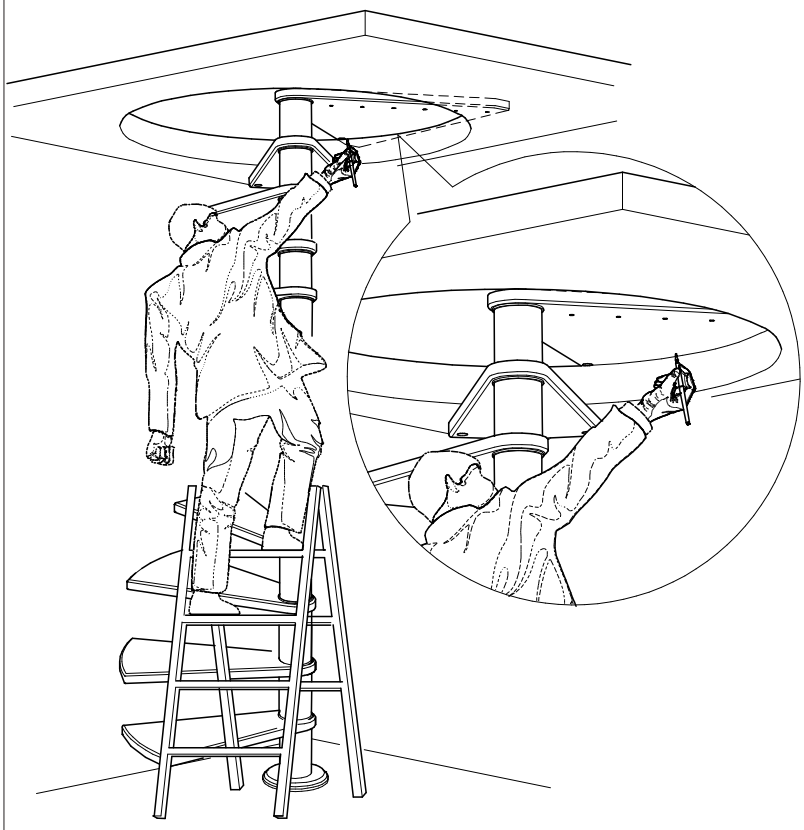

Fig. 10a

- Cut the step by following the marks obtained previously by means of an alternative electric saw or any other cutting tool. (Fig.11)
  Trim by eliminating any scraps or chips.

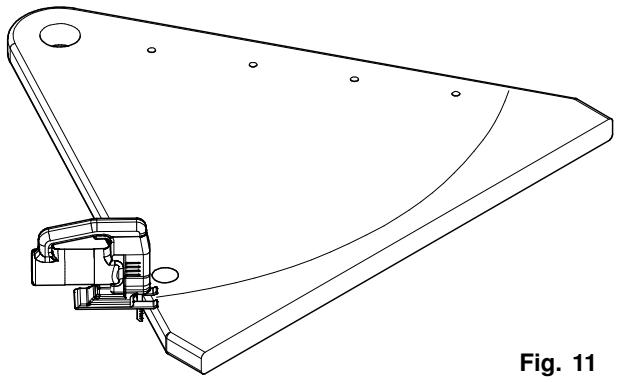

Fig. 11

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- After having moved the final step in the desired position, trace the points to be drilled to anchor the bracket. (in the package **K58**).
  In the bottom side of the step, identify the most suitable position to anchor the bracket, which should not interfere with the holes to mount the columns. Trace the point to be drilled as shown in fig. 12.

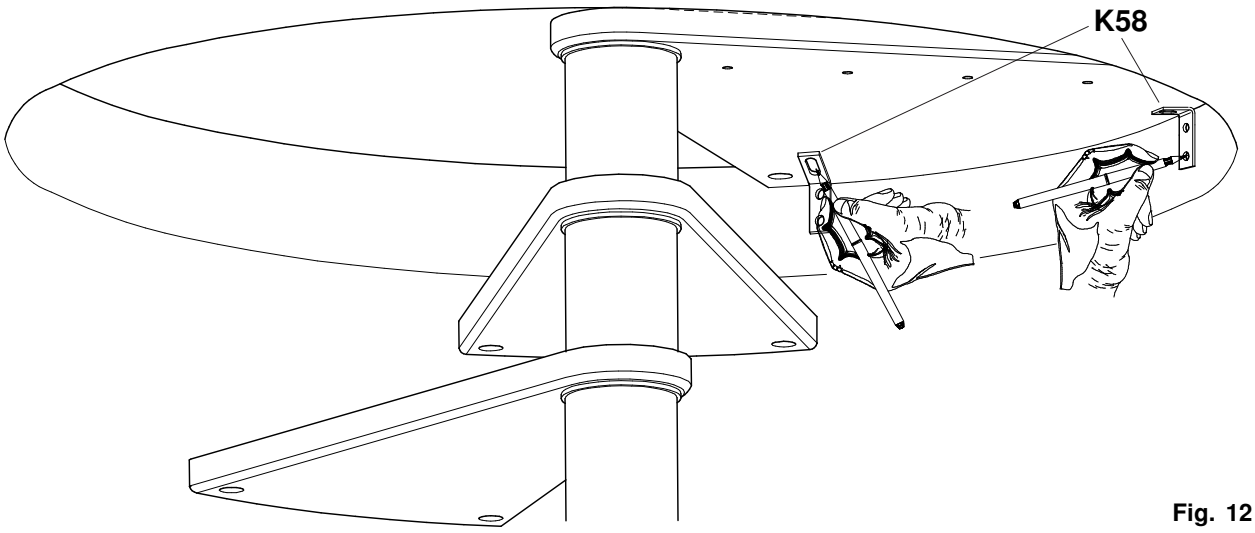

Fig. 12

- Temporarily disassemble the final step to drill the points marked previously as shown in fig. 13 - 13a.

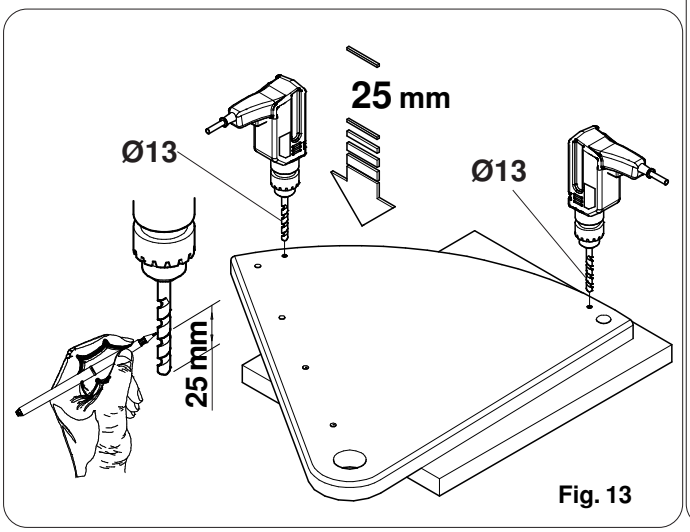

Fig. 13

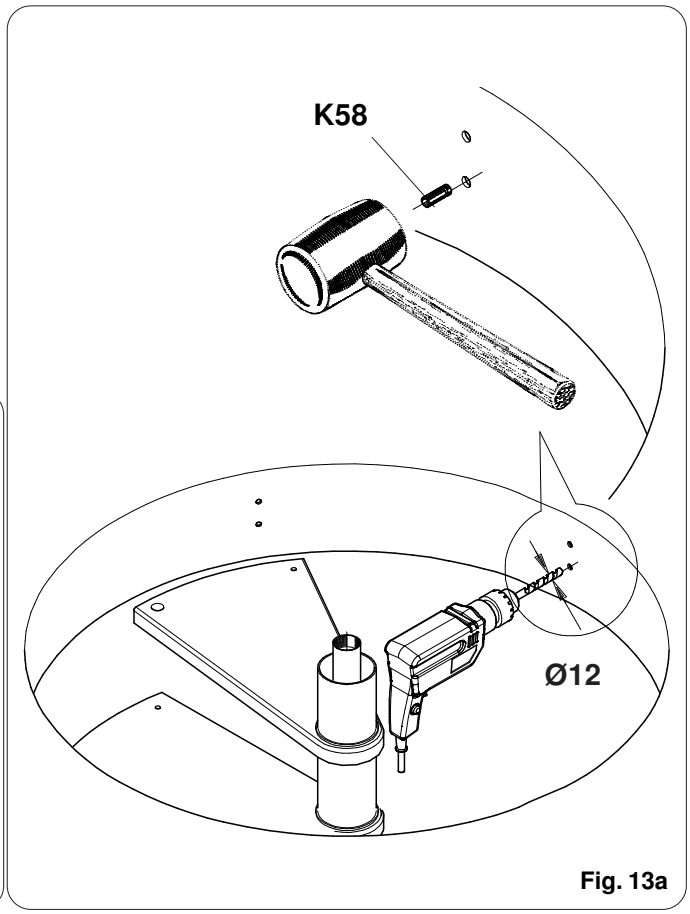

Fig. 13a

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- Before the final assembly of the final step, insert the **K79** black PVC section between the opening/hole slab and the step as shown in fig. 13b

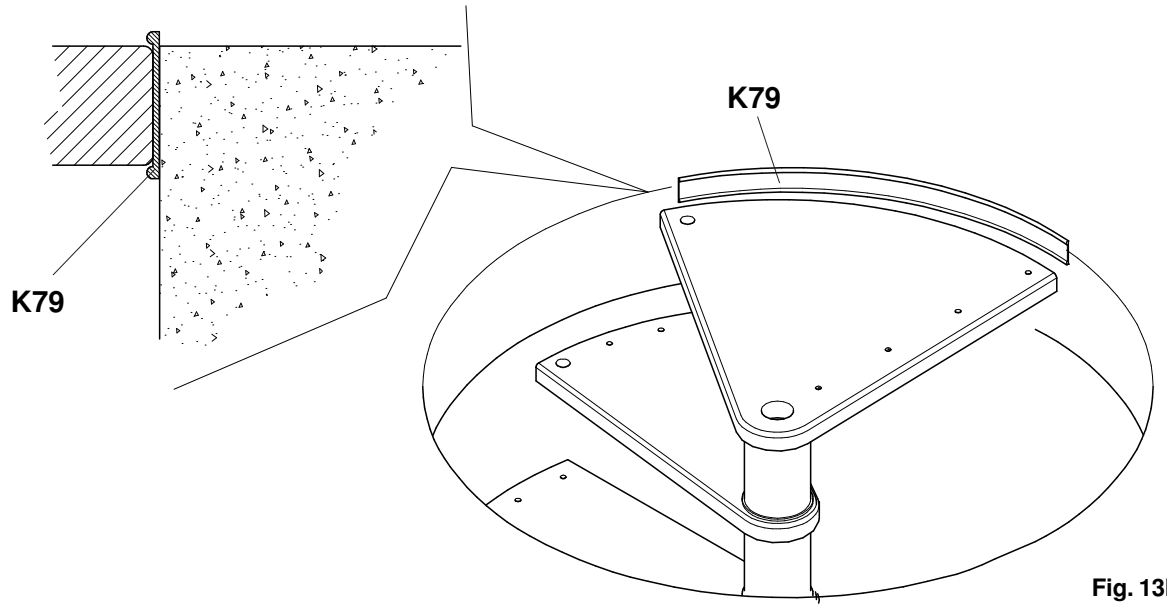

Fig. 13b

- Assemble the **L12** back, anchor it to the pile and tighten the staircase, so that the steps may be oriented when the columns are mounted as shown in fig. 14

- Proceed to anchor the **K58** brackets by means of the screws provided with the kit.
  After having completed this operation, cover the brackets with the dedicated **L16** protections, as shown in fig. 15 by means of silicone or glue.

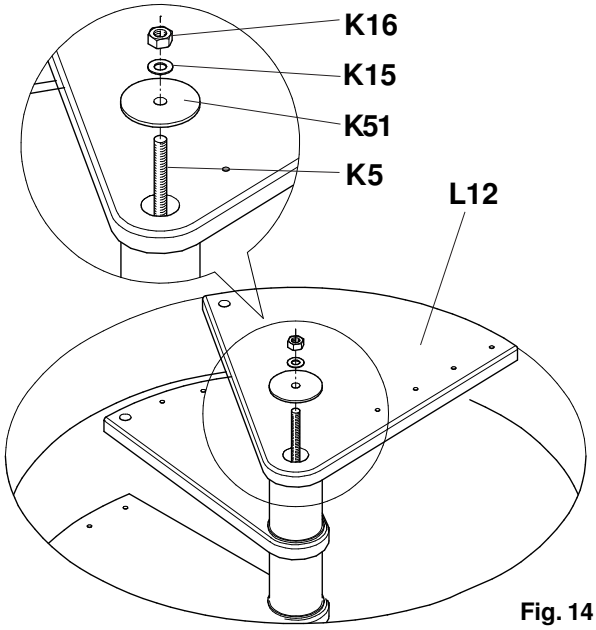

Fig. 14

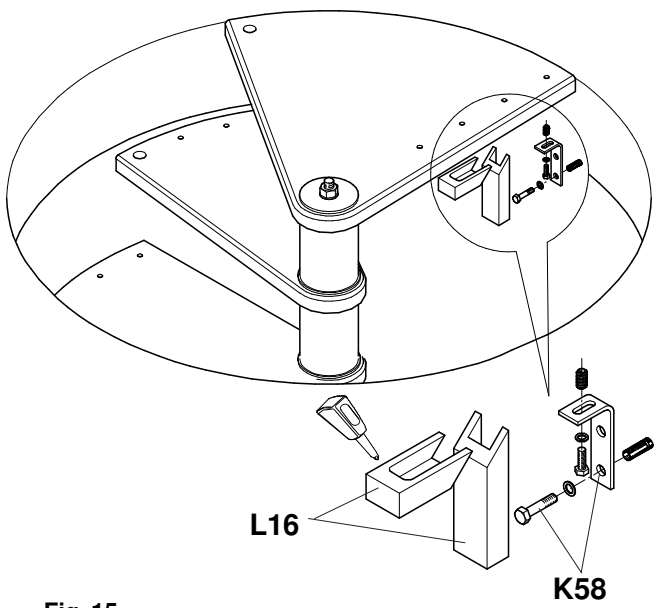

Fig. 15

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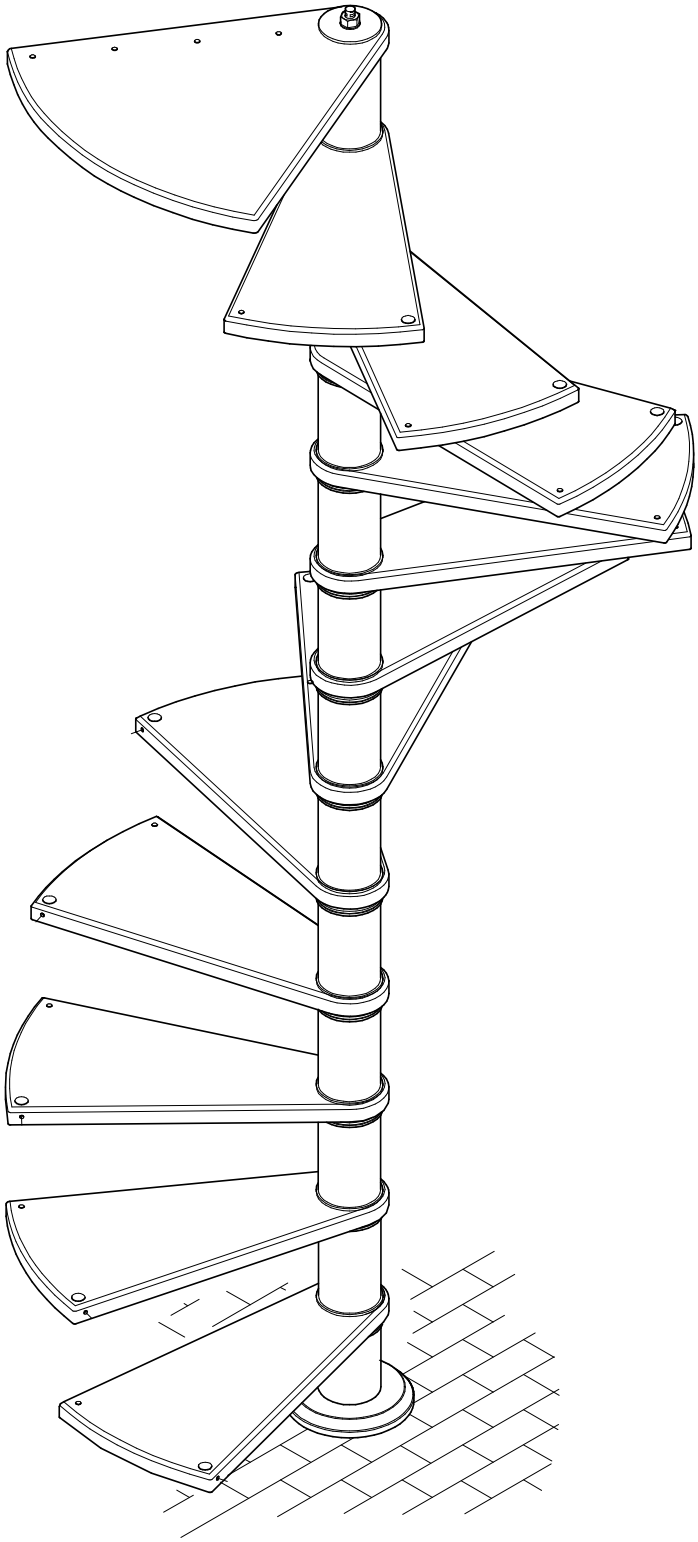
- The staircase is now fully assembled.
  Before continuing, check the state of the structure achieved so far or whether flaws emerge which may affect the stability and safety of the staircase.



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PART 3

PREPARING THE COLUMNS

- Two types of columns with different lengths are included in the package: n. 13 pieces 1125 mm long, needed for the staircase banister, and n.4 pieces 937 mm long, needed for the baluster.
  The first operation to be carried out consists in mounting the **K65** in its bushing (fig. 16 operation 1st); the unit obtained must be inserted into the hole of the column, from the side closer to the cable holder as shown in fig.16 operation 2nd .
  After the insertion, check that the support may revolve or move freely. Lock by means of the screws and nut without tightening **K66**

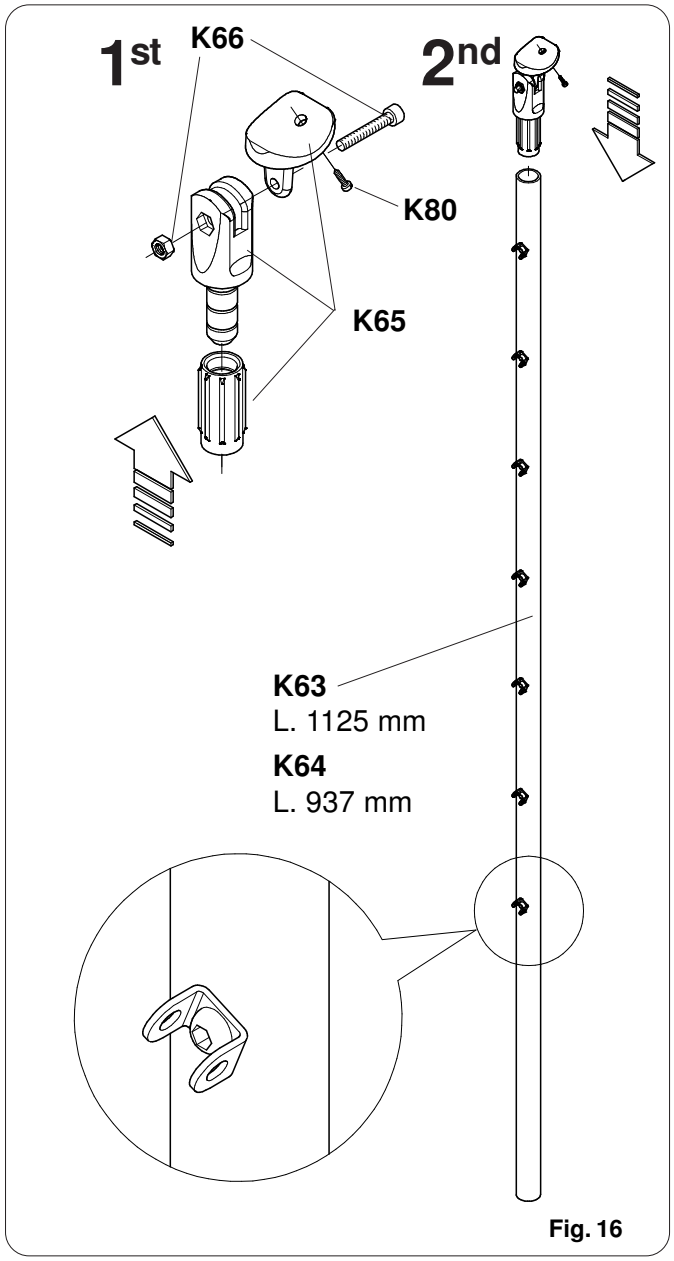

Fig. 16

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ASSEMBLING THE COLUMNS

- Starting from the final step, assemble the **K63** columns.
  As shown in fig. 17, proceed to mount starting from the final step. Insert the **K78** element into the **Ø25** hole and lock it by means of the **K78** kit screw. From under the step, insert the **K78** bushing. Mount the **K63** column in the hole described above after having inserted the **K59** washer; it must lean on the step.
  Assemble **K21** washer at the base of the column and lock it from below by means of the K75 screw and washer without tightening fully.
  Proceed in the same way by assembling all the joining columns, so as to position the steps too.

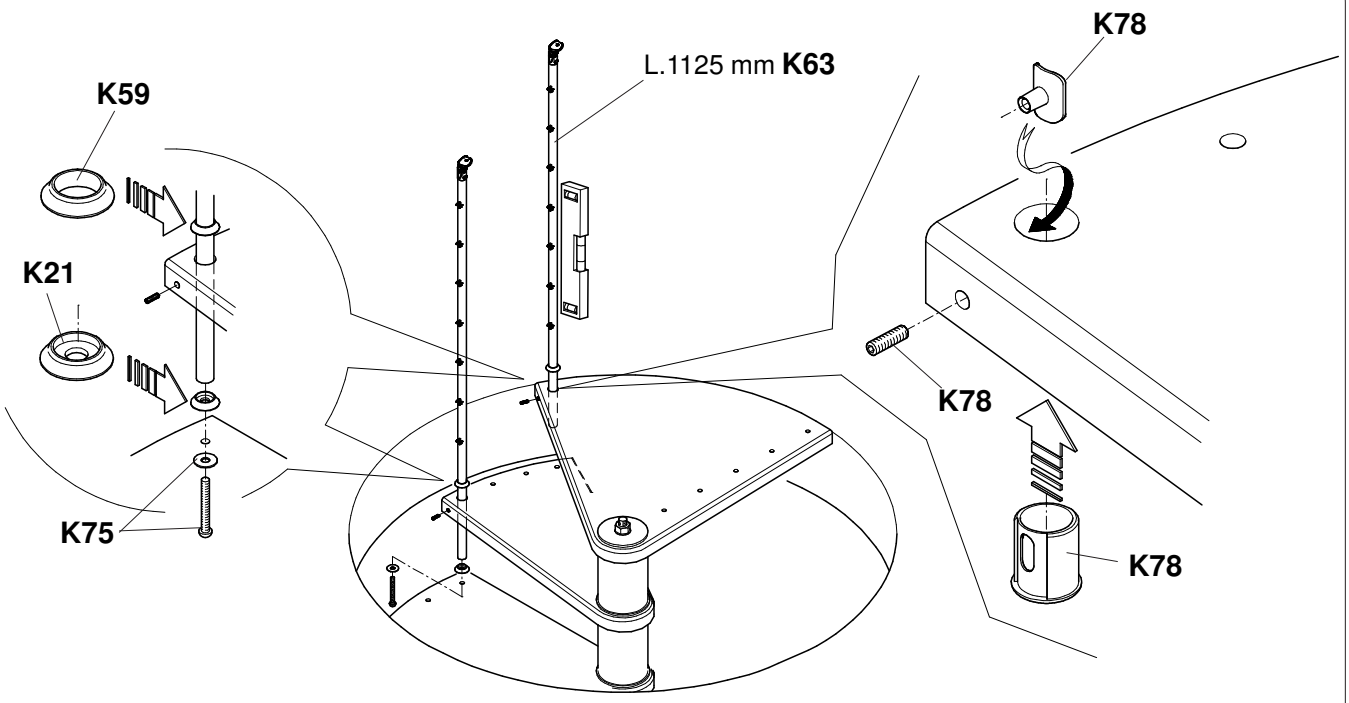

Fig. 17

- After the first step, the column needs to be anchored.
  Proceed as follows: trace the column centre on the ground and make sure that the column is as vertical as possible (if necessary use a level as shown in fig. 18).

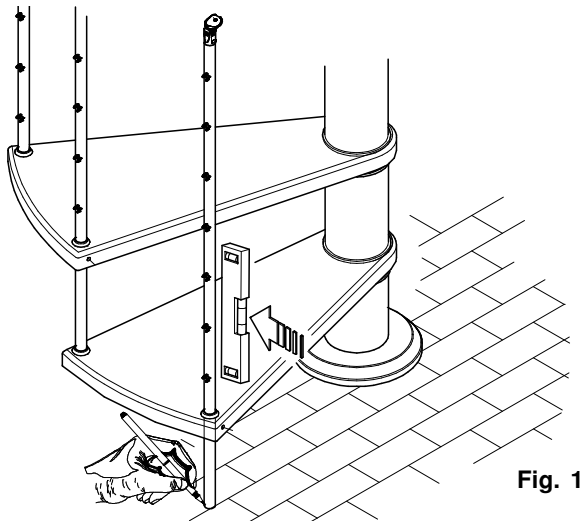

Fig. 18

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- To easily drill the point marked before, unscrew the column anchoring screw passing under the first step, so as to free it. (fig. 19)
  Move the step (by turning it) so that it does not become an obstacle, then drill the floor by means of a **Ø10** drill (fig. 19)

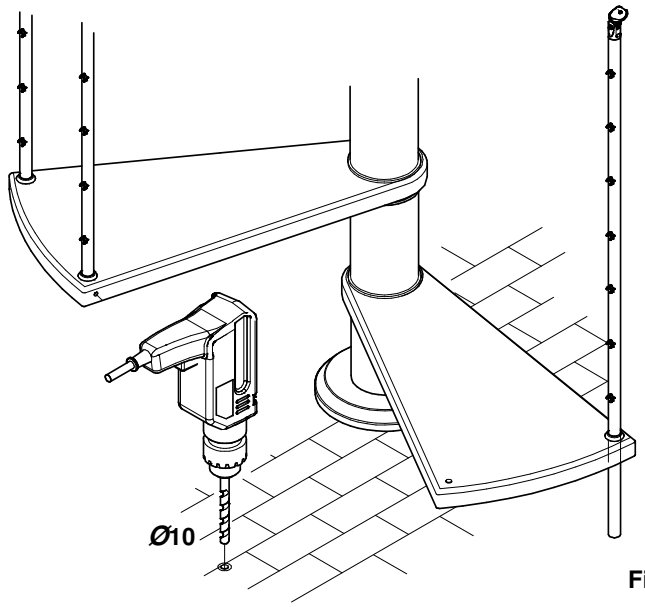

Fig. 19

- Before anchoring the column definitively in its respective seat previously marked on the ground, insert the **K33** stiffener by means of the **K36** clamps as shown in fig. 22.
  Then anchor the column to the ground by means of the dedicated **M6x5** screw included in the **K18** kit, fig. 22

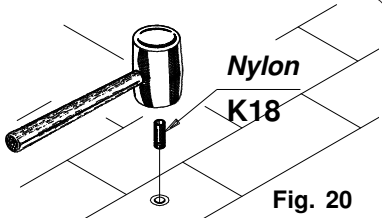

Fig. 20

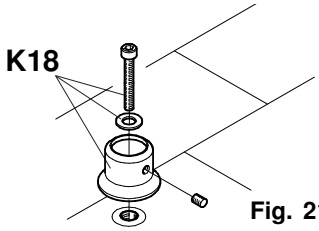

Fig. 21

- Anchor the final step definitively by fully tightening or locking the elements – see fig. 23

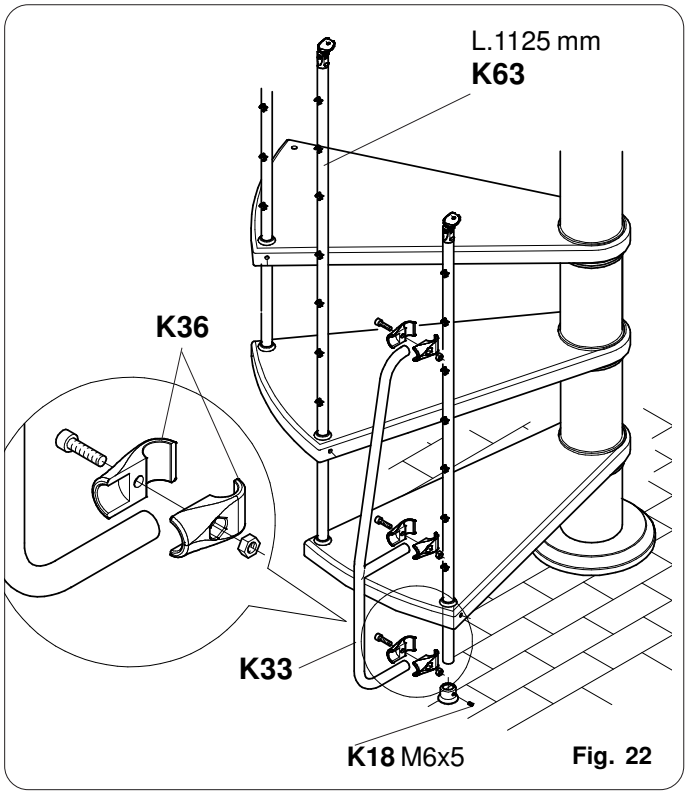

Fig. 22

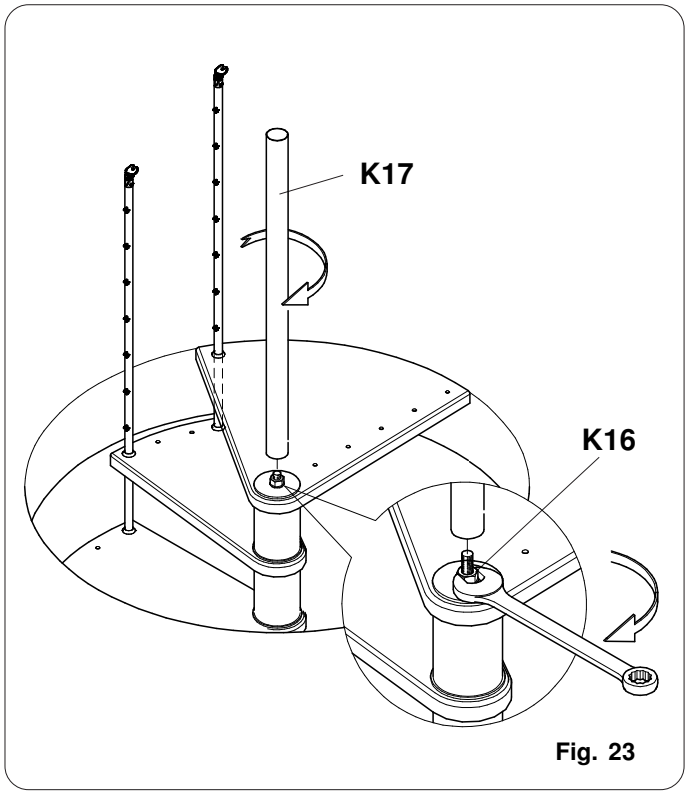

Fig. 23

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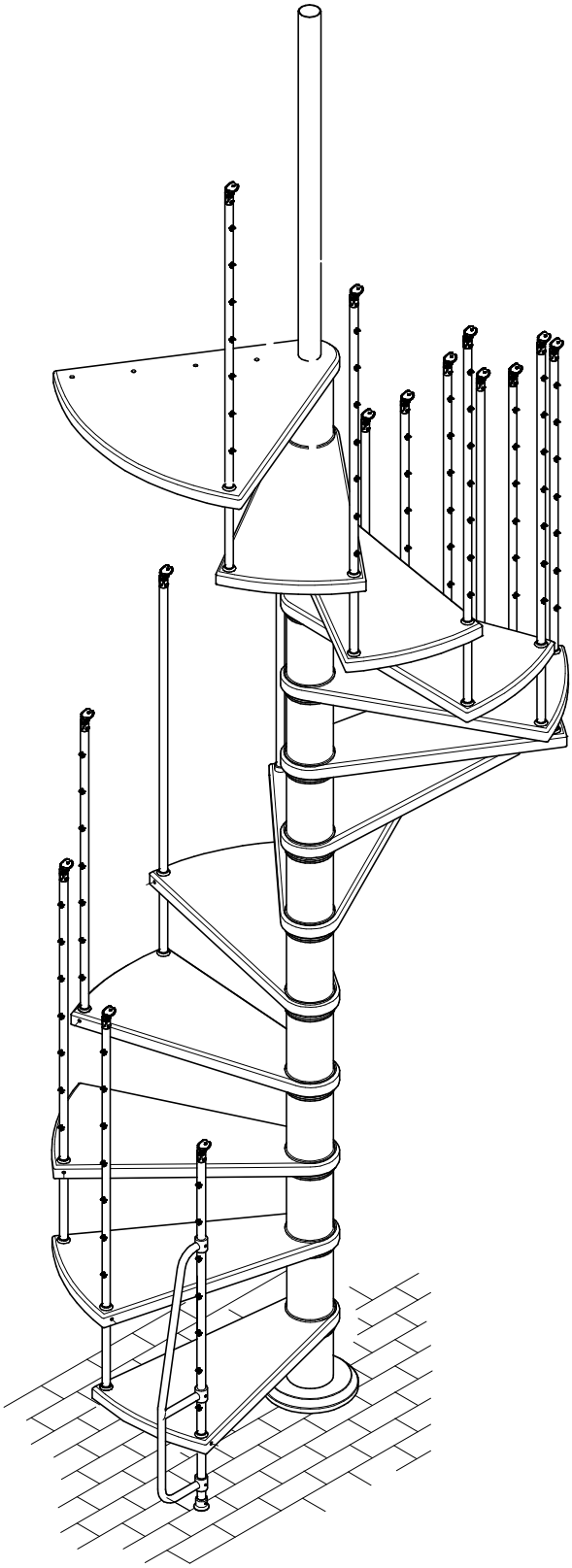
- The joining columns have now been mounted: they support the handrail and provide the correct spiral direction to the steps. Before proceeding to mount the remaining columns, check that the columns already anchored are vertical. Use a level.



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ASSEMBLING THE HANDRAIL

- The **L14** sectors of the handrail are all the same. (fig. 25)
  Place an **L14** sector on the first support of the first column and place the end without connection approx. at a 40-50 mm distance from its housing. (fig.24)
  Repeat the operation in the housings of the other columns and check that they are vertical.
- To join the sectors, proceed as follows: on the **L14** sector to be joined to a previously mounted sector, mount the **K71** washer and the **K72** element into the end without connection and lock through a **K73** screw by tightening fully.
  Mount the unit obtained by inserting it into the end with connection of the sector already assembled to the columns. The end with the connection has a **Ø5** hole. Insert the **K74** dowel into the hole and lock; check it faces downwards.
- Moreover, while assembly operations continue, check that the sectors are correctly placed into their housings, no gaps are left between them and no stress is caused on the columns.
  Proceed until the last column has been reached.

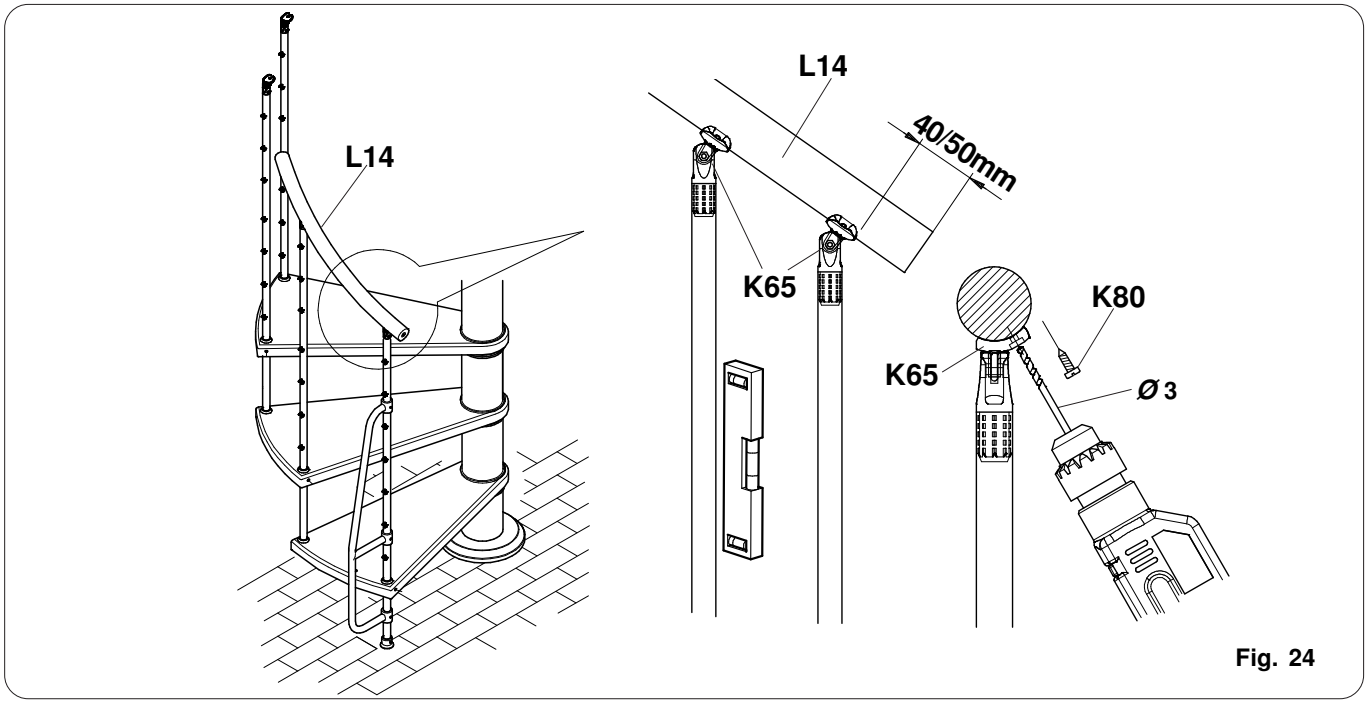

Fig. 24

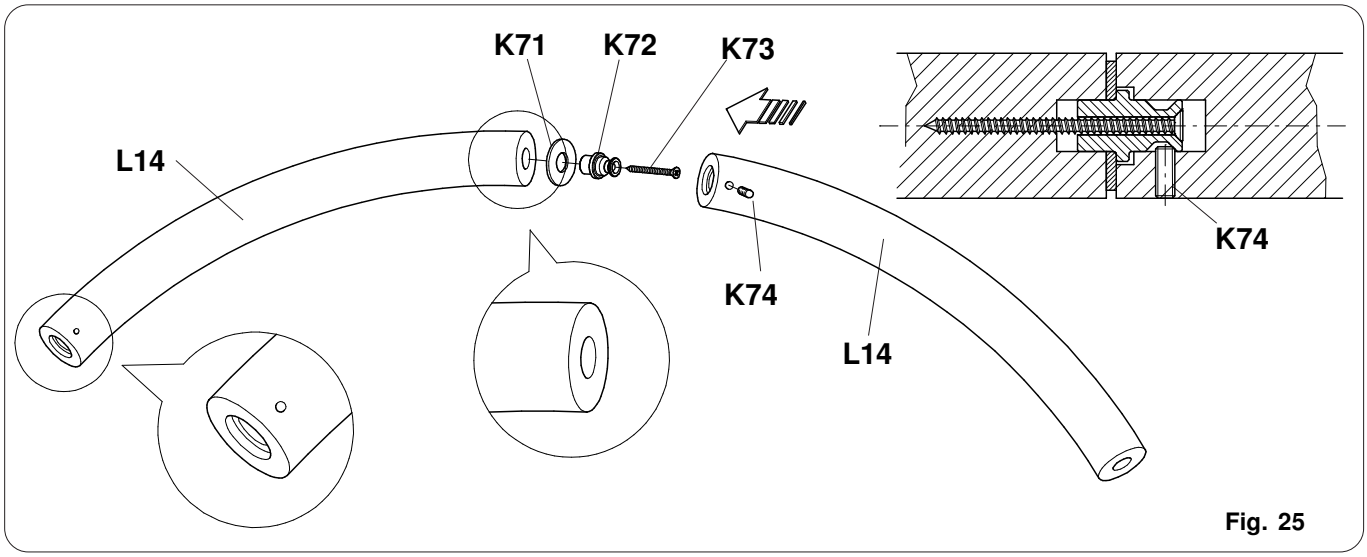

Fig. 25

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ATTENTION!!!
When assembling the handrail make sure that the supports shaped like a "saddle" face the inner part of the staircase.

- At the end of the scale, the last handrail sector may need to be cut.
  Leave a 40-50 mm projecting part, as was the case at the beginning of the staircase.

- After having completed the operation, the **K68** plug must be mounted at the end of the handrail.
  The procedure is the same for both ends, the only difference being that at the beginning of the staircase the **K77** wooden pin must be inserted into the hole of the sector. fig. 26.

- Cut the excessive part. fig. 27.

- Drill a **Ø 4** preliminary hole on bot ends, as central as possible. fig. 28.

- Mount the **K68** plug and lock it through the **K76** screw. fig. 29.

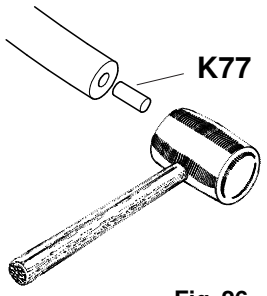

Fig. 26

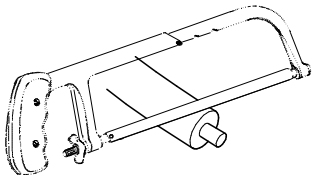
Fig. 27

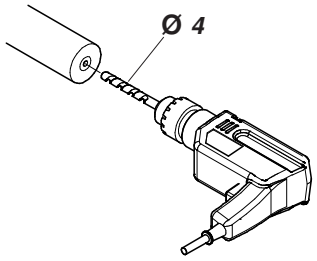

Fig. 28

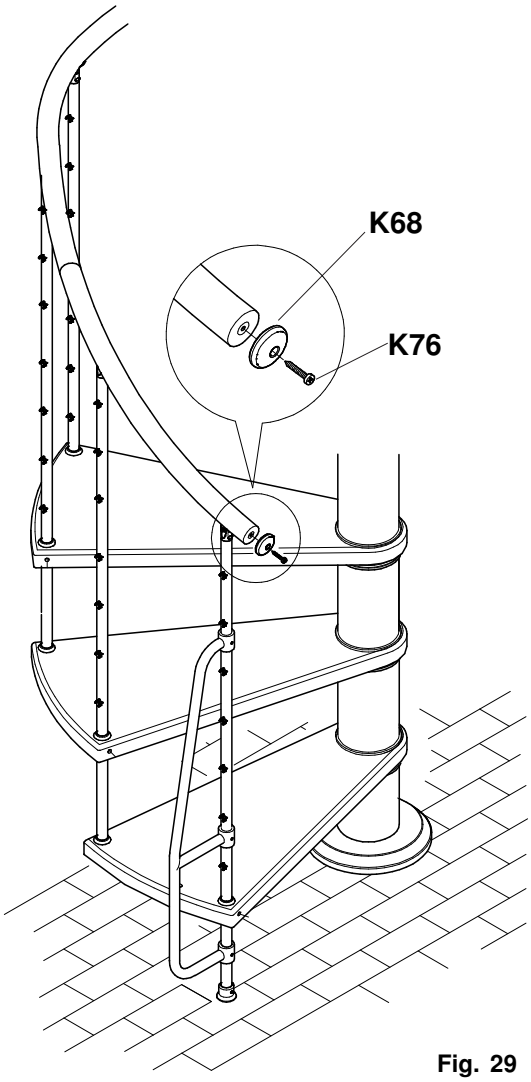

Fig. 29

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ASSEMBLING THE BANISTER CABLES

- Finally, mount the flexible cables

  Two sets of identical cables with different lengths are included in the package:
  K83 length 1000 mm and **K84** length 6500 mm.
  Proceed as follows:
  starting from above, insert one end of the **K84** cable into the forks mounted on the columns and anchor it by means of the relevant **K60** clamp.
  NB. Make sure that the cables are correctly inserted in the relevant supports.
  After completing the operation, make sure that the cables are sufficiently tight between columns.
  Insert the **K60** clamp and anchor it on the cable end; cut the excessive part. Eliminate any scrap or sharp edges resulting from cutting.
  Repeat the same steps with the banister of the final step by means of the **K83** cables.

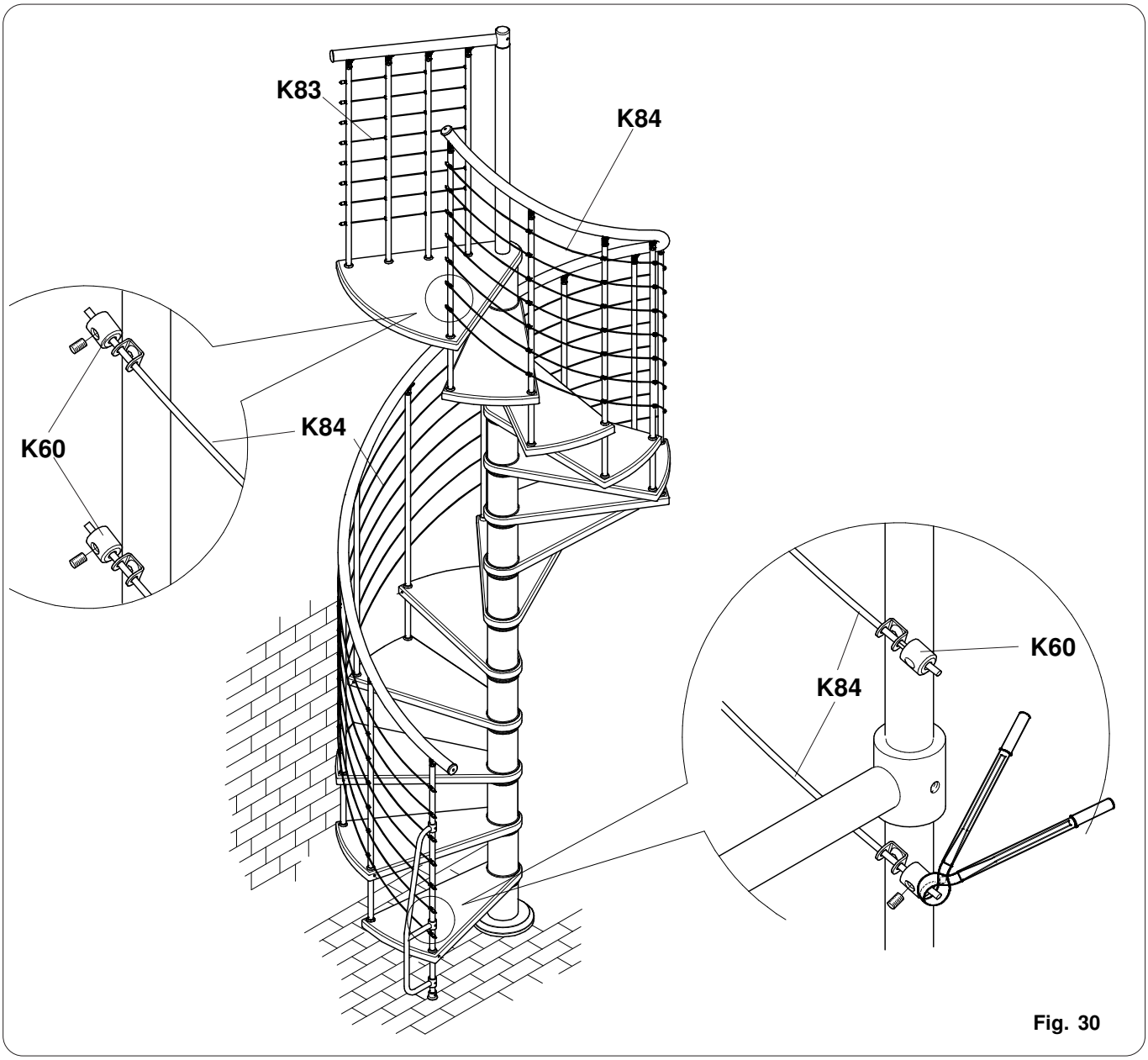

Fig. 30

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ASSEMBLING THE BALUSTER HANDRAIL

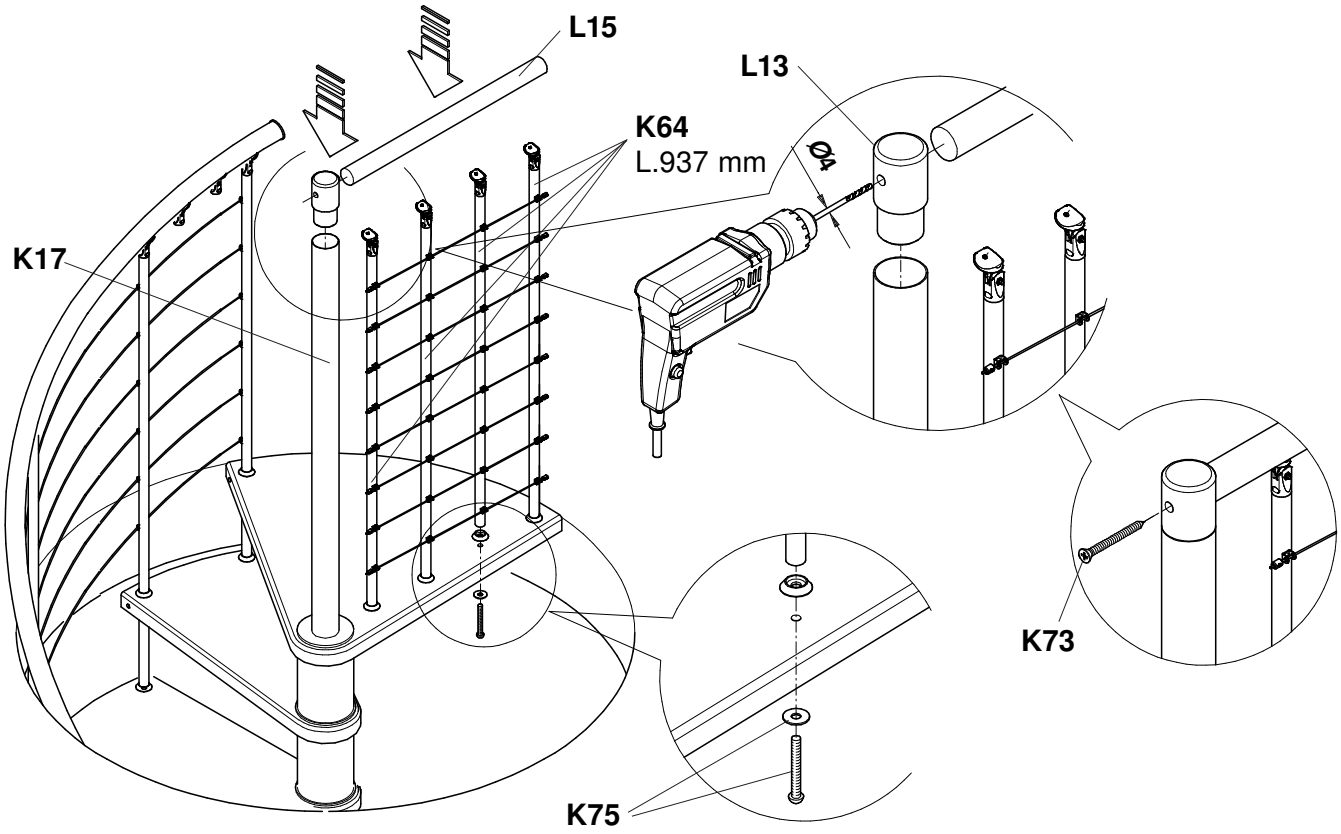

Fig. 31

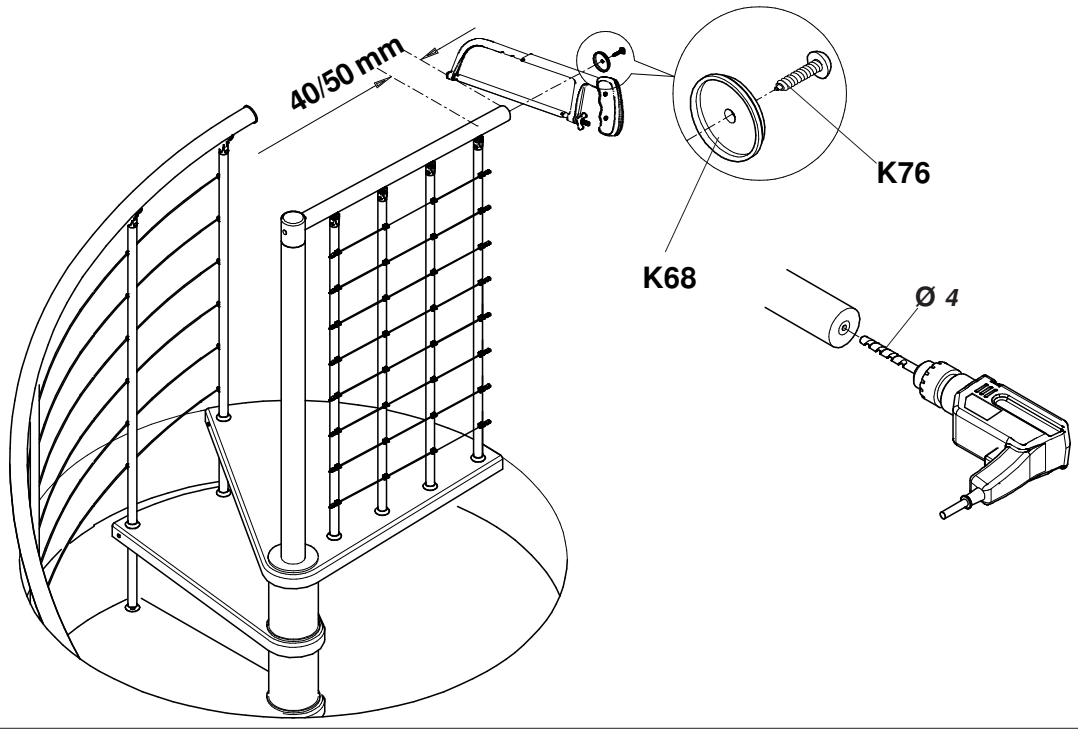

Fig. 32

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COMPLETION AND CHECKS

- After the assembly operations have been completed, check and test that the staircase is stable and all components are firmly anchored.
  Place the **K38** bracket on the wall so that it is located between two steps at the correct height (approx. halfway of the staircase) Fig. 33

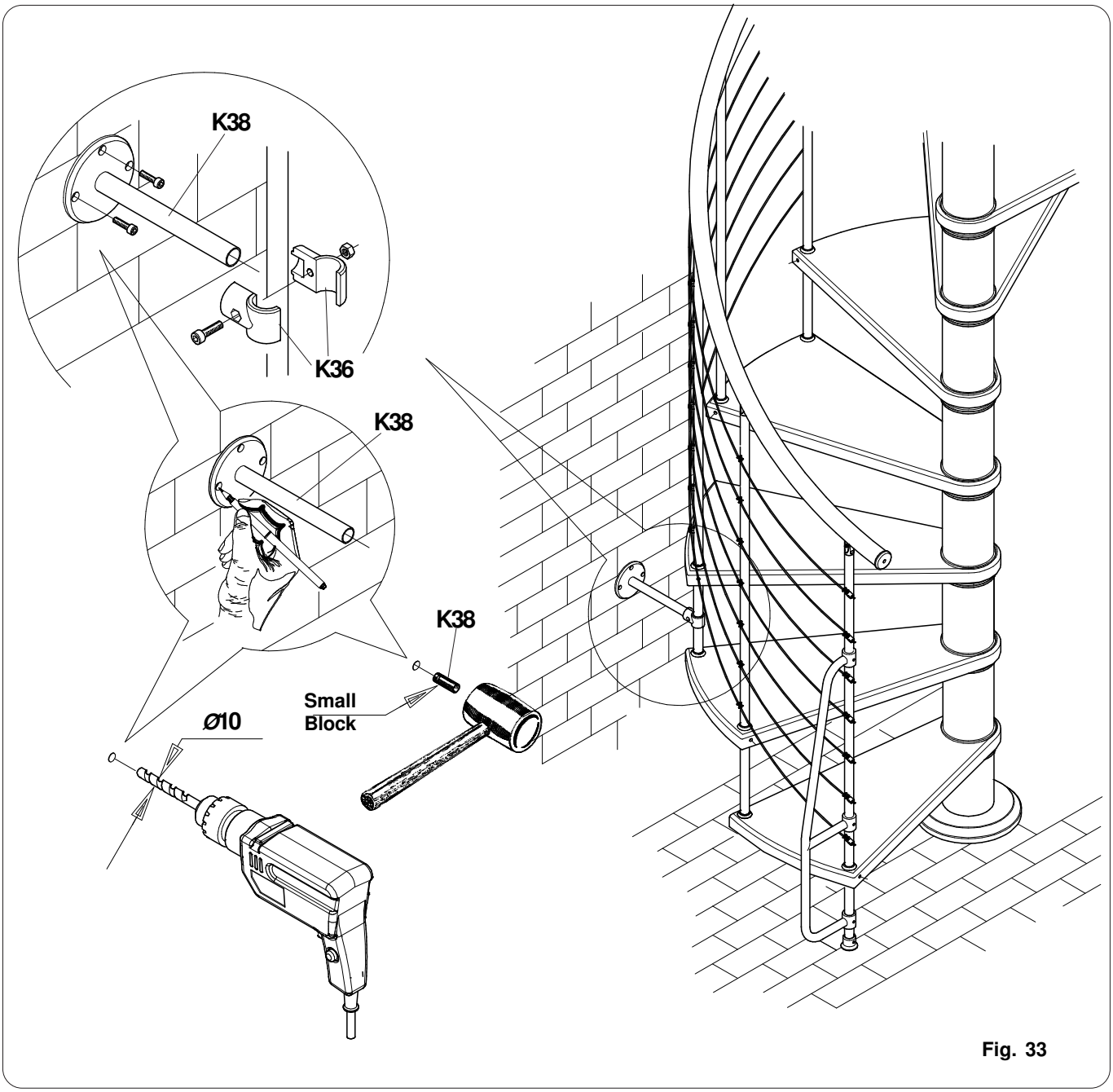

Fig. 33

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