



Argonauta

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ACT IV (Part 1)

***The most precious stone is the grindstone;
and if it could be bound and carried in a
ring, any other stone would pass out of
goodness ...***

Franco Sacchetti

*The stradivari
Los gigantes
The bread from the
ground to the table*

Cremona is a wonderful city of Lombardy, at the center of one of the most important agricultural areas of Italy, since the Roman era.

The cathedral with its Renaissance arch, the baptistry with eight facades, the bell tower of the Torrazzo, characterized by an astronomical clock, are the architectural symbols.

Cremona is the capital of the music and art of luthiers, whose violins are considered the best in the world, coveted by the greatest musicians, lent only on exceptional occasions and memorable events.

And as with the violins of Amati, Guarneri and Stradivari, Cremona is the home of the millstones for wheat, both cylinder and stone, perfect to make accessible and unaltered the nutrients contained in the grain of wheat.

"The most precious stone is the grindstone; and if it could be bound and carried in a ring, any other stone would pass out of goodness ..."

This is how Franco Sacchetti, poet and writer of the '300, in his Trecento Novelle, talks about the stone mill, the machine that, from the past, magically transforms the wheat grain into flour.

Man in his physical and intellectual evolution loses the strength of the jaw in favor of that of the meninges and begins to crush the wheat with stones to make it better usable and digestible.

The first millstones, in prehistoric times, consisted of a plate of rock, of great resistance, on which was spread a handful at a time of wheat to be crushed, using other hard stone, round or flat.

The presence of grooves on the contact surface increased productivity in quantitative and qualitative terms.

The rudimentary grindstone took on a more formal appearance when, with the opening at the center of the dancing grinding wheel (the upper one), the continuous feeding of the wheat was made possible for the grinding process, a process obtained by manually rotating the upper grinding wheel (as said in Sicily the dancing one).

The primordial technique of flat grinding or crushing evolves into a milling technique and the shape and size of the millstones and the grading become the basis of the process.

The peak of the milling technique was reached around 1850 with the improvement of the millstones, optimization of the material used, scoring, size and speed.

The millstones had to meet the requirements of hardness, porosity and homogeneity of structure.

The material used is puddinga (limestone, feldspar, quartz, mica and silica) from the quarries of Montorfano (CO), Inverigo (CO), Gandosso (BG) or Val Camonica (BS).

The stones of the French quarry of La Ferté are coveted and quickly become the main reference point.

Originally the millstones were built in one piece, then later they were built by aggregating 200 400 mm of different hardness: the middle of the most tender stone for the coarse breaking of the seeds, the hardest and strongest peripheral for a greater crushing of the product to be ground.

Convex the upper grindstone (the rotating one), concave the

lower (the dormant one). The secondary grooves, however, those that do not start from the central hole of the stone, have the function of distributing the product to be milled, accentuating the bite and helping the material evacuation.

On the grinders special grooves facilitate the grinding of the product; the shape, the number of grooves and the speed of the active stone (the dancing one) are decisive for the quality of the flour to be obtained.

The grooves, an important element, present in the grindstones, were the object of study and continuous evolutions, in order to avoid processes that would lead to crushing the cereal (and not grinding) as well as overheating and therefore consequently damaging the flour.

In order for a millstone to have a good production and work without heating up, the stones must be equipped with main grooves, which branch off from the central hole of the stone and go up to the outer edge.

The profile of the groove must therefore vary starting from the center, for high grinding, low grinding and rimacina (re-grinding).

Different types of groove: the Dutch, composed of 108 circular grooves on millstones with a diameter of 1,500 and 1,600 mm, the Evans, Drancy and other grooves. The profile of the surface (concave) has the function of allowing the grain a more regular and uniform distribution on the grinding wheel and ensuring the spiral path between the millstones, from the center to the periphery. The rotating grindstone weighs on the product to be ground and for

this reason it is called dancing.

The surfaces of the millstones, both the rotating one and the underlying fixed one, the sleeper, are porous; to this is added the rabbiting, the rows that in the rotation movement are continuously crossed, thus producing the rubbing suitable to work the grain. This grinding path can be shortened or lengthened by means of the arrangement of the channels, or grooves of ventilation and you can then increase or decrease the grinding time to obtain any desired result. The peripheral velocity increases considerably towards the outer section of the grinding wheel and accelerates the milled grain towards the outlet.

The impeller grinder makes about eight turns before the processed product comes out.

The modern technique foresees, for the grinding wheels, the use of mineral agglomerates, compatible with the alimentary norms, that guarantee a very long duration and the consequent drastic reduction of the refilling intervals: the grinding surfaces retain their roughness, consistency and compactness unchanged, not



The work was not finished, but to complete it and to give it perfection it took the seventh, which in music is called dominant.

The world was created with a musical arrangement, its rules respond to the combination of tempos, tones, sharps and flats.

The seventh day is dedicated to the earth and not doing anything. Rest is not the opposite of doing.

The tulip anticipates spring, in particular the white one invites to reflection, to a pause.

Tulips

Filippo Manfroni

At the center of an expanse of fleshy and white tulips stands the powerful figure of a man seen from behind. His physical capacity induces him to think that he is a warrior and the arches of the body together with the proud look turned, decided, almost severe, towards a point far beyond the limit of the canvas, suggests that he is ready to face an enemy.

But an enemy that is not given to know, to see, but only to intuit, just as it is not given to know if it is a physical enemy, or if man is faced with an inner struggle.

In his right hand he holds a sponge: emblem of surrender or simple means of body care?

As is customary to him, in this canvas the artist does not offer answers, but generates questions and emphasizes that sense of uncertainty, of tragedy that permeates human existence and the difficulties that the soul must face.

A tragedy that is the backdrop to the beauty of nature that becomes, despite itself, theater and at the same time spectator.

making it necessary the meticulous work to keep them perfectly level and flat.

The grinding wheels, natural or agglomerated, must be scrupulously certified for food use.

The former have a short life, while the latter have a much longer duration.

The grinding surface (consequent to the diameter of the grinding wheel) guarantees the grinding capacity even at low speeds, for slow and cold processing.

At the end of the 16th century, thanks to the invention of Agostino

Rampelli, the new grinding process began with the rudimentary prototype of the first rolling mill with iron rollers.

He had no luck until the mid-19th century when the cylinder process began its effective development with Friedrich Wegmann,

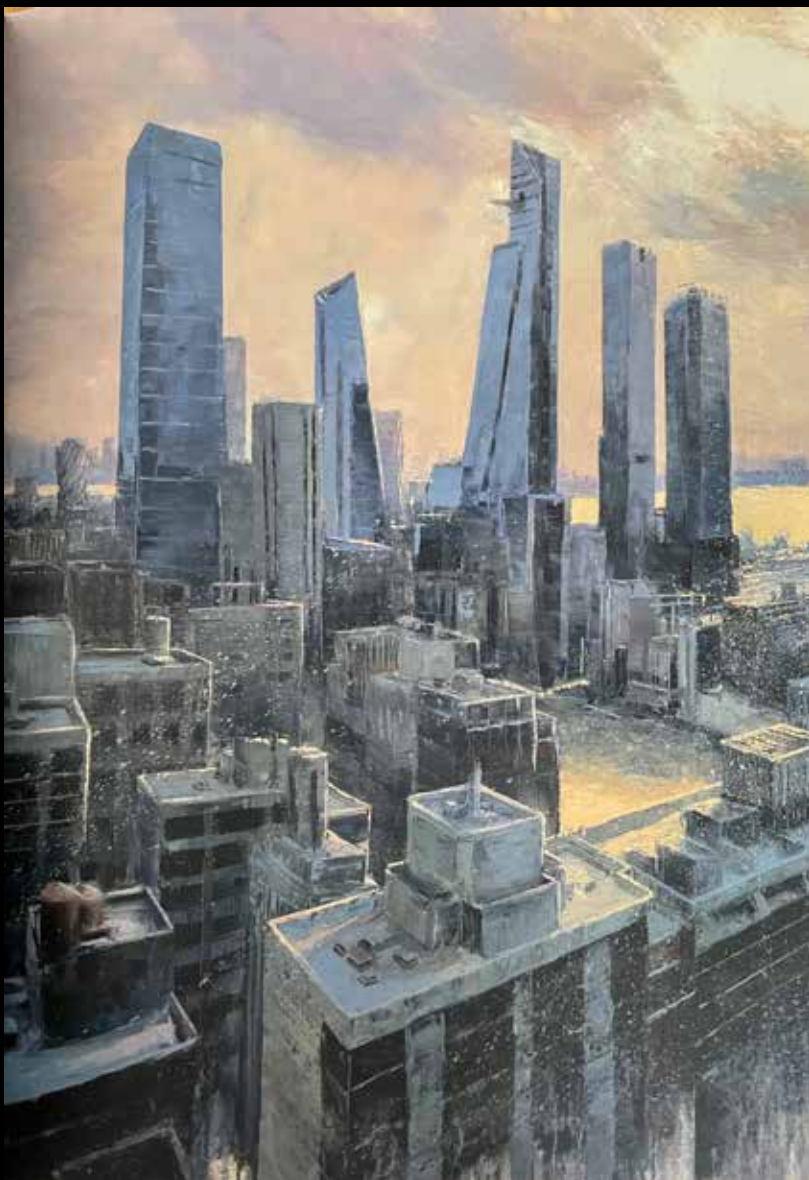
highlighting production rates, limited consumption of the millstones and therefore reduced maintenance costs.

The rolling mill consisted of two rollers (first of porcelain and then almost always of cast iron) with smooth or striped surfaces, which when combined and turned in the opposite direction reduced the grains in the required granulation, after these had reached the desired gap between the two rotating bodies.

Modern industry grinds wheat by means of rollers that widen the peripheral layer and the gem of the grain, followed by sieving by means of silk fibers, with the consequence that only the inner parts can pass through the tiny holes of the fabric.

Different ingredients, like for the violin ... and many secrets. "And on the seventh day, God rested from all the works he had accomplished."

Genesis 2.2



The giants refer to the Greek "gigantes", born from the earth, word from which, it is thought antinomically, the noun derives.

Hence the relationship that can be reconstructed in ancient sources between space, understood as a physical and geographical place where a particular people lives, the language spoken and any resulting ethnic characterization.

New York

Davide Frisoni

In this work Frisoni reinterprets one of the most dear themes to him, the representation of the city understood both as a physical place with its buildings, its streets and its traffic lights, and as a symbolic place of life and a space for experience and knowledge. In this view of the skyscrapers taken from the window of a hotel in New York, the artist offers the observer a glimpse of the city's architecture that stands out against a sky where light and clouds mix, allowing him to deepen his research on color, here emphasized also thanks to the preference for suspended, undefined atmospheres that allow him to play with lights, shadows and tones. Through splashes and drips of color, light effects are created, flashes that immerse the city in a magical dimension, suspended in that instant in which the whole city seems to stop in a moment of enchantment.

The mouth without jaws is like a mill without a grinder (...)

Miguel de Cervantes

Mientras tanto, descubrieron treinta o cuarenta molinos a viento que hay en esa llanura, y cuando Don Quijote los vio, dijo a su escudero.

- La suerte está guiando nuestros asuntos mejor de lo que podríamos desear; porque ahí ves, amigo Sancho Panza, whence puedes ver a treinta o unos cuantos gigantes enormes, con los que creo que estoy peleando para matarlos a todos. With sus despojos comenzaremos a hacernos ricos, ya que esta es a good war, y también es a great service hecho a Dios para librar la faz de la tierra de tan mala semilla.
- ¿Qué gigantes? Dijo Sancho Panza.
- Aquellos, respondió el maestro que ves ahí, de brazos largos, que algunos suelen tener cases dos leguas.

Mira, respondió Sancho, que los que ves allá abajo no son gigantes, up to molinos a viento, y lo que parecen brazos en ellos son las palas, movidas por el viento, hacen girar la piedra de molino ... ".

The noun mill, from the Latin *molinum*, stone grindstone for grinding, refers to the factory (building and machinery), dedicated to the transformation of the cereal into flour.

The first examples of mills in Persia, 3,000 years before Christ; already at the time, as now, great attention to energy consumption and logistics, both crucial for the good conduct and profitability of the business.

The spread of hydraulic or wind techniques, for the handling of heavy millstones, was initially slowed due to the great availability of muscular energy, obtained with animals, but, above all, with slaves, poor citizens or delinquents sentenced to this penalty.

The demographic decline and the decline in slavery prompted people to rediscover alternative energy sources, such as wind and waterways.

The introduction of these techniques of water or wind exploitation implied the need to locate the mill in areas with availability of water streams or winds, without underestimating the ease of access through the roads. The first mention of a mill moved by water can be dated around the first century B.C. as can be read in the verses of the Greek poet Antipater of Thessaloniki:

“Stop grinding, or women working at the mill; sleep until late, even if the crow of the cock announces the dawn. For Demetrius hath commanded the nymphs to do the work that ye did with your hands, and they, jumping down from the top of the wheel, make the axle to turn, which with its spinning races makes the heavy millstones of Nisiriah to turn”.

The Greek historian Strabo refers to the water mill built in 65 BC, the time to which dates the first clear description of a mill with vertical wheel.

It is the Roman architect Vitruvius who tells the technique of the mill moved by water with a gear transmission system, system remained unchanged until today.

In the belly of the mill, from 20 to 30 wheels are inserted thanks to the force of the water that, conveyed with an inclined pipe, tangentially hits the blades of the wheel that transmits the rotation.

The speed of the water synchronises with the speed of the millstones, almost as if they were the rotisms of a clock. The difference in height and the water flow rate determine the type of wheel to be used.

It is the horizontal, called Greek or noble, the one with vanes or half-spoons; it is simple and involves the transmission of direct motion from the wheel to the grindstone.

The vertical wheel, instead, in which the gears transfer the motion from horizontal to vertical, takes its name from the Roman engineer Vitruvius, inventor of the mechanism, and then wheel Vitruvian. The collective imagination often associates the vertical wheel with the mill, making it icastic, even if the simplest and most common type is the horizontal one.

While the horizontal wheel system involves small millstones and requires small volumes of water with fast current, the vertical wheel mill requires rivers with important flow rate and a more complicated mechanics, necessary to convert the rotary motion of the wheel (horizontal) in vertical rotary motion

(grinding), thanks to two gears, built essentially with wooden elements, called *lubecchio* and *lantern*.

The Vitruvian wheel could be built in 2 versions, depending on the position from which it was hit by water: from below and then immersed in river waters, called *orbitrium*, or from above (falling/impact) called *franceschum*.

In the first case, the wheel is partially immersed in river waters: it is the water that hits the wheel at the bottom by turning it in the opposite direction to that of the current; the flow rate of the river is not important but its speed. The necessary height difference is minimal and this type of mill could be made wherever there was running water available.

The wheel hit from above (or impact or *franceschum*) is suitable for a mountain mill, because it takes advantage of the impact speed of the water.

The wheel is relatively small, with boxes that fill with water and that, in the descending phase, unbalance the wheel by increasing the rotation thrust; the lower the flow rate of the river, the greater the diameter of the wheel must be, in order to contain more boxes. Parallel to the water mills, wheels using wind energy are spreading, penalized not only by the need to have areas adequately beaten by the wind, but also by a more complex construction technology.

In the following years, the development of hydraulic and mechanical technologies led to an increase in efficiency of the mills, adopting more complex gears with reduced friction.

The hydraulic works connected to the mill are also improved.

Then the use of steam, as a driving force, makes it possible to install the mill in residential areas, regardless of the availability of water or wind flows. Thus began the first approaches with the new cylinder milling technique, which continues to refine until, at the end of the 19th century, it is perfected: the grains are stripped one by one, separating the bran, the germ and the endosperm, to then be ground separately and satisfy the growing food industry, leaving room for the traditional millstone to meet the demand of farmers to grind small quantities of cereal.

Today the source used is electricity, definitively supplanting the previous ones. Thanks to the increased efficiency and ease of transport of this form of energy, the gradual abandonment of the stone mill in favor of the cylinder one, takes place at the beginning of the twentieth century and throughout the twentieth century, and then now go back to satisfy the technique applied to a niche market of great value, dedicated to forgotten flours.

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Give us this day our daily bread: this is how Christians invite, with prayer, the Father, identifying in the food obtained by cooking a mixture of flour and water, the synonym of food, which humanity needs to live.

Bread, a symbol of wealth, has always embellished (and still embellishes) every table, from the most humble to that of the princes.

"Cum panis" is a generator of companions, that is, those who share the nourishment.

"We are what we eat" and we eat foods of which bread is the pinnacle, it represents our primary nourishment, telling us about ourselves, allowing us to make Feuerbach's aphorism palindrome: "we eat for what we are!"

The poem of Gilgamesh, a Sumerian text of the second millennium BC, tells the process of civilization of the wild man named Enkidu who no longer limits himself to consuming foods and drinks available in nature, such as wild herbs, water or milk, but he begins to eat bread and elaborate products of which he becomes aware thanks to a woman who gives him a gift.

Mortals, Homer recounts in the *Odyssey*, are, par excellence, "bread eaters", unlike brutes and animals, whose diet has nothing civil,

nothing intelligent. Food preparation becomes an emblem of human evolution and its relationship with society.

"... So when we arrived at the land nearby" (it is Ulysses who tells), "here on the extreme point we saw a cave, on the sea, sublime, shaded by lauri; and here many flocks, sheep and goats, had a stable; surrounded by a high fence, made of blocks of stone and long trunks of pine and oaks with high canopy.

Here a man (Polyphemus) had a den, a monster, that flocks fed, aside, and with others did not mix, but only lived, had an unfair soul.

He was a giant monster; and he did not resemble a man who ate bread (...).

Then I ordered my faithful companions to remain at the ship, to guard the ship; and I (Ulysses), chosen among them the twelve bravest, went (...)."

Thus Homer precedes the Jesuit and paleontologist Teilhard de Chardin, regarding the law of complexity and consciousness, recalling in the use of bread the noosphere, of which human beings are part and, precisely by virtue of knowledge, they

separate from the beast to enter the mature stage of civilization.

This is the case of cyclopean figures such as Polyphemus, who, isolated in his self-sufficient cave, does not live in community, does not plant trees, does not cultivate the land, does not co-produce food with his fellows.

He drinks only raw milk and eats in its natural state, so much so that he devours the companions of Ulysses who are still alive.

Matters become more complex passing from the inanimate state, to the life of plants, to the life of animals, to the life of man.

From the geosphere, to the biosphere and finally to the noosphere, a collective consciousness of human beings, the consciousness generated by the interaction between minds.

"The more complex a being is, according to our Complexity Scale, the more it is centered on itself and for this reason it becomes more aware.

The higher the degree of complexity in a living being, the greater its consciousness; and viceversa". (Teilhard de Chardin)

Bread is present in the popular encyclopedia to summarize experience and wisdom.

Aristotle distinguishes "hard from soft bread" in life and in morality.

In the *Aeneid* Virgil extends his hand to the one who "brings bread for his children".

Dante Alighieri proclaims blessed those who sit at the table where the bread of the angels is eaten.

Cervantes sought consolation: "When there is bread, even pain is lighter".

Bread, despite its simplicity, is a fundamental food and is present in painting and in the history of art, of all ages. Here it is present in the New Testament in the paintings Christ in the house of Martha and Mary in the Wedding at Cana, in the Last Supper, in the Last Supper of Leonardo, in the Miracle of the multiplication of loaves and fishes and in the transubstantiation, that is, the conversion of the substance of the bread and wine into the substances of the body and blood of Christ.

"Dogma datur christianis, quod in carnem transit panis, et vinum in sanguinem"

A dogma is given to Christians: the bread is transformed into flesh and the wine into blood.

(Thomas Aquinas)

Bread is the protagonist in the canvas *Cena in Emmaus* by Caravaggio. Bread is the image of everyday life with the Mangiafagioli di Carracci who, on the threshold of 1600, reveals the menu of a farmer where bread is fundamental.

And again the still lifes of the seventeenth century (in Spain, as well as in the Netherlands and Italy), following Caravaggio have given dignity to food, the products of the earth and bread, of which it is a constant, for its form, for its symbolic value of food par excellence, and element of chromatic balance for its warm color.

Bread, an element that has always been present in art, becomes an icon of reality, it is its symbol, it represents life itself, it represents man's ability to think, to use nature, to satisfy his own needs with intelligence (*Déjeuner sur l'herbe* by Manet or the Ferrara bread of metaphysical painting).

In the Roma caput mundi, at the time of Augustus, bread is at the center of daily life and there are over three hundred bakeries, all strictly of Greek school, since it was the Macedonian bakers who exported its art and technique.