

## WATER MILL AND ITS TERMINOLOGY IN SLOVAK AND OTHER SLAVONIC LANGUAGES

LADISLAV MLYNKA, Bratislava

Cultural and historical circumstances of the origin and spreading of water mills can be observed from several aspects of the European cultural space. J. Le Goff analyzing technical progress of medieval Europe considered invention and spreading of water mill in particular, among the "the most unique and most revolutionary medieval inventions" (Le Goff, 1991: 202-203). Hydraulic mill which spread all over Europe between the 11th and 14th centuries is an upgraded version of water mill used in Asia Minor and it represents technical heritage of the Romans. It was described and drafted by the Roman author Marcus Vitruvius in his "Ten Books on Architecture" about 30 B.C. Unlike, the so called Greek mill, labeled also Asian mill, the Turkish one has a vertical water wheel that is fixed to the horizontal shaft and the turning motion is transferred to the vertical shaft, *vreteno* (spindle) of the grinding millstone by geared wheels.

Territorial spreading of the simpler Greek mill in Europe is roughly defined by culturally-geographical border of Balkan. It appeared in Greece, on the current territory of Romania and Bulgaria, but in the northern part of Europe as well. In Russia, mills were called *mutóvka*, as opposed to mills with vertical water wheel, which have been documented with a later date and are considered younger. These were called *melnica*, *nemeckoje koleso* (Hanušin, 1974: 92). Description of mills' construction signalizes various ways of transmission and perception of the above mentioned technical solutions. Likewise it works for names of wind mills: German, Dutch wind mill respectively.

Manual, rotary mills, called millstones were the predecessors of water mills. They are documented by archeological findings from the Late Lathenian times. Development and spreading of these mills refer to the influences of Celtic and Roman provincial culture (Mruškovič, 1992: 96-98). Millstone, which is based on a pair of stones, became the basis for grinding system of the water mill machine, called millstone structure. Manual rotary millstones spread over Europe in the early medieval times within aristocratic environment (hill forts), but also in rustic environment where they survived along with technically more sophisticated water mills in small farms until the end of the 19th century, exceptionally, mainly in the

mountainous Carpathian region until the first half of the 20th century (Etnografický atlas Slovenska, 1990: 29, 103).

Water mill came to our territory probably in the Great Moravian times from the Frankish and Panonian areas inhabited by Slavs (Kučera, 1974: 178; Hanušin, 1970: 180-181, 1979:9-10). For a comparison, in France the first documented water mills date back to the 6th century, in England to the 8th century. In the 9th century they were used by Slavs in Carinthia, in the second half of the 10th century in Bohemia (evidenced on the territory of Bohemia in the years 1100 and 1140), on the territory of Moravia in the year 1150 (Štěpán-Křivanová, 2000: 12-13), in Poland in the first half of the 12th century (1145), in Russia in the 13th century, 1267, etc. (see Hanušin, 1979: 9-10; Feldhaus, 1914: 718-722; Frančić, 1954: 79-83).

Written evidence of the existence of water mills on our territory is dated back to the end of the 11th century, from the 1st half of the 12th century, respectively. The oldest evidence on water mills on the territory of Hungarian Kingdom dates back to the year 1015. Reliable sources document two mills on the land of Tihanian abbey in 1055. Property register of the monastery in Panonhalma lists seven water mills in the years 1083 – 1095, and finally, in 1108 we can find a reference to the mill of the Dömös canonry (Hanušin, 1970: 180, refers to other sources and authors). Evidence from the year 1135 is more specific and more exact. It refers to a mill location (*locus molendini*) and also to miller Scykon in the village Pavlová on the lower Hron river, owned by the Benedictine monastery in Bzovík (Hanušin, 1979: 11). Three mills have been documented on the river Žitava in the village "Vten" near Marcelová from the year 1138, a mill in the extinguished village "Zamto" near Levice on the river Kompa from 1158 and a mill with two pairs of millstones again on the river Žitava in Slepčany from 1164. 151 water mills in total were documented in written on the territory of contemporary Slovakia over the following century. The highest concentration refers to the rivers of the southern, south-western Slovakia and Spiš region.

Water mills represented not only economic and technical contribution but they had a great civilization related and cultural significance.

They entered our territory along with the process of feudalization from the Slavonic Zadunajsko indirectly, by east Frankish sphere of power (Hanušin, 1979: 10-11). At the same time they document the important civilizational role of medieval monasteries. Water mills replaced hard, almost slavish work with manual grain mills, millstones, which had to be done to collect enough flour for daily bread. Their high performance enabled to increase grain production, especially on the big royal, feudal properties.<sup>1</sup>

It is assumed that Slavonic term „mlyn“ from the Latin *molina* through German *mulin* was taken over by the Czechs when they encountered Germans, before the year 750. A number of water mills from the 10th century have been documented in Croatian Dalmatia. Due to systematic research of Slavonic terminology

---

<sup>1</sup> Along with water mills, wind mills overspread Europe from the 13th century (Prague, 1277). They were referred to as „barani“ (ram) or German mill, and the so called dry, „gáplové“ mills with animal race, called also horse or ox mills (ŠTĚPÁN-KŘIVANOVÁ, 2000: 15-16).

Hungarian philologist Elemír Moór believes that elementary Slavonic milling terminology developed in Zadunajsko where Slavs had lived before arrival of Hungarians in the 10th century. Besides the older, civilization related words, Hungarians borrowed from Slavs also milling terminology which has been proved by the Hungarian milling terminology and preserved local names as well (Hanušín, 1979: 10).

Water mills were built on waters with a substantially strong and balanced flow. Mills were built on river banks with undershot wheels. After overshot wheels had been introduced, mills could be built even on smaller waters, where the flow was adequate. Except for mill race system, the mill structure includes also gearing system. It changes horizontal turning motion of the water wheel and its shaft to vertical turning of the spindle and millstone. Finally, it is the work system of the mill, called grinding system which consists of a pair of millstones on mill scaffold. Lower is static and upper is moving. It also includes the flour sieve mechanism.

Mill race system brings water from the river (stream) to the water wheel. It is usually a made up channel – *náhon*, which together with the *mother stream* creates a mill island. Mill race is also called *a ditch*, mill ditch (y. 1208), in Slovene *strúga*. A dam- *hat'*, *hrádzu*, *jaz*, *splav*, *hám*, in Czech *jez* was built on a proper spot on a river or creek. Dam made of a wood construction was filled up with stones in Orava region. They called it *skriňa* (a case). Steep water from the dam was bounced back to the race way, also called *mlynský jarok* (mill trench), *mlynský potok* (mill stream), *priekopa* (ditch). Volume and flow of the water for the race way was regulated by bleeder gates, *odbernými stavidlami*, *stavniceou*, *zástavniceou*. In the contrary, redundant water from the race way was sluiced through sluice ways, called *výpust* (outlet), *opust*, *fludrik*.

In front of the water wheels a wooden, later a brick channel, *lamfešt*, *žlab*, *žleb*, *burknicu*, in Czech also called *lamfešt*, or *vantroky*, *vantrokový žlab*, in Slovene *vodno korito*, *mlynsko žlebovje*, *plúder*, in Polish *koryto* was built. Redundant water was baffled by *jalový žlab* (false/dead channel). Inlet of water was regulated by gates, *zástavnica*, *odrážka*, *vyrážka*, *skočnica*, *rampúch*, in Poland *zastawka*. The most common was a gate with two windows (*okná*) in front of the wheel, of which one was the wheel, mill window and the second was false, waste- *slepé*, *pusté*, *jalové*. Inlet of water was regulated by lifting or dropping of the gate, *stavnice*, *šúbora*, in Slovene called *zapornice*, (They were built next to each other due to the number of wheels on a wooden sheltered bridge.), or by lifting of the pivoting *skočnice*, *zrážky*.<sup>2</sup>

Water wheels were constructed with low race way, *spodové*, *lopatové*, *šajfové*, *klepetové*, *hrebeňové*, *hrebenáč*, similar in Czech *lopatník*, *hřebenáč*, *vlk*, *povodní kolo*, in Slovene *vodno kolo z lopatami* (*vodnu*, *zunajnu*, *lopatnu*), in Polish

<sup>2</sup> Slovak milling terminology refers to the used bibliography. It is based mainly on the studies of Ján Hanušín from the 60ties of the 20th century and on our own research. It covers the territory of Slovakia's also bordering region of Orava in Poland and in Slovenia, mainly mill Soržev in the village Polže, north from the town Celje (Steiermark, miller Oton Samec, born in 1947). Research was concluded on May 22, 2002.

*podsiębierne*, in Ukrainian *pidlivni koleso*. These were genetically older, had lower efficiency than the newer one, more efficient wheels with upper race way, also called *vrchové*, *korcové koleso*, *korčiak*, in Czech *korečník*, *sklípkové kolo*, in Slovene *na korec*, in Ukrainian *nalivni vodiane koleso*, *nalivni mlin*. They had spread since the first half of the 14th century. Their efficiency doubled, it used to reach 60 – 75%. Their diameter was app. 4 meters, width 80 cm and depth of the wheel rim was 30 cm. They turn on a robust horizontal shaft (*val*, *velňa*), usually made of oak wood. Czech terminology also often mentions the term *val*, the same by the Polish, Russians and Ukrainians, in Slovene it is called *vreten*, *ureten*.

Low race way wheels used to have one- or two rims, or even higher number of rims *vence*, *kruhy* when it comes to boat mills, which carry transversal paddles, *lopatky* (shovels), *klepetá*, in Czech called *peření*. They are fixed to the shaft by arms- *ramená*, *kríže*, which are either *zadlabané*, *na dlab* to the shaft, or *obkročné*, in other words *vzperné*. In Slovenia arms are called *mataruge*, *mataružnce*, *motoroge*, wheel rims are made from *krvine*, in Slovak, or *bahrá*, *kruhy*, in Ukrainian *obod*, *obodok*. Internal sides of *krivice* of the upper race way wheels (called *korcové* wheels), in Polish *nasiębierne*, have gutters, *jarky*, *falce*, in which boards of *korce* (buckets) were put. These buckets (*korce*) are cased (*dno*, *podošva*). Lower board is *snoza*, *šufľa*, upper board is *korcovka*, *korec*. In Ukrainian buckets are called *kovši* (*skriňki*). Water from the channel was falling into them from above. Output of the mill was related to the volume of the water flow and level of the water fall. Old millers were experienced enough to know that “one hundred liters per second to one meter in height produces the power of a horse”. Water fall, *zvýšku*, *skok* was measured in units called *strevice*.

Double bearing shaft, *val*, is imbedded on both sides of the bearing through a metal axle, *čap* with an iron board, *lopatina*, *piest*. It is placed in a channeling of the shaft and fixed by metal hubs, called *zdery*. In Slovene the axle is called *šekl*, *šjakl*, axle with paddles is called *šekl-lopata*. Bands are *obroče*, or *rinki*, wooden wedges are called *kajle*, *zagojzde*. The axle, *čap*, in Czech *čep*, is embedded in bearing, *hlavničke*, or *vankúši*, in Czech also *shlavíčko*, which is placed in wooden *hlavnica*, in Czech *shlaví*, in Slovene *logar*, *pouza*. *Hlavnica* was lying on two beams, called *jarmo*, *klietka*, or *mostík* or even *šibenky*, in Czech *remlíky*. Water wheel was sometimes surrounded by a brick protection to prevent freezing of the water when the winter frost comes. It was called *kolesovňa*, *ráštovňa*, *ráštabňa*, in eastern Slovakia *sруб*, *izbica*, in the Czech lands *lednice*.

Gearing system consists of cogged gears, which regulate direction and speed of turning, i.e. speed of the working part of the mill – millstones. The core of the system is a big *palečné koleso* (cog wheel), which is usually in 1/3 smaller than diameter of the mill wheel. *Palečné koleso* is fixed to the shaft by countersink arms in the same way as the water wheel is. It consists of *krivice*, *bahrá*, stuck together with wooden nails. The Polish also have *paleczne kolo*. Ukrainians call it *zubčaste koleso*, *obolok z kilkami*. The wheel had cogs- *palce* on a side of the rim. It was called *lícne*, *palečné* (cog) wheel, in Czech also *lícník*. Rarely, cog wheel had cogs *na chrbte* (on the back), *na čele* (on the front), *hřebeni venca*,

čelné, chrbtové (back) wheel, in Czech *čelník*. Cogs of *lícne* (face) wheel interlock in the gearing, *cievy pastorka*, that is firmly built in the vertical iron spindle, *vreteno*. Similarly, in Czech it is called *pastorek*, or also *lucerna*, *kladnice*. In Morava they call it *cévník*, in Slovene it is called *papreslica*. Ukrainian water mill also had a spindle, *vereteno*, with wooden „*palički-civi*“ between two iron rings, in our territory called also *kotule*, *taniere*, in Slovene *kargle*. Iron *pastorok* was also called *tríb*, in Polish *kola trybowe*.

Set of cogs and gearings was called *náboj*. *Postaviť náboj*, i.e. to synchronize operation of the gear mechanism, was at that time one of the conditions for passing tests to become a Master of the craft. On more complex, multilevel, *dupľovaných* (doubled) gears, for example, in boat mills, the big *lícne* (face) *palečné* (cog) wheel was complemented by a *predloha*, *ležatý hriadelík* (horizontal, little shaft) with gearings and a small *palečným* cog wheel, which was driven by *pastorok na vreteno* (on the spindle). In the Czech lands it was constructed and fixed to the big *palečník – čelník*, and was called „*na vystrák*“. Vertical assembly of doubled gears set up had *palečné* wheels ordered in different direction (*čelník* above the big *lícnik*), it was called „*výstroj na hever*“.

Vertical iron axle, *vreteno* (spindle), was in Czech called *železí*, in Polish *wrzeciono*, *wahadlo*, in Ukrainian *vereteno*, in Slovene *štanga*, *osovina*. In Bulgaria and in Balkan region they called it *senj*. Spindle is placed in a metal bearing, *panve*, *panvičke*, in Slovene *ponovica*, which is lying on transversal beam of the mill scuffold. In Slovak it is called *lavica* (bench, seat), in Czech *kobylica*, in Slovene *ležaj*, in Bulgarian *baba*. There is a flexible *strmeň* (shackle) under the bench, which controls and regulates the distance between millstones, called *lahčenie*, *skladanie kameňov*, respectively. On the top of the spindle there is a metal, ribbon shaped *praslica*, *paprica* imbedded through an eye, firmly fixed to the lower part of the upper millstone. In the Czech lands *praslica* is called *kypřice*, *pyprice*, in Poland *paprzyca*, similarly also in Serbia and Bulgaria, in Slovene *koprivca*, *kapriuca*, in Russian *paraplica*, *porchlica*. Circle hole in the lower stone surrounding the spindle is filled with wooden *kuželnica*, in Czech *kuželice*, in Slovenian *pukša*, *kožel*.

Turning of the spindle was the driving force for *jogging motion* of the sieving machine. First of all it was sifting of grist in a mill case, *pytl'ovaciaj truhla*, in Czech *moučnice*, in Ukrainian *skriňka dľa borošňa*, in Polish *skrzynia na mąkę*, in Slovene *pajtl*, *pajkltruga*, i.e. the so called *pytl'ovanie*. It spread out probably from the Czech lands in the 16th – 17th century. Wooden rails *cievy pastorka* were ejected from the rings to make a *palcová vačka*, in Czech *palečky*, which knocked against a wooden gusset, *pytl'ová odrážka*. It caused the jogging motion of the sieving sack, made of woolen or silky fabric of various density<sup>3</sup> *pytel* (sack),

<sup>3</sup> A specialized thread craft, called *pytlíkárstvo* or *plátenkárstvo* was dedicated to production of sieving sacks. From the 18th century the craft was concentrated in the region of Myjava, survived until the second half of the 20th century. They produced *plátenká* from woolen threads or silk in six thicknesses. For more details see Marková, E.: Myjavské plátenká a pytlíky. In: Slovenský národopis 15, 1967, pgs. 555-569.

in Czech *pytlík*, in Slovene *pajkl*, in the mill *pytl'ovej* case. Rattling movable sieving mechanism, which consisted of *odrážka*, *pytl'ovací valec a vidlica*, *ráz-sošky*, in Czech *rohy*, in Slovene *rogovice*, was in the Czech lands called *hasáčert*. Due to the sound produced by mills, many of them were called „*klepáč*“.

Grinded grain, grist, was falling down through *múčnu dieru* (flour hole) in the lower millstone into the sieving *pytel* (sack). Fine elements felt through the sack into mill case. Mill case had a side window for flour takeout and manipulation with the sack. It was covered with canvas or shift door, in Slovene *lina od pajklna*. In the middle of its length there was a little sack *pytlík* hung by *uši* on *vidlica*, *rázsošky*, *trasadlá* of the sieving mechanism.

Thicker elements were falling by gravity and jogging through a leather hub of a slant placed sack *pytel'* into *žajbro*, *zúbor*, in Czech *žejbro*, *krejha*, in Slovene *zaubr*, *zajber*, *grajzlca*. *Žajbro* has also a wire sieve. It is moved by levers and pivoted arms, in Czech *bidélec*, in Slovene *cukštanga*, *zaubrštanga*, and thus the jostling motion of the sieve *žajbra* is produced. Middlings are falling into *pritruhlík*, bran into *otrubník*, in Czech *truhla*, in Slovene *truga*, *kišta*.

*Palcová vačka* was replaced by a separate metal triangle *vačka* (*klobúk*, *triangel*), sleeved on the spindle under *pastorek*. By *pytl'ovací valec* (roller) and *odrážka*, *hasáčert*, it moves also the horizontally pivoting arms and rotary *žajbrové valce* (rollers), in Czech *pacholata*, in Slovenian *vretence*, *vretenček*. In Morava the mechanism of levers for moving *žajbro* is also called *drktačka*, *repetačka*. Springs for straining the sieving mechanism, backward motion of *žajbro*, *pytl'ová a pytl'ovacíu spružinku*, *žajbrovú spružinku*, in Slovene *fedr za situ*, *za zaubr*, straining cogged wheels with pawl, in Czech called *rohatka*, in Slovene *šponar*, *štrajfl*, which were used to roll the string up on the bar, were made of ash wood.

The last system of the mill mechanism is grinding system (grinding plant). The core of it is created by a pair of grinding millstones, *kameňové zloženie*, in Ukrainian also *žorna*, in Russian *žernova*. The bottom, static stone lies on the floor of the mill scaffold, *ležiak*, in Czech also *spodek*, in Slovene *spodnjak*, in Ukrainian *nižnij kamiň*. The top, turning stone is called *behúň*, in Czech *běhoun*, in Slovene *vršnak*, *vršjak*, *laufar*, *tekač*. It turns on the mill spindle by means of *cievový pastorek*. Diameter of the stones used to be about 80 – 90 cm, height of the top one – about 50 cm, height of the bottom one – half of it. Millstones are placed in a wooden cover (splint), called *lub*, in Slovene *obut*, *obod*, in Bulgarian *káshnak*. This is where our saying „*čo má za lubom*“ (“*what is he/she hiding, up to*”), comes from, since *mletiar* (customers of mill) did not know how much flour was left behind *lub* of the millstones.<sup>4</sup>

<sup>4</sup> A separate article, published in a SAS collected works under the title: „Remeslá a remeselníci v slovenskej ľudovej frazeológii.“ In: *Studia Academica Slovaca* 33, 2004, pgs. 154-166, was focused on proverbs and sayings related to crafts, including mill craft, as well as the article: „Remeslá a ich patróni v slovenskej ľudovej kultúre“. In: *Studia Academica Slovaca* 31, 2002, pgs. 161-167. See also MLYNKA, 2004: 128-154. An article on mill craft in Slovakia was published in *Studia Academica Slovaca* 22, 1993, pgs. 167-174. A review on Slovak folk culture articles was published under the title: „Ľudová kultúra v zborníkoch Studia Academica Slovaca“. In: *Studia Academica Slovaca* 29, 2000, pgs. 337-345.

Mill scaffold is a separate wooden construction on which the millstones along with feeding basket are placed. It was also referred to as *výška*, *pôda*, *zanáška*, since corn and grist were carried in *v meričky*, *škopíky*, in Slovene *mernik*, and lifted up by using stairs, in Slovene *stopnice*. To make flour, grist had to be grinded repeatedly, from four up to six times. One grinding *razové mletie* was enough to get grit. In Czech mill scaffold is called *hranice*, mezzanine also *mlecí podlaha*, in Slovene *pot*. Scaffold consisted of massive beams, logs *predná* (front) and *zadná* (rear) *podošva* (sole), *svorový stĺp* (pillar) and *hrada*, *strmeň* (shackle) with *lavica-kobylna*, *múčna hrada* with *múčnou dierou* (flour hole). Interspace between the millstones was regulated through a slot in the front *svorový stĺp* (pillar). It was referred to as *skladanie*, resp. *lahčenie* of the stones. By means of wedges the height of *strmeň* and *lavica*, which was supporting bearing with spindle, *vreteno*, was controlled. Newer method of *lahčenie* used a lever mechanism- *váha*, in Czech called *housle s kozlíkem*, *hasákem*, and finally by metal screw mechanisms, in Slovene *vijak*.

Grinding system includes also a feeding basket, *kopčah*, in Slovene *grob*, *grot*, in Ukrainian *kiš*, in Russian *kovš*, in Polish *kosz na ziarno*. Bottom part of the basket, flexible ground is called *kopčášek*, *korýtko*, in Czech *korčák*, in Bulgarian *sedlo*, in Slovene *koritce* with hangers on jamb construction, the so called *krosienka*, in Czech called *šťálce*. Jogging motion of the feeding basket, *korýtka*, was in ordinary mills provided by so called shuffling. A wooden pin is being shuffled upon the surface of the upper stone. It has been preserved in Bulgarian Greek mills, *karadžejky*, and it is called *krečetalo* or in Turkish *čekâldak*. *Krečetalo* connected to *furka* and *kuklica* (regulation of friction) is jogging *sedlo*, in order to ensure a balanced falling of corn from the slant channel- *kutlica*, into the slot between the stones.

The so called "flick mechanism" to direct the grist towards the space between the stones was typical for our mills. An iron *výškoková obrúčka* (flicking ring) was fixed along the circuit of the hole of the upper millstone (*oko behúňa*), called *pupková zderka*, in Czech *zdirka*. The wooden pin called *trasák*, *ruštak*, in Czech *rejholec*, *rejlík* was bouncing against its drifts. It was fixed to the side of the *korýtko* (little gutter), which regulated falling of the grist from the feeding basket. It was tuned up by tightening of a *spružinky* (springs) on the side of the basket, string and cogged wheel and *západka*, in Czech *s rohatkou a klapací pružinkou ve varhánku*. Directing of the corn flow was sometimes provided by a short leather *hrdlo* (hub) on the gutter hole.

Ingenuity of mill craftsmen is represented by invention of a *vytierač*, *jazyk*. It was a long, shaped, wooden stick placed in the *oka behúňa* (hole of the upper millstone) fixed to the upper wall of *lub*. It lumped the corn into opening of *behúň* (upper millstone) between the stones, off the body of *praslica*. Millers were, due to the milling orders, obliged to have a bell signaling the end of milling installed, so that the mill did not run idle.<sup>5</sup> However, millers were able to identify the right operation of the mill even by clatter of machines. There was

<sup>5</sup> It is mentioned also in articles on milling, written in Slovak in the 18th century: „Aby mlyn, kdy ma mletia, prazdny nestal, v jednom každem mlyne pri koši ma držati mlynar obeseny zvonček.“ Turčianska župa from the year 1771 – SEDLÁK, 1969: 139.

a bell hanged on a string attached to the feeding basket. End of the string was fastened to a wooden stick in *kopčah* (feeding basket). Once *kopčah* was empty, the stick bounced against the flexible bottom of *korýtko* and rocked the bell.

Before the sieving mechanism and sacking in the mill case were introduced, it had been necessary to sieve the grinded corn manually in sieves of various size several times. Sieves were also used for cleaning of corn before grinding. In some parts of northern Slovakia corn was grinded in rural water mills without using sieving mechanism even in the first half of the 20<sup>th</sup> century. That is why mills possessed several types of sieves – *riečice*, *rešetá*. It was a hard and exhausting job, performed by apprentices, also called *prášek*, and journeymen, *mládkovia* and *stárkovia*, *mlynská čelad'*, or women sieved the grist themselves at home. Hence in 1477, king Vladislav Jagiello accommodated the appeal of journeymen from Prague and Kutná Hora and abolished usage of sieving mechanism in mills, *hasáčerty*, in order to protect their jobs. (Štěpán, 2000: 17). At work they also used brooms and mops, shovels, sacks, scales, various types of calibrated containers, *násypky*, *merice*, *škopíky*, in Czech also *mírky*, *věrtelé*, in Slovene *škaf*, *šafla*, *mernik*, *štrihany mernik*.

Besides mill case, there was also a grit case, *špickastl*, and a big case for mixing flour. Another important part of mills' interior was, *mýtna truhla* (toll case), used for storing the toll, 10 – 15 % of the grinded corn and 2 % *na rozpraš*. Toll case was locked and hired millers opened it exclusively at the owner's representative's presence. Miller was compensated for milling by *mýtna štvrť* (toll's quarter), the rest of the grain was owned by the landlord. *Truhla prachová* (dust case) was used for *ometky*, i.e. to store flour dust from the floor, from millstones and *spoza lubu* (from behind *lub*) before they got struck. That is why mills had also small windows to protect mill dust escape. *Ometky* were supposed to feed landlord's boars. Hens and pigeons also got their shares on the mill yard, as they complemented the overall picture of a mill.

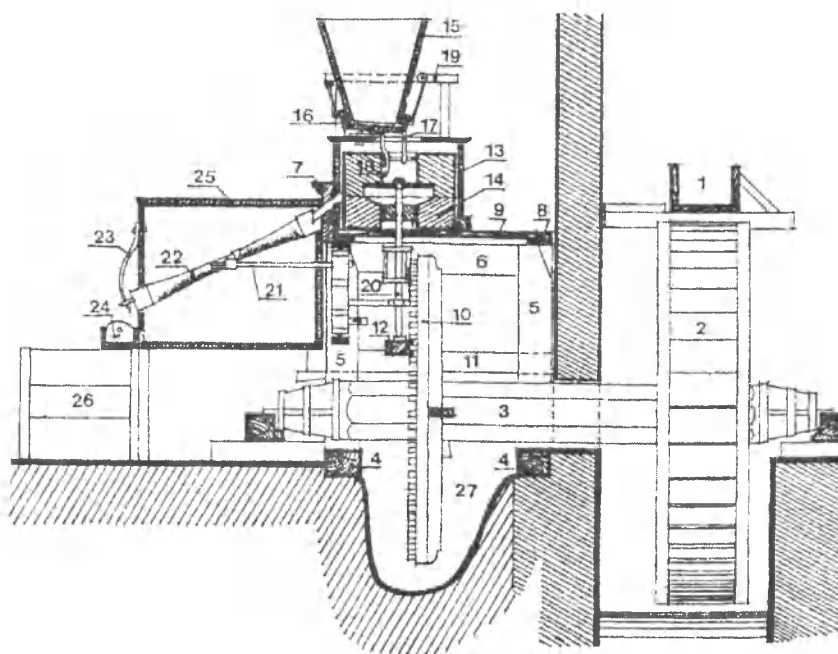
Tools for striking millstones could also be found in mills' facilities. They had to get struck according to the type and quality of stones as well as the volume of flour that has been grinded. It was usually repeated every third week, after 40 – 50 sacks of grain have been grinded. *Lub* was taken off, stones were swept and the upper millstone was, by an iron or wooden lever, wooden wedge (in Czech *pačhole*) and wooden roller (in Bulgarian *zajak*) flipped to a chair, or a low tripod. Milling surfaces of both stones were painted in black color and with special hammers *kresali* (struck), *kuli* (Slovenes called this activity *klepanje*) gutters and trenches, *brázdy*, *remíše*, in Czech also *větrníky*. Sarsens were being struck for about 2 hours,<sup>6</sup> They did it with chisels and sharp hammers, called *čakan*, *oškrd*, in Czech *špičák*, *premelice*, *oškrť*, in Slovene *škrl*. They checked the striking surface and diameter of the stone with a pair of compasses (*cirkel*, *váha*, in Slovene *vaga*), balanced *behúň* by means of a special construction, *virgula*.

---

<sup>6</sup> I quote a milling saying from Slovenia, Gorenjska region (Novo mesto): „Če kdo en par kamnov skleplje v eni uri, je to zagotovo slabo delo!“ – BOGATAJ 1982: 104.



Mill machine is a universal invention and is carrying no signs of ethnic specialty, in other words exclusion. Many nations have contributed to its construction and technical elaboration over a number of milleniums of cultural development. However, the crucial phenomenon was the process of accepting new values and technical solutions, their integration within a new economic and cultural system of the new environment and the process of internal adoption by the social community. Terminology is considered to be the external sign of integration of a new value with the individual cultural system. On the other hand, it may refer to the ways by which the new technical and technological solutions entered the socio-economic environment. Register of folk terminology in Slovakia documents above 1400 entries/expressions, including their vernacular versions. Our study was focused on the linguistic and cultural fortune of mill terminology in a wider context of some Slavonic languages.



Water Mill and its' Terminology in Slovak Language

1. žľab, 2. vodné koleso, 3. hriadel', val, 4. predná a zadná podošva, 5. predný a zadný svorový stĺp, 6. svorová hrada, 7. múčna hrada, 8. zadná hrada, 9. podlahové dosky, hradky, 10. palečné koleso, 11. strmeň, štekvan, 12. polica s panvovým ložiskom, 13. lub, 14. kameňové zloženie, 15. násypný kôš, kopčah, 16. kopčážek, kopýtko so závesmi, 17. trasák, rušák, 18. vytierač, jazyk, 19. krosienka, 20. vreteno s príslušenstvom, 21. vysievací, pytl'ovací mechanizmus s príslušenstvom, 22. pytel', 23. pytl'ová pružina, 24. žajbro, zuber, 25. pytl'ová truhla, 26. pritruhlík, otrubník, 27. podkolesová jama, podkolesie

## LITERATURE

- BARANOVSKI, B.: *Polskie młynarstwo*. Wrocław : Ossolineum, 1977, 144.
- BOGATAJ, J.: *Mlinarji in žagarji v dolini zgornje Krke*. Novo Mesto, 1982, 191.
- CZAJKOWSKI, J.: *Muzeum budownictwa ludowego w Sanoku*. Przewodnik. Sanok, 1978, 65.
- ETNOGRAFIČKÝ atlas Slovenska. Bratislava : Veda, 1990, 123.
- FELDHAUS, F. M.: *Die Technik der Vorzeit, der geschichtlichen Zeit und der Naturvölker*. Leipzig, 1914.
- FRANČIĆ, M.: *Technika mlynów wodnych w Polsce w XVI i XVII*. In: *Kwartalnik Historii Kultury Materialnej* II, Warszawa, 1954, č. 1-2, 79-103.
- LE GOFF, J.: *Kultura středověké Evropy*. Praha, 1991.
- HANUŠIN, J.: *Pojem a klasifikácia vodných mlynov na Slovensku*. In: *Slovenský národopis* 18, 1970, č. 2, 177-222.
- HANUŠIN, J.: *Ku genéze najstarších strojov na Slovensku*. In: *Z dejín vied a techniky VII*, Bratislava, 1974, 85-124.
- HANUŠIN, J.: *Najstaršie vodné mlyny na Slovensku (do konca 13. storočia)*. In: *Dějiny věd a techniky* 12, Praha, 1979, 9-23.
- HANUŠIN, J.: *K dejinám a typologii tradičních mlynov*. In: *Museum Vivum* I, Rožnov pod Radhoštěm, 1985, 33-62.
- KOLEVOVÁ, E.: *Malé vodné mlyny – karadžejky (žarnovy) v okolí Plovdivu zo začiatku 18. storočia*. In: *Zborník Slovenského národného múzea LXVI, Etnografia* 13, 1972, 113-123.
- KUČERA, M.: *Slovensko po páde Veľkej Moravy*. Bratislava : Veda, 1974, 450.
- LANGER, J.: *Stroje v lidové kultuře II. (vodní mlýny)*. In: *Muzejní a vlastivědná práce* 16, 1978, č. 2, 73-80.
- MLYNKA, L.: *Remeselník vo vidieckom prostredí. Remeslo a status remeselníka v lokálnom spoločenstve*. Bratislava : Stimul, 2004, 188.
- MRUŠKOVIČ, Š.: *Žarnovy – ručné rotačné mlynky na obilie z územia Slovenska v historickom a interetnickom kontexte*. In: *Zborník SNM LXXXVI*, 1992, *Etnografia* 33, 93-148.
- MUZEJ narodnoi architekturi ta pobutu u Lvovi. Putivnik. Lviv, Kameniar, 1980, 183.
- NOVÝ, L. a kol.: *Dějiny techniky v Československu (do konce 18. století)*. Praha, 1974.
- SEDLÁK, F.: *Poriadok pre mlyny a mlynárov z r.1771*. In: *Slovenský národopis* 17, 1969, č. 1, 137-141.
- SLOVENSKI etnološki leksikon. (Ed. A.Baš a kol.), Ljubljana : Mladinska knjiga, 2004, heslo mlín, mlínarstvo, mlínski kámen – s. 331-332, vŕdni mlín – s. 681
- ŠTĚPÁN, L. – KŘIVANOVÁ, M.: *Dílo a život mlynářů a sekerníků v Čechách*. Praha : ARGO, 2000, 310.

## RESUMÉ

Príspevok poukazuje na civilizačný a kultúrny význam vodných mlynov v Európe. Vodné mlyny sa rozšírili v období 11. – 14. storočia ako rímske kultúrne dedičstvo. Ich budovanie je spojené so šírením feudalizačného procesu aj u slovanských národov Európy. Načrtávame technický a konštrukčný vývoj vodných mlynov, zloženie náhonovej, prevodovej a mlecej sústavy mlyna a terminológiu, spojenú s mlynskou technikou a technológiou. K základnému slovenskému a českému mlynárskemu názvosloviu uvádzame paralelné príklady vybraných termínov z územia Poľska, Ukrajiny, Slovinska a Bulharska. Ľudovú terminológiu považujeme za znak osvojenia si a zároveň integrácie nových technických hodnôt etnickým spoločenstvom a jeho vlastným kultúrnym systémom. Pôvod názvov zároveň poukazuje na cesty, odkiaľ tieto technické vynálezy prenikali a ktorými smermi sa ďalej šírili.