

SEITZ





EMERALD



FEBRUARY 1946

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"SEITZ" FRICTION-JEWELS

specially manufactured for the watchmaker!

Up to the present all Jewels sold to the watchmaker were of the same large variety and second quality used by the watch factories.

The watchmaker had to be satisfied with this inferior quality, as there was nothing better obtainable. In a few years his assortment of jewels became a mixture of useless jewels.

For this reason Mr. Pierre SEITZ created, an assortment of high-class jewels specially manufactured for the purposes of the watchmaker.

*This catalogue is also printed in French
and in German.*

*Also all indications in the cases are
given in French and in
German on demand.*

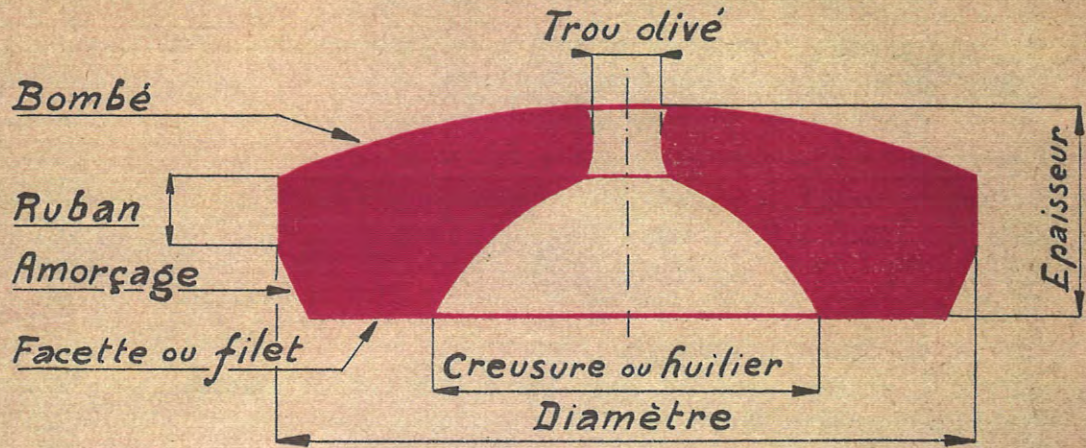
INDEX :

SEITZ' Outfit :

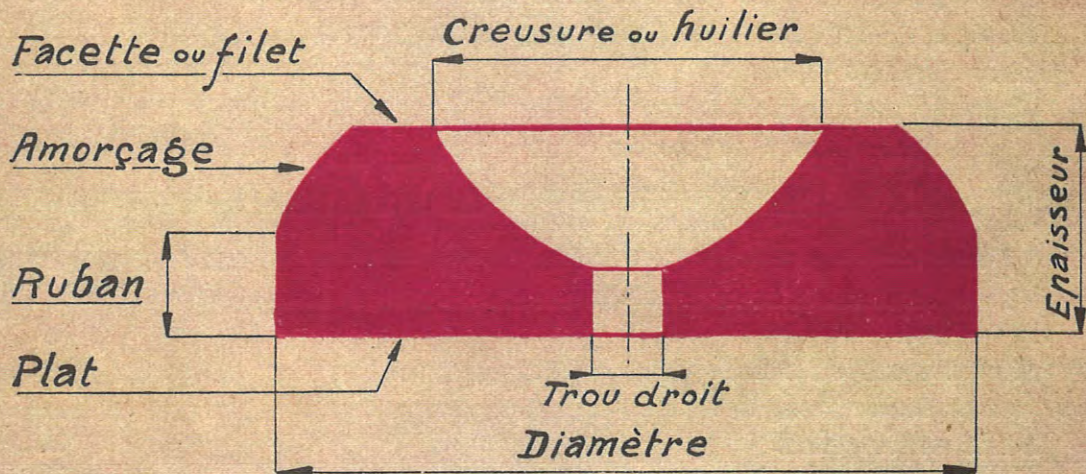
Technical drawings of jewels with adapted terms	2.
Pictures of the Seitz' works	3-5.
Recent developments in the process of repairing watches	6-9.
Complete outfit in wooden case	10.
Standard outfit in black case	11.
Friction jewellery tool with its set of 12 flat pushers a. 5 anvils	12-13.
Set of 15 reamers with broach	14-15.
Set of 12 centering pump pushers	16-17.
Uprighting pump tool	17.
Set of 4 round face plain hole reducing punches	18.
Set of 11 concave pushers	18.
Face plate with 3 clamps	19.
Holder for jewel hole settings	20.
Set of 12 centering points on spring	21.
Set of 5 pushers and 3 anvils for setting watch hands	22.
Tools for setting lever	22.
Reducing ring	22.
Tool for straightening balance pivots	23.
Grinding stone	24.
Handle with 3 chucks	25.
Chuck - holder	25.
Pivot gauge for the repairer and other pivot gauges	26.
Directions for using the friction jewellery tool	27.
<i>Friction jewels Seitz :</i>	
Some technical directions	29.
The various kinds of jewels	30.
The standard repairing cabinet	31.
Chart showing the contents of the different cabinets of Standard jewels	32-33.
Assortment of convex balance jewels	34-35.
Assortment of center jewels	36-37.
Assortments of bushes	38.
<i>What is to be bought ?</i>	
Some useful hints	28.
Marks and packaging	39.
Drawer for assortments of jewels and bushes	40.

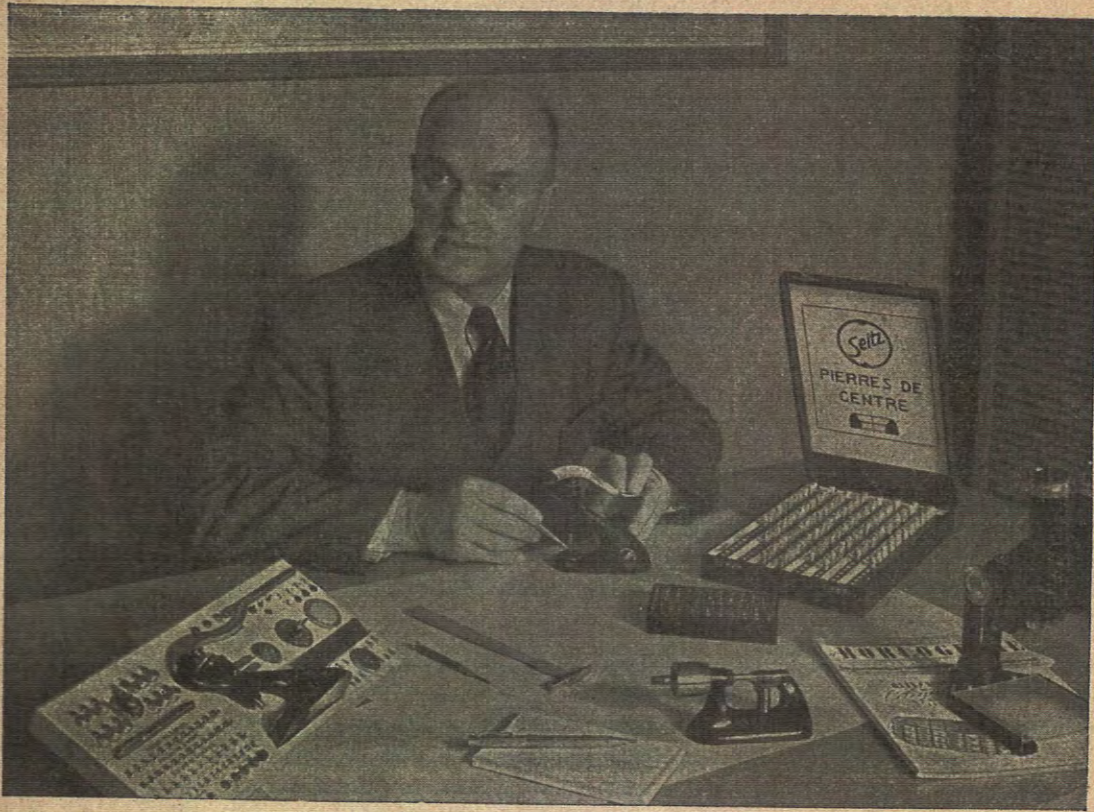
Appropriated terms of the jewel referred to in the directions on using the various tools « SEITZ ».

Pierre de balancier



Pierre glace





Mr PIERRE SEITZ,
manufacturer of the jewels
and jewellery tools
« SEITZ »

Some aspects of the workshop Pierre SEITZ :



Working the jewels to the precise diameter.



Inspecting the jewels.



Finishing the friction
jewelling tools.



Preparing the assortments
of jewels.

Recent developments in the process of repairing Watches

The layman is generally not aware of the contradictory qualities that he can expect from his faithful companion of life.

He desires a very precise watch, and this can only be obtained by reducing the diameter of the pivots to a minimum and by providing the points of pivoting with very hard stones, which are very breakable.

Fashion caused an extraordinary development of the wrist watch to the detriment of the pocket watch. The reduced size of the first renders however their manufacturing more difficult and the working of its parts more sensitive to the minutest defects. A watch worn on the wrist is much more exposed to shocks than a pocket watch, and if many modern watches are provided with security arrangements protecting the pivots of the balance staffs against shocks, many other parts, which are not especially protected have to suffer.

If Swiss watches of a good makers can hold such contradictory conditions, it is see the result of the technical progress of the last decades. Nevertheless, because of its structure and its size, the watch will always be a very delicate instrument that will require from time to time the services of a medical specialist ! The physician of a watch is the watchmaker. His tools and working methods remained the same for over 100 years and the treatments he was able to effect were mostly lesser evils.

We must acknowledge that the infinite and daily increasing variety of watches, the many in tiny pieces are not made to simplify his work.

Only an expert watchmaker who had acquired great technical knowledge, would be able to put in good working condition a watch entrusted to him.

For the good of watchmaking, some Swiss technical men, amongst whom Mr Pierre Seitz has to be mentioned as being one of the first,

have been studying for some ten years, the modernization of the tools and the working process of the repairer.

The results of these researches were so profitable that they mark a considerable progress in watch repairing. The jewels are certainly the most fragile part of the watches ; a pocket chronometer contains 19 to 21 of them, a good watch 15 to 16 and a lever watch of inferior quality at least 7.

The replacing of a broken jewel was always very difficult for the watchmaker, often impossible to realize to perfection. He had to have in his stock of replacing material a jewel that had exactly the same shape and the same dimensions as the jewel that had to be changed.

For one who knows the great variety of shapes and sizes of watch jewels, there is no doubt that this condition was rarely fulfilled. Because of these circumstances, the watchmaker had to be satisfied with a jewel having as near as possible the shape and desired size.

Thanks to the „Seitz” assortments of jewels especially manufactured for the repairer and to the „Seitz” jewellery tool provided with a precise, simple and very complete equipment, the replacing of a broken jewel is now, in every case, an easy process, rapidly executed and guaranteeing the integral maintenance of good conditions of pivoting. It would take too long to describe minutely, all the steps of this great progress.

In fact, it is due to the practical realization of two ideas, which are :

1. The creation, for the repairer, of an assortment absolutely complete, a minimum number at the least expense possible of first rate watch jewels.

2. The creation of rational, non encumbering tools, easy to handle, very complete and cheap, for replacing watch jewels and bushes. (The bush is a pierced brass-cylinder, that can be used instead of a watch jewel).

The catalogue of the firm Seitz gives all desired information about details of manufacture and the particular advantages which constitute the realization of these two ideas.

We can say that it is now possible for a watch repairer, to be completely supplied with the necessary tools to do, under the best possible conditions all repairs of the watch jewels and bushes, at an expense of 300.— to 400.— francs (70 - 95 dollars).

The assortments (repairing cabinets) of «Seitz» friction-jewels of which there are various kinds contain also special jewels for lever escapment, ellipses, pallet stones right and left, cap jewels as well as bushes.

The «Seitz» friction jewellery tool has, in addition to the usual accessories, a broach to press in the jewels, a set of 12 flat pushers, 11 concave pushers, 12 self-centering pump pushers and 15 reamers ; of 4 round-face plain hole reducing punches and 5 anvils, and can be completed with some other very useful and well made tools.

Such as the face plate with 3 clamps, the holder for jewels, the set of centering points on spring, the set of pushers and anvils for setting watch hands and the broach with 3 chucks for reamers.

The firm «Seitz» has also created a tool for straightening pivots and several types of metrical hole gauges for measuring pivots. These hole gauges are constituted of very carefully chosen watch jewels that can be easily replaced in case of breaking. The guaranteed precision is of 0,00012 mm.

The «Seitz» materials and outfits are delivered in well designed cases to simplify their use and maintenance.

All those materials and outfits are manufactured in series by the most modern mechanical process. This means that they are absolutely interchangeable and in case of deterioration easily replaced at a small cost. At the beginning of this article I have compared the watchmaker to a medical man. Everyone knows that the great scientific discoveries, especially when treating infectious illnesses, have made the use of new methods of great value.

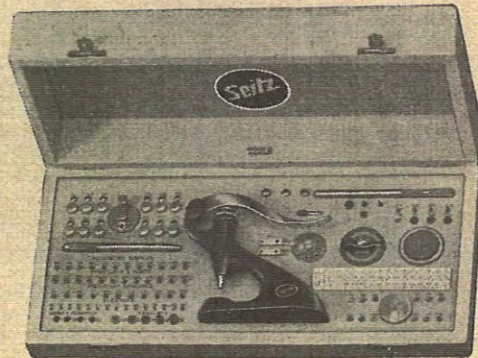
The scope of watch repairing is much more moderate, the remedies which are used, are essentially mechanical and practical.

The progress made in the last 10 years brings however such an improvement in the methods and the quality of the work of the watch repairers that this evolution can be compared with what happened to medicine. Empiric methods depending essentially upon the professional ability of the practitioner, have resulted in real scientific methods, which are more efficacious and quicker. Ever since the assortments of jewels and the Seitz friction tool were created, they have been a great success increasing with time.

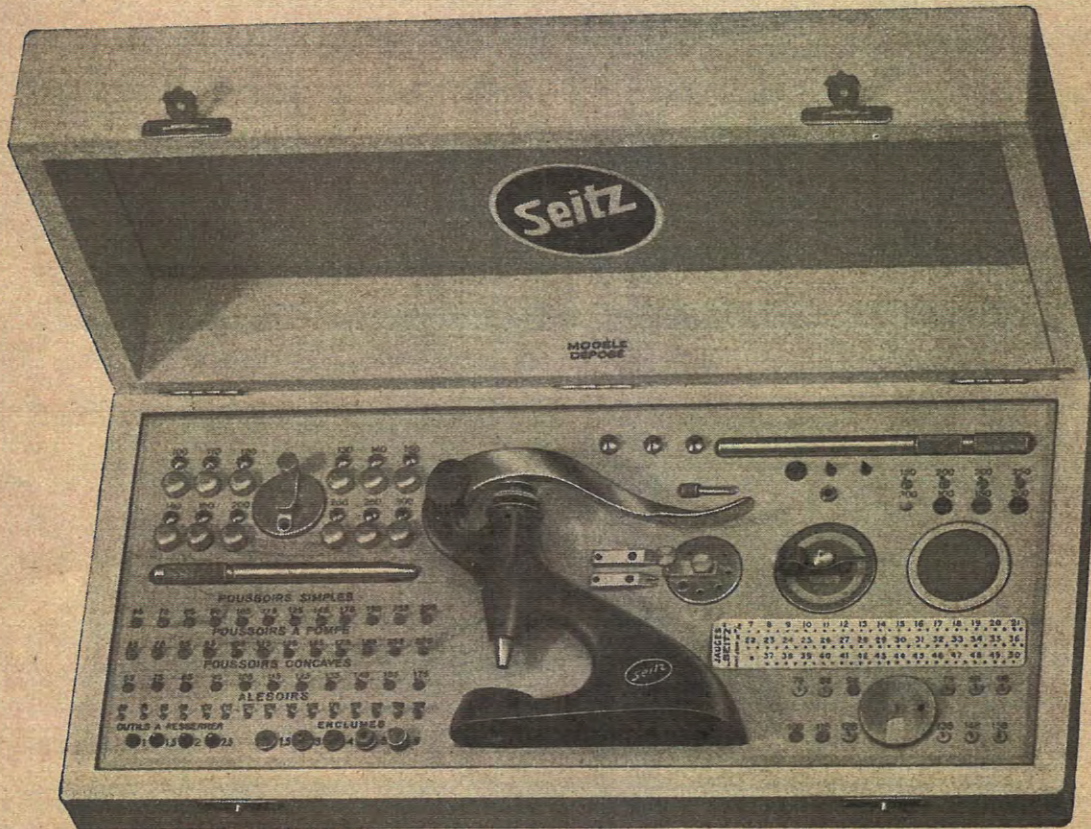
It can hardly be otherwise since they open a new era in the condition of repairs and the maintenance of watches.

S. Guye

Headmaster of the Watchmakers' school
of La Chaux-de-Fonds.



Complete "SEITZ" friction jewellery outfit in wooden case



Weight kgs : 2.100.

Ref. 30150

This assortment is the most complete and precise on the market. Unsurpassed for the watchmakers' needs in the use of friction jewels.

CONTENTS OF THE CASE :

- | | |
|---|---|
| Friction jewellery tool with 12 flat pushers and 5 anvils | Face plate with 3 clamps |
| Set of 11 concave pushers | Holder for jewel hole setting |
| Set of 15 reamers with broach | Set of 12 centering points on spring |
| Set of 12 pump pushers | Set of 5 pushers and 3 anvils for setting watch hands |
| Tools for setting the lever | Handle with 3 chucks |
| Set of 4 round-face plain hole reducing punches | Tool for straightening pivots |
| Reducing ring | Pivot gauge for watch repairers |
| | Centering pump pusher to upright |
| | Grinding stone. |

Friction "SEITZ" jewellery Standard outfit - in black case



Weight kg. : 1.

Ref. 30300

This assortment is absolutely indispensable for the friction jewellery.

CONTENTS OF THE CASE :

Friction jewellery tool with 12 flat pushers and 5 anvils	Set of 12 pump pushers
Set of 11 concave pushers	Set of 4 round face plane hole reducing punches
Set of 15 reamers with broach	Tools for setting the lever
	Reduction ring.

All Seitz' accessories of the Standard type are placed on an unbreakable bakelit base.

The "SEITZ" friction jewelling tool

for the repairs with set of 12 flat pushers and 5 anvils. The «SEITZ» friction jewellery tool made of a special alloy and black varnish of the nicest finish.



height 12 cm - weight gram. 400

Ref. 30520



Its elegant and modern shape distinguishes it from all other friction jewellery tools. It is manufactured with such precision that it will give satisfaction to the most exacting watchmaker. Its light weight (400 grams) makes it easy to use, and at the same time gives a perfect layer and great solidity.

It is provided with the following improvements :

1. its chromed lever may be unhooked with great ease (Swiss pat.) to make it less cumbersome when reaming.
2. its micrometrical nut as well as its index with sloped and set off divisions (Swiss pat.) permits an easy and precise reading.

3. The handle of the "Seitz" jewellery tool



is so arranged that the pushers can be instantaneously set into place. This handle naturally belongs to the indispensable set of friction jewellery tools (page 11).

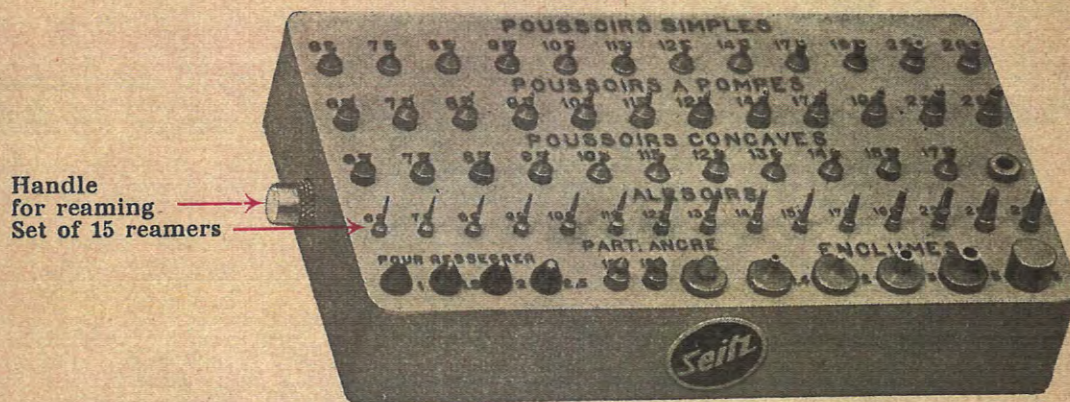


These 17 pieces are always sold with the friction tool «Seitz». They are calculated in its price.

The sets of anvils and pushers are a part of the «Seitz» friction tool. The anvils are placed on the face, the pushers into the handle.

All the «Seitz» tools placed on the bakelite base, are hardened and their diameters rectified, in order to assure a perfect interchangeability.

Set of smoothing broachers (reamers) "SEITZ"



Weight : 80 gr.

Ref. 30522

The "SEITZ" smoothing broach, the creation of which has revolutionized the methods of replacing a jewel, is undoubtedly the most precise and most important tool of «Seitz» set of tools. This smoothing broach with conical joint, is fixed to a special handle, having the same diameter as the pressing-broach. It can be interchanged with the latter and be used in the friction jewellery tool.

The "SEITZ" smoothing broach begins with a cutting part with a half round section thus avoiding every off-center of the hole of the bridge or of the plate; then it continues with a cylindrical part; this last one has a diameter precise to the hundredth of mm. The number of this diameter is stamped on the smoothing broach. It is evident that when the smoothing broach is completely pushed in, the hole thus made will have the exact diameter wanted and will be perfectly cylindrical. The diameter of the smoothing broach is one hundredth smaller than the diameter of the jewel to be forced in.

How the reamer "SEITZ" works.

This design shows the set jewels and the new pressed jewels and the work done by the smoothing broach «SEITZ».

The fig. 1. shows a bridge and a set plate jewel.

fig:1

Pierres serties



The fig. 2. the same with a friction jewel.

fig:2

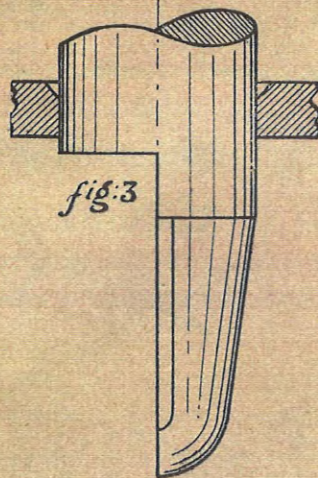
Pierres chassées



Comparing these two draughts it is easy to understand that the pressed jewel is fixed more rationally than the set one.



The fig. 3. shows the work done by the smoothing broach, which went through the setting of fig. 1., to replace the supposed broken jewel, by a jewel of a greater diameter. The smoothing broach has prepared a well perpendicular hole exactly one hundredth of mm. smaller than the diameter of the jewel.



The fig. 4. shows the repair when finished.

fig:4



We insist upon the fact, and any watch repairer will understand it, that the „SEITZ“ method which is so simple, is valuable only because its precision. It is not enough to have a jewel and a smoothing broach; a „SEITZ“ jewel and a „SEITZ“ reamer are necessary.

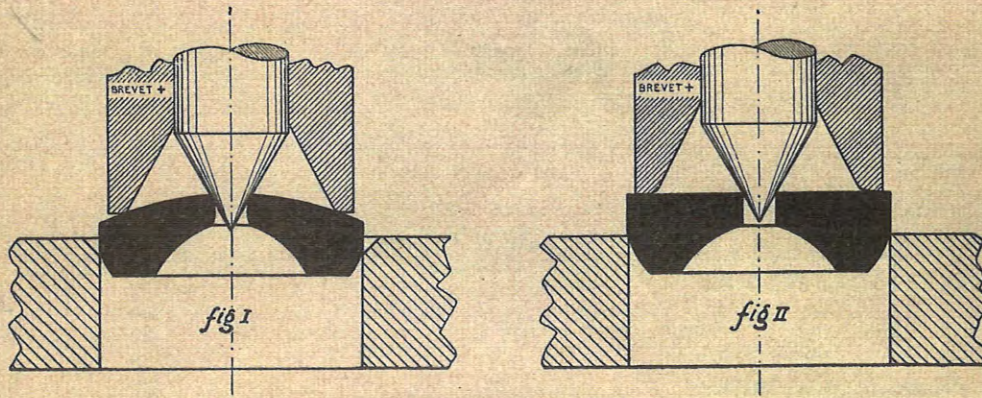
Set of 12 "SEITZ" centering pump pushers

Swiss pat. Nos 75328 & 80599.

Ref. 30523

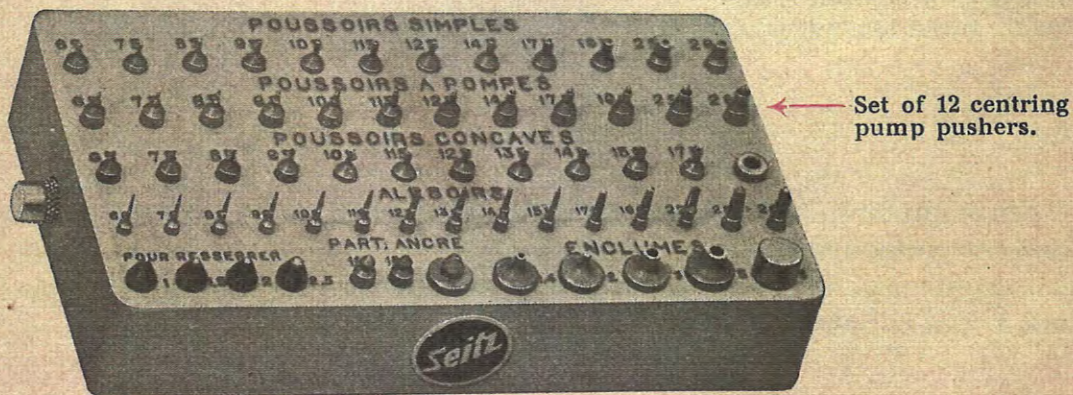
Its advantages :

As shown on the pictures I & II.



the face of the pusher is hollowed, allowing the pressing of flat and convex jewels. The special shape of the pusher helps the watchmaker to obtain a perfect pressing or displacing, without possible breaking, of any jewel.

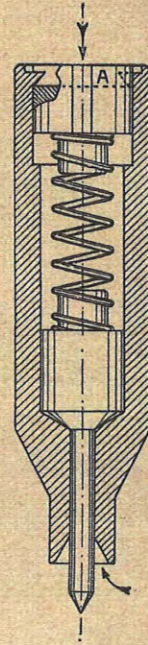
It is evident that in order to displace the jewel on the other side, that is on the side of the oil sink, you must take a pusher corresponding to the diameter of the facet of the jewel (see jewels page 2).



Set of 12 centring pump pushers.

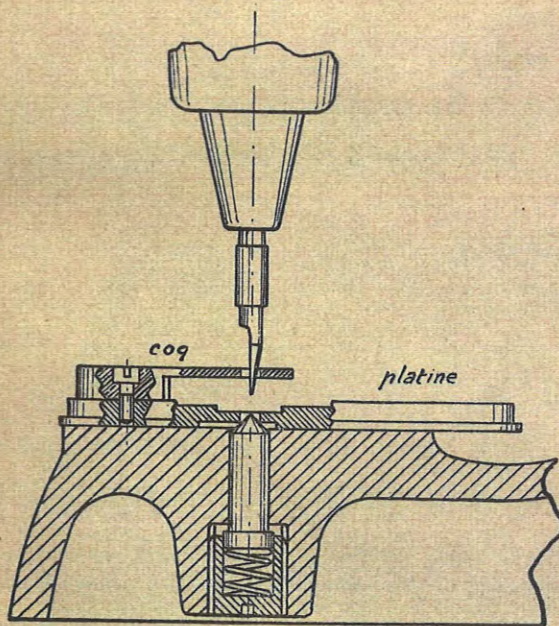
How to dismantle a centering pump pusher :

In order to rectify periodically the pushers to obtain a straight pressing, this new pump pusher is so made that it can be taken apart instantaneously. You have only to press slightly on the top part A with a screw driver in order to compress the spring, then to turn $\frac{1}{4}$ that will release the top A, the spring and the pump. This way of rapidly disassembling the pusher, will enable the watchmaker to straighten the face of each pusher on the friction tool itself, with the grindingstone «Seitz» made for that use, or also to sharpen the point of each pusher on the lathe. The putting together will also be done quickly. The experiences with the friction jewel show us every day that too many watchmakers use pushers in a bad state. There would be much less breaking at the time of the pressing, if pushers of all kinds were sharpened periodically (see page 24).



“SEITZ” centering pump pusher to upright

Ref. 30531

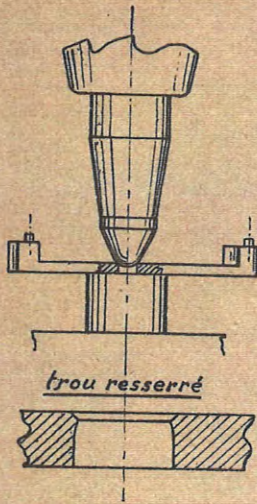


This pump has been especially made to enable the watchmaker to upright a defective hole with respect to a hole in good state. This pump can be adjusted in the base of the friction tool and gives an uprighting of great precision.

Set of 4 "Seitz" round-face plain hole reducing punches

Weight : 20 gr.

Ref 30524

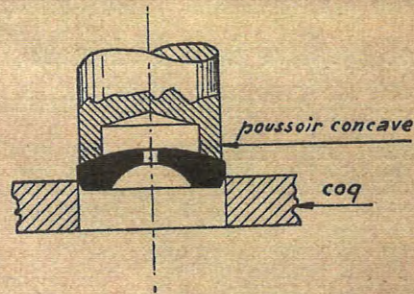


These 4 small tools made of hardened and polished steel, will without any difficulty and without injuring the plate, enable you to reduce a hole. In some cases, it will avoid the replacing of a jewel which is still untouched but that does not hold well in its place. This picture in section shows clearly how to use this accessory.

Set of 11 concave pushers

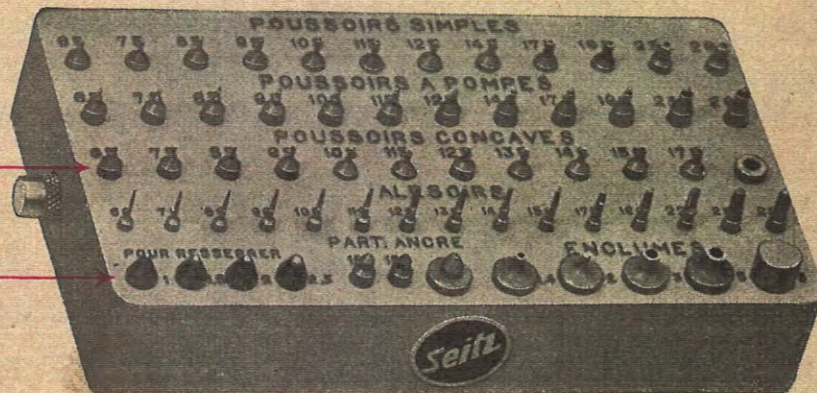
Ref. 30521

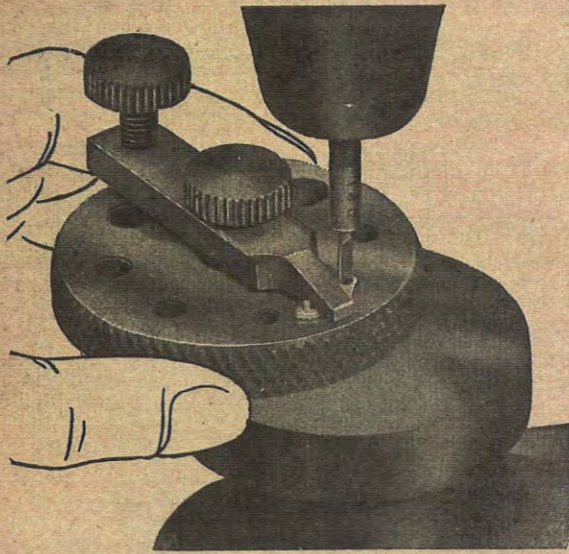
The concave pusher is indispensable for the pressing of all convex jewels. It is clear that pressing a convex jewel with a flat pusher will present a great risk of it breaking. This picture in section of the concave pusher will explain why a concave pusher is necessary for pressing in convex jewels.



Set of 11 concave pushers

Round-face plain hole reducing pushers





" SEITZ "

Face plate with 3 clamps.

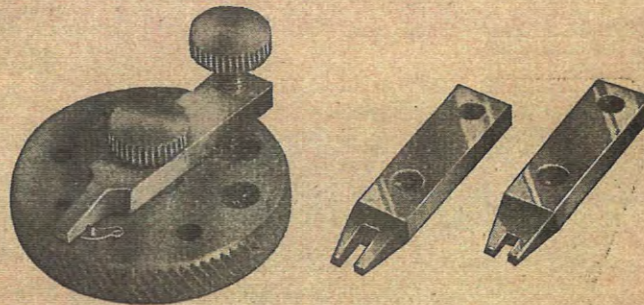
If you wish to ream out an arm, a cover plate, a cap jewel plate etc. the face plate «Seitz» will greatly help, because it will enable you to hold a small piece of any shape.

Each piece is well fixed on the flat face plate. The very light face plate «Seitz» follows the reamer when working, avoiding all unround holes. To press jewels in small movements the face plate is also indispensable, because it holds it very flat and enables you to center it very easily under the pusher.

" SEITZ "

The face plate with 3 clamps.

Ref. 30157



Weight : 30 gr.

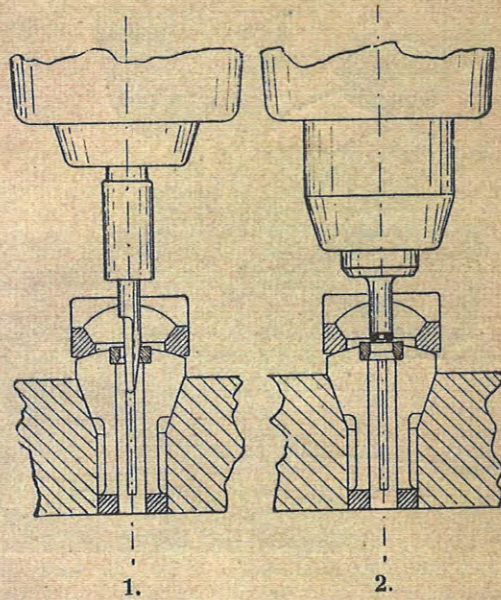
"SEITZ" the great Swiss Factory of watch jewels, known for quality and high precision, producer for the most important Watch factories, created for the watch repairer tools and a unique assortment of friction jewels.

Holder "Seitz" for jewel hole settings (chatons)

in case, containing the brass settings

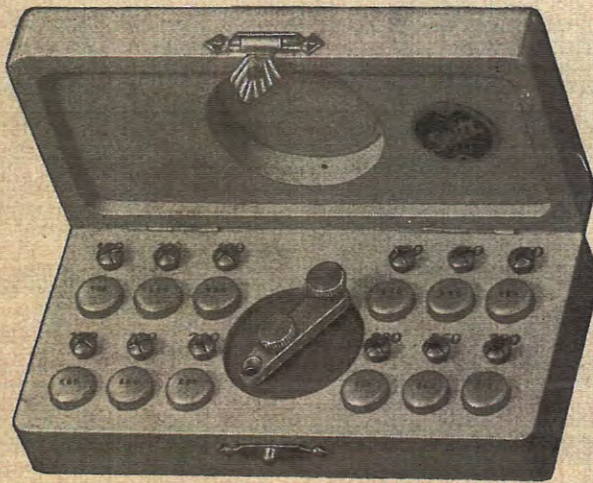
DIRECTIONS :

Choose the brass setting of the desired diameter, put it into the chuck, place the chuck into the holder, bring back over the clamp and tighten slightly (see pict. 1) Small settings must not be tightened too strongly so that they should not get out of shape. When the reaming out of the setting is done, the jewel can be pressed into it as usual (pict. 2).



Advantages of «Seitz» holder for jewel hole settings compared with all similar tools : The holder «Seitz» for jewel hole settings is held with 2 fingers and is put on the face of the «Seitz» friction tool. The reaming out is done as usual and as the holder is not fixed, it will follow the movement of the reamer, avoiding all off-center of the reamed out hole in respect to the exterior of the bush or setting. It is possible to press one after the other 4 or 5 jewels of different diameters in the

same setting when reaming out each time a little bigger so that no off center resulting between the hole and the exterior diameter of the setting. In the systems where the holder is fixed into the base of the friction tool, there will always be some off-center when reaming out. This is the result of the holder not being able to follow the movements of the reamer, as is the case with the holder «Seitz». Watch repairers will always be able to buy the necessary settings.



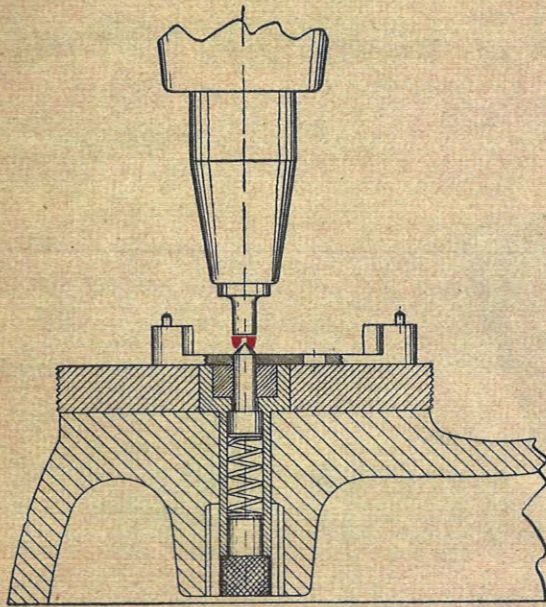
Weight : 150 gr.

Ref. 30154

They will always find great satisfaction when repairing good watches provided with hole settings.

Set of "SEITZ" centering points on spring

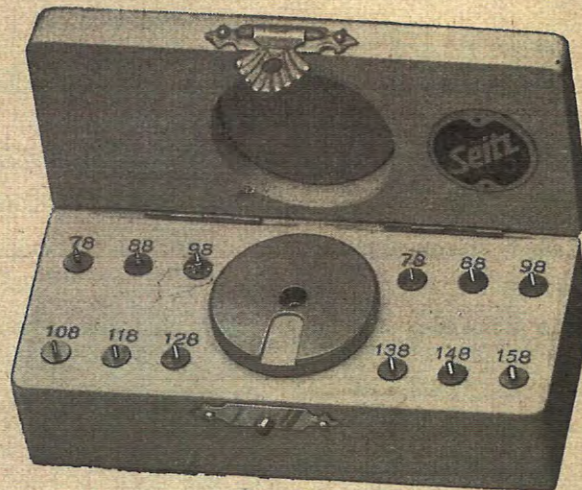
The pressing in series.



This set is composed of : 1 plate bearing the point on spring which can be adjusted in the base of the friction jewelling tool ; 12 interchangeable centering points on spring. This set was especially made for the factory's watch-

maker but also for the watch repairer. This outfit centering automatically the jewel in respect to the plate, will allow to make pressing or after-touch in series.

Ref. 30155

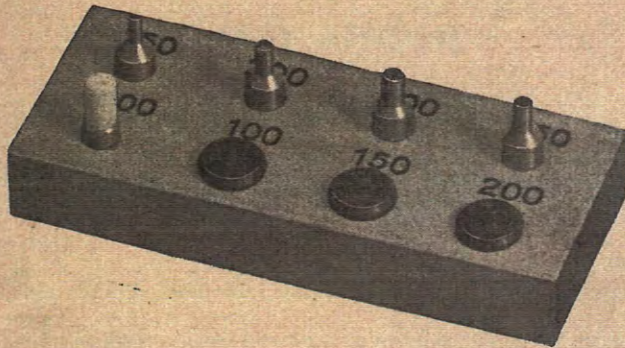


Weight : 100 gr.

« SEITZ » method for replacing the jewel, based on the system of the friction-jewel adopted by all modern Watch factories, is a real progress.

Allowing for speedness and precision the repairing of ancient and modern movements « SEITZ » has rapidly acquired a world-wide reputation.

Set of 5 pushers and 3 anvils for setting watch hands "SEITZ"



Ref. 30158

Weight : 10 gr.

This set completes the « Seitz » outfit. It allows an easy fitting of watch hands. It is composed of 4 brass pushers, one horn pusher and 3 anvils. The pushers are fixed into the Seitz broach for pressing.

"SEITZ" Tools for setting the lever

This tool will be useful for displacing the lever on its stem, so as to regulate the pallet stones, that they should get to the same level with the lever wheel. To operate, introduce the lever-stem into the



Ref. 30525

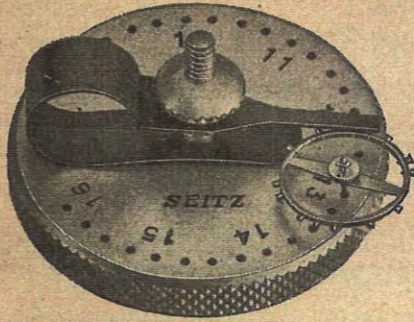
Reducing ring

Tools for setting the lever

anvil, choose the necessary pusher which will allow the displacing of the lever-stem as wished.

"SEITZ" tool for straightening pivots

to $\frac{1}{4}$ / 100th of mm.



Ref. 30350

Weight : 20 gr.

As the picture shows, the tool is composed of :

a round metal plate, bored with 33 jewelled holes on its periphery from 8 to 16 to $\frac{1}{4}$ of 100th. These holes are as precise as the jewels of Seitz' gauge.

DIRECTIONS :

Example : a balance pivot diam. 10 is bent.

Place the bent pivot into a hole of bigger diameter, say 12 or 13, according to the curve of the bent pivot. Make the balance turn delicately with a brush and press slightly on the part of the balance which does not turn round properly, with a wooden pin or tweezers. Repeat this operation in putting each time the pivot to be straightened into a hole of $\frac{1}{4}$ /100th smaller and this until you get to the hole of the diam. 10.

The moveable ruler is only used to control the round of the balance, it must not be used to press on the rim or on the top pivot.

With a little practice, the watchmaker will be able to straighten perfectly, even the most bent pivots, without any flats appearing on the pivot, as is the case with all other methods of straightening.

With this tool, the pivot is straightened on all its length, without any off-center and without facets, which is another advantage.

The "SEITZ" grinding stone

Weight : 30 gr.



Ref. 30528

This tool is composed of a round stone, diameter 30 mm. set into a metal plate ; the chosen stone has been especially selected for the work required.

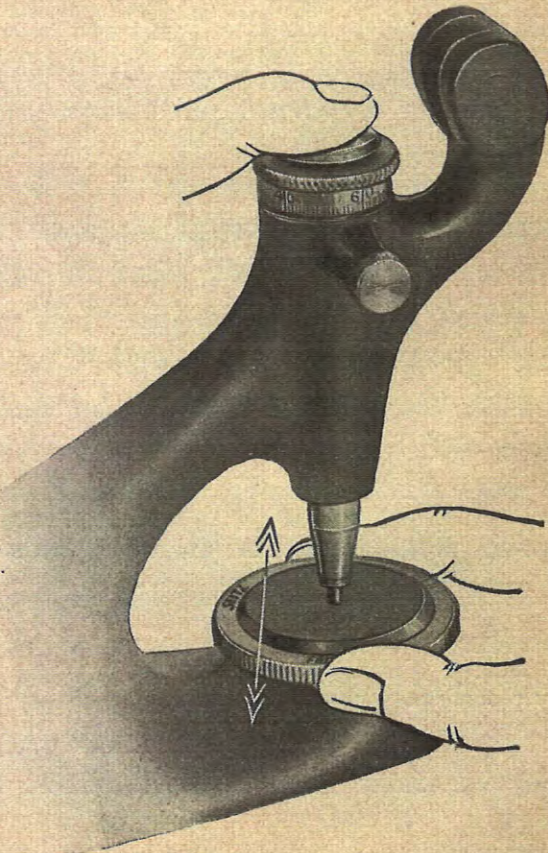
Its Use : the first condition that the pushers and anvils of any sort of friction tool must fulfill, is that they must be strictly flat in respect with the face of the tool.

How many times does a jewel break when being pressed, because the pusher pressing on it is defective, or the anvil not flat.

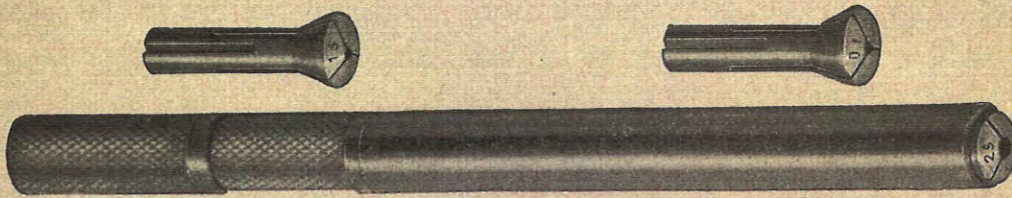
The grinding stone «Seitz» avoids this inconvenience. It is set in a nurlled metal disk with a perfectly flat basis and parallel to the grinding stone.

DIRECTIONS :

It will be sufficient to put the grinding stone on the face of the friction tool and to perform a move of going and coming when pressing slightly on the broach. Pushers and anvils will be rectified easily as well as all the special tools having to be quite flat. The reducing ring will be put into the place of the pusher and allow the adjusting of the anvils for their rectifying with the grinding stone, it is included in the Standard outfit (see page 22). This stone will be of great help to the watchmakers and will also find its place in all friction jewelling workshops.



"Seitz" handle with 3 assorted chucks

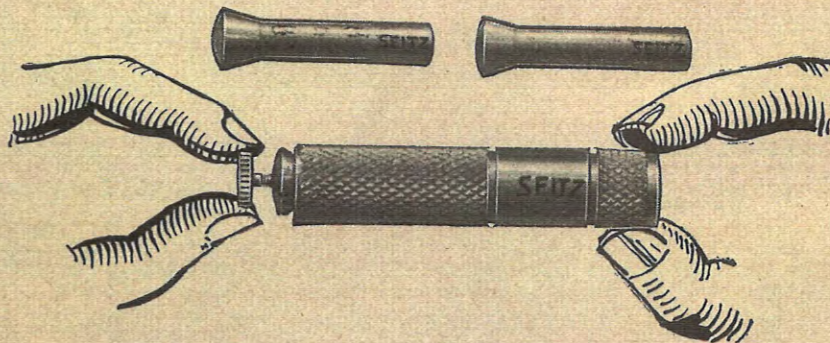


Weight : 40 gr.

Ref. 30159

This tool is most useful. It is put in the place of the broach and enables to fix the drills, reamers etc. It is not a necessary tool for pressing the jewels, but is a useful accessory for all sorts of jobs.

"Seitz" Chuck holder



Weight : 20 gr.

Ref 30517

This tool was especially made to pinch the winding stems on their widest diameter. The chuck was made not to harm the winding stem and to fix rationally a crown.

This tool cannot be used in the place of the above mentioned one. It is delivered with the special chucks « Seitz » 10 - 12 - 15.

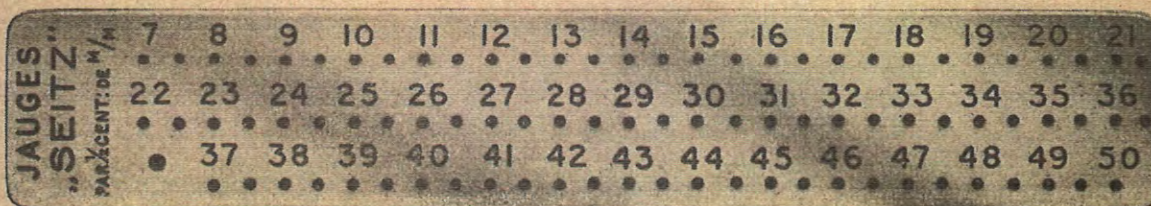
The "Seitz" Pivot-gauge (in case)

It is composed of a small rectangular chromed plate carrying 87 gauges in ruby. The holes are graduated from 7 to 50/100 of mm. by $\frac{1}{2}/100$ of mm with a precision of $\frac{1}{4}/100$ of mm. The numbers are engraved on the plate and are easy to read.

This gauge allows the watchmaker to measure rapidly and most precisely the diameter of a pivot. Thus he will find the jewel-hole which he needs.

Weight : 6 gr.

Ref. 30529 A



The same gauge is made with 44 gauges in pressed rubies going from 7 to 50/100 of mm by 1/100.

Ref. 30529 B

"Seitz" Pivot-gauges with graduation in $\frac{1}{4}/100$ of mm.

These gauges identical to the pivot-gauge here above have the advantage to give the $\frac{1}{4}/100$ of mm. Example : hole $\frac{8}{100}$, $\frac{8\frac{1}{4}}{100}$, $\frac{8\frac{1}{2}}{100}$, $\frac{8\frac{3}{4}}{100}$, $\frac{9}{100}$ of mm.

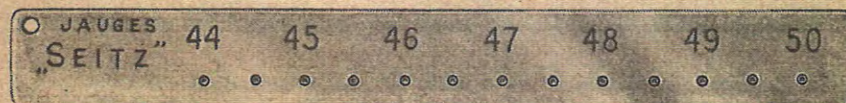
The precision is also of $\frac{1}{4}/100$ of mm. Indispensable for the manufacturer of watches they will also be appreciated by all good watchmakers.



Weight :

5 gr

To be had : 6 to $\frac{8}{100}$, 8 to 11, 11 to 14, 14 to 17, 17 to 20, 20 to 23, 23 to 26, 26 to 29, 29 to $\frac{32}{100}$ of mm.



Weight :

5 gr.

Identical gauges, but in $\frac{1}{2}/100$ of mm. To be had : 32 to 38, 38 to 44, 44 to 50, 50 to 56, 56 to $\frac{62}{100}$ of mm.

Directions for use of the "SEITZ" jewelling tool and its set of reamers.

How to press a « SEITZ » jewel when replacing a set jewel in an old plate.

1. Open the setting in order to take the jewel to be replaced.
2. Choose a smoothing broach big enough to remove the setting. Adjust it to the handle made for this and slide it into the pressing tool. Remove the setting. For holes of large diameters, do not make the hole speedily larger, but do it gently and gradually, so as to avoid making a bad hole.
Always use the smallest possible smoothing broach, if necessary the operation can always be repeated with a larger one.
3. Take away the broach for the reamers and replace it by the one to press in. Put the jewelling tool very flat. Choose a pusher and an anvil to that effect, center on the anvil the piece to be repaired. Choose a jewel corresponding to the diameter of the « Seitz » reamer that has just been used.

Example : reamer 139/100 — jewel 140/100.

With the micrometer-screw, regulate the pusher to the desired height. One division equal to 1/100th of mm.

Place the jewel, oil - sink downwards.

Press gently on the lever until the pusher touches the jewel.

When the jewel has taken its flat position, press stronger on the lever.

How to press in a « SEITZ » jewel in a plate already provided with a pressed in jewel :

The work is the same except operations No 1 and 2 (unless the hole is not in a perfect state).

„SEITZ“ Tools and their set of friction jewels will do for any repairs, either on old movements or on modern movements provided with friction jewels

We guarantee that the watchmaker in possession of our outfit „SEITZ“, no longer requires any other jewel.

What is to be bought ?

We advise the watchmaker to purchase :

A «Seitz» friction tool with the indispensable accessories, those which are mentioned on page 11. However we advise the purchase of a great cabinet as shown on page 10 complete. If this is not possible at the beginning, the great wooden cabinet may be bought only with the tools mentioned on page 11. The other tools may be bought later on, gradually. We don't know of any case where the watchmaker having bought a «Seitz» friction tool didn't want to have it complete later on.

Jewels : It is well understood that the purchase of an assortment of «Seitz» jewels completely does away with the assortment of jewels in settings.

For the beginning the assortment B is mostly required.

The assortment A, reduced (see chart on pages 32 & 33) allows a start with little expense. It can be completed at any time. In addition to the cases A, B, C or D, the supplements are very useful. These supplements are delivered with 3, 6 and 12 jewels of each.

Supplement No 0 : Convex balance jewels, with olive holes, their shape prevents the oil from spreading.

Supplement No 8 : Plate jewels of great diameters (260 & 300/100) indispensable for the old big movements.

Supplement No 6 & 7, roller jewels and pallet stones : These last ones complete advantageously the set of «Seitz» friction jewels.

In order to have a complete assortment don't hesitate to buy :

The assortment of convex balance jewels, with olive holes E, F, G or H.

The assortment of center jewels J, K, L or M.

"SEITZ" JEWELS

If the precision and the simplicity of «SEITZ» tools enchant the watchmaker, the quality and accuracy of the jewels will make him a faithful customer. He who has ever used «Seitz» jewels will never buy others.

Some technical informations.

«Seitz'» jewel is made of first - rate synthetic Ruby. A garnet jewel cannot be used for the «Seitz» process, this material being too breakable. A ruby jewel of inferior quality might cause troubles for the same reason.

The exterior edge of the jewel to be pressed is made exactly concentric to its hole. The exterior diameter must be precise to one half hundredth of mm ; this is of the greatest importance. Why ? The hole in the plate being prepared with «Seitz» reamer at a $1/100$ of mm smaller than the diameter of the jewel, it is evident that the diameter of the jewel to be pressed in must be of absolute precision. For example : for a jewel, diameter $100/100$ of mm, the hole will be prepared at $99/100$ of mm. If the jewel measures $101/100$ it will break when pressed in if, on the contrary, it measures $99/100$, it will not stay put.

Conclusion :

A set of «SEITZ» tools, in spite of their great precision, is only valuable when used with «SEITZ» jewels and vice versa.

The various kinds of jewels "SEITZ"



Convex balance jewels, olive shaped holes
(see list, 0, pages 32 & 35).

This jewel has the advantage, with its convex part, to keep the oil constantly on the pivot of the balance. Its olive shaped hole reduces the rubbing of the pivot to a minimum. These jewels are generally used for first-rate movements.



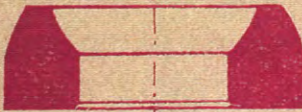
Glaces, olive shaped holes (see list, sec. 1, page 32)

Used for the balance, in current watches or for any other kind of stone in the escapement.



Glaces, straight hole (s. list, s. 2, 3, 4 & 8, p. 32 & 33)

Either used for the bridge or the plate. There are no more, as in jewels to set, flat jewels and convex jewels.



Center-jewels for jewellery. The center wheel (see list, center jewels, sec 9 & 10 page 37).



Cap-jewels (see list, sec. 5, page 33).



Roller jewels (see list, sec. 6, page 33).

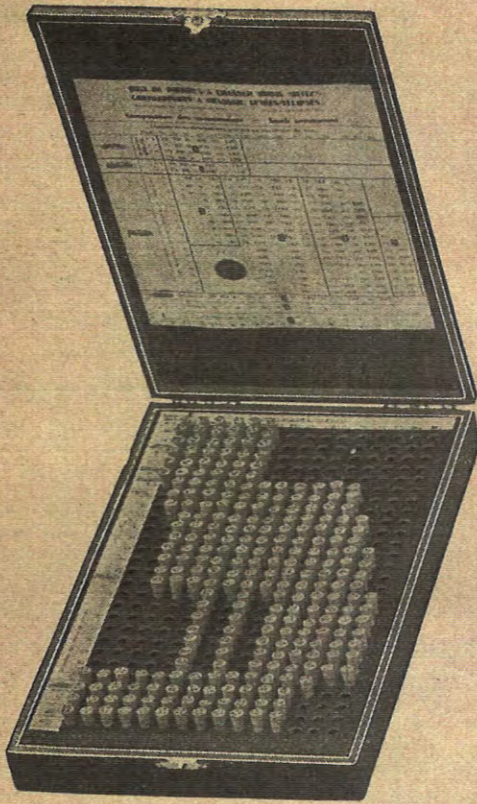


Pallet stones righth (see list, sec. 7, page 33).



Pallet stones left (see. list, s. 7, page 33).

The repairing cabinet "Seitz" Standard



The black cabinet:

This elegant cabinet covered with washable black «pega» contains all the jewels «Seitz» necessary for any repairing. Strongly made, it groups on a little board 177 glass tubes with corks, carefully numbered.

The disposition is clear :
horizontally the exterior diameters,
vertically the diameters of the holes.
The jewel wanted is found in a second.

Size: 35 cm x 20 cm - Weight: 900 gr.

Ref. 30310

There are the following "Standard cabinets" :



- A reduced assortment with 3 jewels
- B complete assortment with 3 jewels
- C complete assortment with 6 jewels
- D complete assortment with 12 jewels

In order to have a cabinet containing all the jewels,
the sections 0, 6, 7 & 8 must be added.

CHART

Showing the disposition of the repairing cabinet « Seitz »

This chart is placed in every case - cover.

		Exterior diameters of jewels in hundredths of mm.															
		70	80	90	100	110	120	130	140	150	160	180	200	230	260	300	
 Convex balance - olive	ol. 8	70	80	90	100	110	120										
	ol. 9	70	80	90	100	110	120										
	ol. 10	70	80	90	100	110	120										
	ol. 11	70	80	90	100	110	120										
	ol. 8	70	80	90	100	110	120										
	ol. 9	70	80	90	100	110	120										
jewel in hundredths of mm.	10	80	90	100	110	120	130	140	150	160	180	200					
	11	80	90	100	110	120	130	140	150	160	180	200					
	12	80	90	100	110	120	130	140	150	160	180	200					
	13	90	100	110	120	130	140	150	160	180	200	230					
	14	90	100	110	120	130	140	150	160	180	200	230					
	15	90	100	110	120	130	140	150	160	180	200	230					
	16	90	100	110	120	130	140	150	160	180	200	230					
17	90	100	110	120	130	140	150	160	180	200	230						

Diam. of the hole of the



18	90	100	110	120	130	3 140	150	160	180	4 200	230	260	8
19	90	100	110	120	130	140	150	160	180	200	230	260	
20			120	140				160	180	200	230	260	300
22			120	140				160	180	200	230	260	300
24			120	140				160	180	200	230	260	300
26			120	140				160	180	200	230	260	300
28			120	140				160	180	200	230	260	300
30			120	140				160	180	200	230	260	300
32			120	140				160	180	200	230	260	300

Cap-jewels

70	80	90	100	110	120	5 130	140	150	160	180	200	230
----	----	----	-----	-----	-----	--------------	-----	-----	-----	-----	-----	-----

Roller jewels ϕ

32	34	36	38	40	42	6 44	46	48	50	52	54
----	----	----	----	----	----	-------------	----	----	----	----	----

Palletstones right

22	24	26	28	30	32	7 34	36	38	40	42	44
----	----	----	----	----	----	-------------	----	----	----	----	----

Pallet stones left

22	24	26	28	30	32	34	36	38	40	42	44
----	----	----	----	----	----	----	----	----	----	----	----



The empty spaces correspond to sizes not used or special sizes which are not manufactured. The diameters grouped in the reinforced frame are those contained in the assortments A, B, C, and D. The composition of the assortment A (reduced assortment) is indicated by the sizes in fat print. The sections 0, 6, 7 & 8 are sold on demand by 3, 6 & 12 jewels (see price-list).

See list of special jewels on the back of the enclosed price-list.

Assortment of convex
balance jewels with
olive hole
"SEITZ"

The brown cabinet

Ref. 30305



Size : 15 cm x 15 cm - Weight : 250 gr.

This cabinet

covered with washable brown «pega» contains an incomparable assortment of friction Convex balance jewels with olive hole «Seitz». Holes going from 7 to 16/100 of mm, diameters from 70 to 180/100 of mm. The disposition of the jewels is identical to that of the repairing cabinet Seitz (see page 31). This new assortment is indispensable to all watchmaker wanting to do a fine job.

There are the following assortments :

- E. reduced assortment, 3 jewels each tube of the diam. in fat print
- F. complete assortment, 3 jewels a tube
- G. complete assortment, 6 jewels a tube
- H. complete assortment, 12 jewels a tube

(See page 35)



CHART

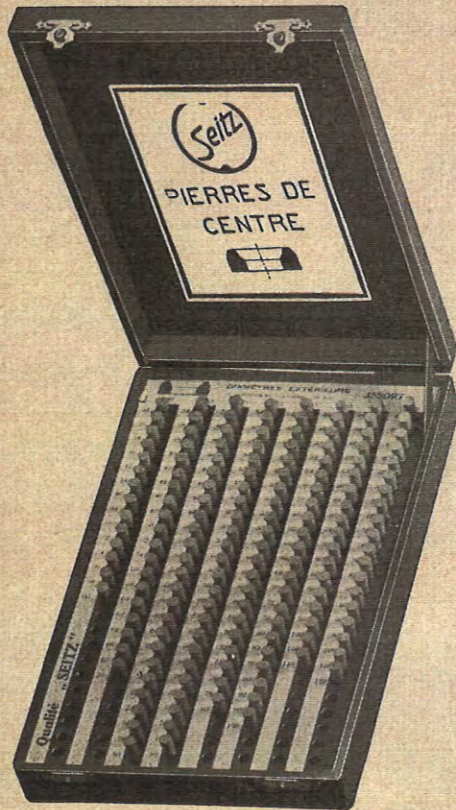
showing the disposition of the assortment of convex balance jewels with olive hole «SEITZ».

		<i>Diameters of the jewels in hundredths of mm.</i>										
		70	80	90	100	110	120	130	140	150	160	180
Holes of the jewels in hundredths of mm.	7	70	80	90	100	110	120					
	8	70	80	90	100	110	120	130	140	150		
	9	70	80	90	100	110	120	130	140	150		
	10	70	80	90	100	110	120	130	140	150		
	11	70	80	90	100	110	120	130	140	150		
	12	70	80	90	100	110	120	130	140	150	160	180
	13			90	100	110	120	130	140	150	160	180
14			90	100	110	120	130	140	150	160	180	
15			90	100	110	120	130	140	150	160	180	
16			90	100	110	120	130	140	150	160	180	

The arrangement of the reduced assortment is given by the numbers printed in fat.

For special convex jewels, see enclosed price - list.

Assortment of "SEITZ" friction center-jewels



Size 30 x 19 cm.
Weight : 580 gr.

The blue cabinet

Ref. 30315

This assortment of friction Center-jewels will be appreciated by all watchmakers. The composition of this assortment is the result of a sort of vote organized between the most important supply houses for watchmakers of Europe and U.S.A. It contains a complete collection of center jewels. This cabinet is the continuation of the repairing cabinet « Seitz » (see page 31). This cabinet is made identically to the two other assortments, only the cover is blue. Every size is clearly indicated on the cork and the board by vertical and horizontal numbering. Holes going from 34 to 110/100 of mm, diameters from 120 to 300/100 of mm.

There are the following assortments :

- J. reduced assortment, 1 jewel a tube of the diameters of the holes in fat print
- K. complete assortment, 1 jewel a tube
- L. complete assortment, 2 jewels a tube
- M. complete assortment, 3 jewels a tube

For special center jewels, see enclosed price - list.

(see page 37).



CHART

showing the disposition of the assortment of «SEITZ» center-jewels.

Diameters of the center-jewels in 1/100 of mm.

		120	140	160	180	200	230	260	300
Holes of the center-jewels in 1/100 of mm.		34	34	34	34	40	46	56	60
		36	36	36	36	42	48	58	62
		38	38	38	38	44	50	60	64
		40	40	40	40	46	52	62	66
		42	42	42	42	48	54	64	68
		44	44	44	44	50	56	66	70
		46	46	46	46	52	58	68	72
		48	48	48	48	54	60	70	74
		50	50	50	50	56	62	72	76
		52	52	52	52	58	64	76	78
		54	54	54	54	60	66	80	80
		56	56	56	56	62	68	82	82
		58	58	58	58	64	70	86	86
		60	60	60	60	66	72	90	90
			62	62	62	68	76	96	92
			64	64	64	70	80	100	96
			66	66	66	72	82	106	100
			68	68	68	74	86	110	106
			70	70	70	76	90		110
				72	72	78	92		
			74	74	80	96			
			76	76		100			
	sec.		78	78					sec.
	9		80	80					10

The composition of the reduced assortment is given by the numbers in fat print.

Two assortments of "Seitz" friction bushes

Diam. 70 to 300/100. thickness for *extra flat* movements Ref. 30320/1



Size 12 x 6 cm. - Weight: 110 gr.

chrometric screw of the friction tool. No more conical bushes, no more bushes that have to be rivetted.

These bushes, made with great precision, diameters and holes very precise, polished and gilt, can be used without any touching up. The great advantage of these bushes is that the exterior diameters are as precise as the diameters of the friction jewels «Seitz», it is thus possible to use «Seitz» reamers as well as the friction tool «Seitz», exactly in the same way as for the friction jewels. The hight can also be regulated (with the bush in its place) by using the mi-

Diam. 70 to 300/100 - Thickness for *high* movements Ref. 30320/2

No	∅	Hole	Thick	No	∅	Hole	Thick	No	∅	Hole	Thick	No	∅	Hole	Thick
41	70	10	50	51	130	11	60	61	160	75	120	71	230	50	90
42	80	10	60	52	140	11	80	62	180	14	110	72	230	70	110
43	90	50	90	53	140	40	70	63	180	45	90	73	230	90	120
44	90	10	45	54	140	35	90	64	180	50	80	74	260	60	90
45	100	11	60	55	150	12	90	65	180	80	120	75	260	80	100
46	100	30	80	56	150	40	110	66	200	16	110	76	260	100	110
47	110	11	60	57	150	70	90	67	200	40	120	77	260	120	120
48	120	11	70	58	160	12	80	68	200	60	120	78	300	60	90
49	120	35	90	59	160	40	90	69	200	80	120	79	300	80	100
50	120	50	100	60	160	45	100	70	230	18	120	80	300	100	120

Trademark and packaging "SEITZ"

«Seitz», through good quality and precision has succeeded in creating a friction jewel bearing a trade mark. The watchmaker who has used a friction jewel «Seitz» wants again "the friction jewel Seitz".

In order to avoid all counterfeiting, the packaging of «Seitz» bear the trademark ; there are two kinds :



Glass tubes with numbered corks and bearing the trademark «Seitz». These tubes are used in the cabinets as well as in the refills, by 3, 6 or 12 friction jewels.

The wrapper «Seitz», is made of transparent cellophane bearing the trade mark «Seitz». It is used for refills mainly for overseas.

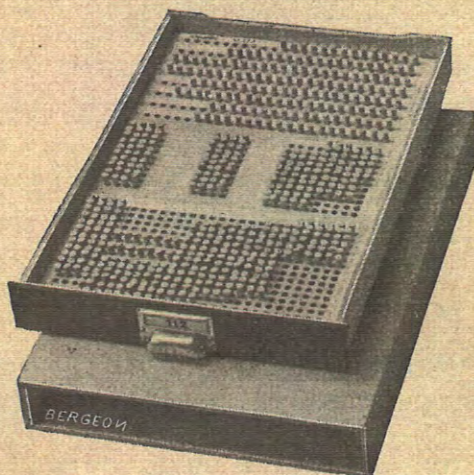
Watchmakers !

If you want to be sure to get a friction jewel "Seitz" ask for the original package "Seitz".



In Switzerland, and in many other countries the glass tube is used. It is very practical and is no more expensive than the cellophane wrapper. Empty tubes are not taken back.

Special drawer



This drawer is especially made for holding the 3 «Seitz» assortments of jewels and 2 assortments of bushes to press in.

It can be put into BERGEON's cupboard.

(For more details, ask for the special catalogue.)

JAUGES "SEITZ"	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
	37	38	39	40	41	42	43	44	45	46	47	48	49	50	

«SEITZ» pivot gauge No 30529 B discribed on page 26.

PRICE - LIST " SEITZ " -

Tools :

	Page	Swiss Francs
Friction jewellery tool with its set of 12 flat pushers a. 5 anvils *	12-13	
Set of 11 concave pushers	* 18	
Set of 15 reamers with broach	* 14-15	
Set of 12 centering pump pushers	* 16-17	
Set of 4 round face plain hole reducing punches	* 18	
Tools for setting lever	* 22	
Reducing ring	* 22	
Black cabinet alone	* 11	
Face plate with 3 clamps . . . . .	. 19	
Holder for jewel hole settings, with settings complete in case . . . . .	. 20	
Set of 12 centering points on spring, complete in case . . . . .	. 21	
Set of 5 pushers and 3 anvils for setting watch hands . . . . .	. 22	
Handle with 3 assorted chucks . . . . .	. 25	
Tool for straightening balance pivots, hole by $\frac{1}{4}/100$ . . . . .	. 23	
Pivot gauge for the repairer to the $\frac{1}{100}$ of mm. . . . .	. 40	
Uprighting pump tool . . . . .	. 17	
Grinding stone . . . . .	. 24	
Wooden cabinet alone for the complete set of tools . . . . .	. 10	
The complete cabinet (see page 10) composed of all above mentioned articles without the empty black cabinet . . . . .	. 10	
The Standard cabinet composed of all the articles with a * . . . . .	. 11	
Chuck holder . . . . .	. 25	

Gauges: (page 26) Pivot gauge for the repairer to the $\frac{1}{100}$ mm. (see above)

Pivot gauge to the $\frac{1}{2}/100$ of mm. . . . .	. 26
High precision gauges, precision warrant. to $\frac{1}{4}/100$ of mm. N° 6-32	. 26
dito to $\frac{1}{2}/100$ of mm. N° 32-50 . . . . .	. 26
dito to $\frac{1}{2}/100$ of mm. N° 50-62 . . . . .	. 26

Friction jewels :

Assortments in elaborate cabinets, lid with hinges

1. Standard black cabinet (pages 31, 32, 33)

- A Reduced assortment, 3 jewels a tube in fat print in sec. 1, 2, 3, 4 and 5
- B Complete assortment, 3 jewels a tube in sec. 1, 2, 3, 4 and 5
- C Complete assortment, 6 jewels a tube in sec. 1, 2, 3, 4 and 5
- D Complete assortment, 12 jewels a tube in sec. 1, 2, 3, 4 and 5

The jewels of the sections 0, 6, 7 and 8 outside the black frame (see chart pages 32 and 33) are not included in the prices but can be put into the cabinets, they must be ordered :

Suppl. for sec. **0** (convex balance, olive holes)

3 jewels a tube	
6 » » »	
12 » » »	

Suppl. for sec. **6** (roller jewels)

3 jewels a tube	
6 » » »	
12 » » »	

Suppl. for sec. 7 (Pallet stones, right and left)

Swiss Francs

- 3 jewels a tube
- 6 » » »
- 12 » » »

Suppl. for sec. 8 (jewels diam. 260 and 300)

- 3 jewels a tube
- 6 » » »
- 12 » » »

2. Brown cabinet, convex balance jewels (see page 34)

- E Reduced assortment, 3 jewels a tube of the diameters in fat print
- F Complete assortment, 3 jewels a tube
- G » » 6 » » »
- H » » 12 » » »

3. Blue cabinet, center jewels (see page 36)

- J Reduced assortment, 1 jewel a tube of the diameters in fat print
- K Complete assortment, 1 jewel a tube
- L » » 2 jewels » »
- M » » 3 » » »

4. Cabinet containing the assort. of bushes to press in (page 38)

- No 1 120 pces
- dito No 2 120 »

Jewels for refilling

Sections	0	1	2	3	4	5	6	7	8	9	10
1 jewel a tube	—	—	—	—	—	—	—	—	—		
2 jewels a tube	—	—	—	—	—	—	—	—	—		
3 » » »											
6 » » »											
12 » » »											
144 jewels in wrapper											

O.Sp: = hole 6 all exterior diam. : - all jewels exterior diam. 60/100

Detached pieces

Tools

Swiss Francs

- Flat pusher, alone
- Concave pusher, alone
- Pump pusher
- Reamer alone
- Anvil alone
- Special anvil on demand
- Round-face plain hole reducing punch alone
- Broach for reamer alone
- Jewelling tool broach alone

Jewels

Swiss Francs

- Hole settings { (p.20) 10 pces
- all numbers { 100 »
- Bushes { (p.38) 10 »
- all numbers { 100 »
- Standard black cabinet, empty
- Brown cabinet for convex balance jewels, empty
- Blue cabinet for center jewels, empty
- 100 corked tubes, not numb.
- 100 » » numbered
- 100 cellophane wrappers without Nos
- 100 » » with Nos

Prices without liabilities





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