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The Bassoon: Three Technical Studies

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# the bassoon: three technical studies

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by john e. schleiffer

## I. Piano-Key Mechanisms

Many of the harmonics produced on woodwind instruments are sounded more easily through the use of an octave-key. Since the tone produced through the use of this key is not always an octave, a better term to apply would be "register-key." The needs of each member of the woodwind family vary from instrument to instrument. The clarinet, for example, employs only one such register-key, while the oboe employs from one to three octave-keys, some of which operate automatically.

The bassoon has three octave or register-keys. It has been impossible to devise a mechanism that allows these keys to open and close automatically as installed on other woodwinds. This is due to the fact that the thumb is needed for other fingerings in the middle and low registers (C-sharp, A and C in the middle register and B-flat, C, C-sharp, D and D-sharp in the low register).

The three octave or register-keys on the bassoon are: (a) the most important of the octave-keys that governs the opening and closing of the small pin-hole on the bocal (also called the "S"), (b) the A-key on the wing-joint, and (c) the C-key which is located directly above the A-key.

While the A and C octave-keys are used merely to allow the tones A and C to speak more easily, most bassoonists find that the small pin-hole in the bocal must be kept open for all tones above G and this opening is absolutely essential for the production of the tones B-flat, B, C, C-sharp, and D.

Since it is possible to sound all of the tones on the bassoon with the bocal-hole open, the ideal solution would apparently be to simply leave this hole open with no mechanism for its closing. This simple solution is not feasible, however, since the lower register of the instrument does not speak with ease when the bocal-hole is open. In fact the lowest tones cannot be played piano or pianissimo with the bocal-

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hole open and efforts to produce these tones softly without closing the bocal-hole may cause the tones to sound an octave higher.

To overcome this difficulty a number of mechanisms for the closing of this important hole have been devised. Bassoonists should become acquainted with the workings of the so-called piano-key mechanisms to enable them to make a suitable choice dictated by their particular performance requirements.

The simplest bassoons are equipped with bocals that have a slide or little key mounted on them which allows the hole to be opened. Since the key is opened by reaching up to the bocal to release the slide or key, the bassoonist plays with the key in closed position, only opening it when necessary. Previously, this was the accepted manner of playing. The tempi were not too fast and the small-bore bassoons utilized at the time permitted the upper register to sound without opening the bocal-hole.

Modern day large-bore bassoons with bigger tones and greater evenness of tone and scale possess an undisputed advantage over the small-bore instruments, but demand an improved bocal mechanism. An early partial solution was found by installing an automatic connecting-rod between the low register and the key covering the bocal hole. This piano-key mechanism automatically closed the bocal-hole whenever that was fingered, thus allowing the bassoon to speak easily. Since the chromatic series of notes from low F up to G-sharp also needed assistance for pianissimo playing, another key was devised for the left thumb.

It would, of course, be easier to construct a mechanism that automatically closed when the above series of middle register notes was played. Technically, such a mechanism would not cause any difficulties just as long as the identical fingerings were not employed for notes, one octave higher. These thoughts lead to the development of an additional permanent closing key for either the left or right thumb. Six different arrangements of this device are shown in illustration 1. The "S" bocal-hole is held closed by the permanent

closing key but can be opened whenever necessary through the use of the key.

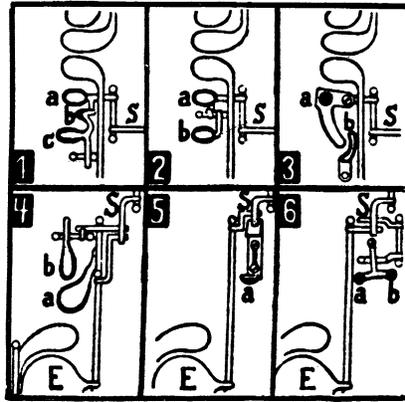


Illustration 1

Generally, the first arrangement shown in illustration 1 is the preferred device since most players become adjusted to the multiple employment of the left thumb. However, more recent trends are in favor of freeing the left thumb from additional duties by relegating the governing of the permanent closing key to the right thumb (example 4, illustration 1). As the permanent closing key can be operated by the two levers A and B, very little technique is lost. The variations shown

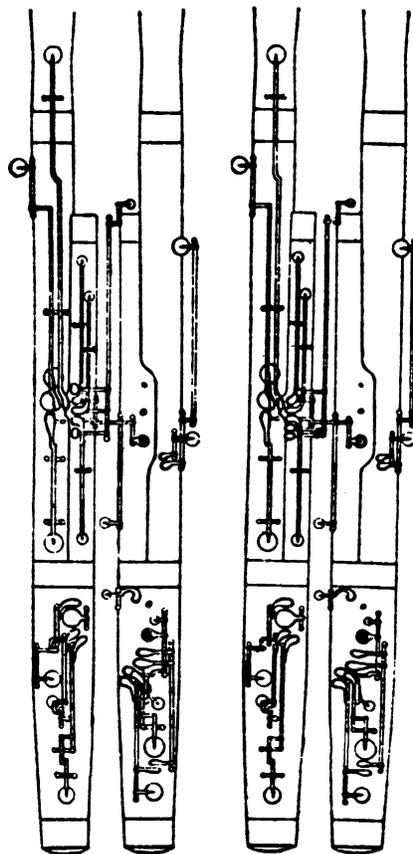


Illustration 2

Illustration 3

(examples 2, 3, 5, and 6 of illustration 1) do not operate basically in any different fashion.

Three additional "S" octave mechanisms that are not widely used but are worthy of attention are described.

The bassoon shown in illustration 2 has no automatic device from the low E since the "S" octave mechanism is arranged not to stay open but to remain in the closed position. The left thumb key that usually closes the "S" octave key is arranged to open this hole and in addition a second thumb key is positioned above the C-key to also operate the mechanism.

The instrument shown in illustration 3 is also fitted with a permanent opening-lever, advantageous for the playing of long passages in

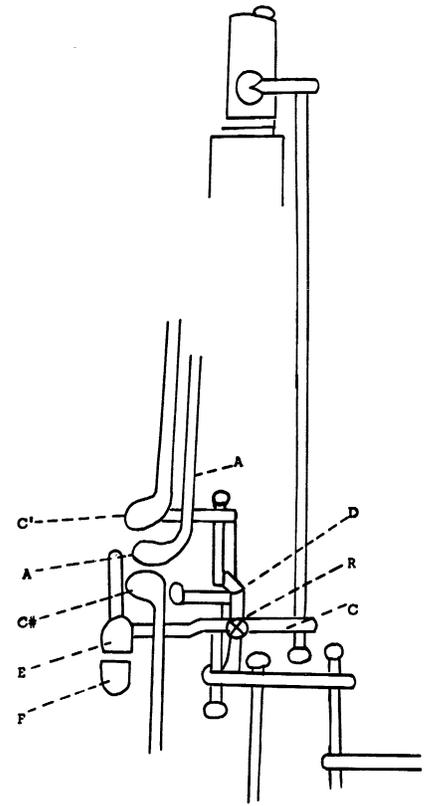


Illustration 4

the upper register. These closed-piano mechanisms have not been widely adopted because it presupposes that the musician has been accustomed from early training to the opposite use of the left thumb. Moreover, the "S" bocal-hole can also be kept permanently closed if the bassoon is equipped with the added device shown in illustration 1. Therefore, the closed mechanism does not present anything basically new.

The bassoon shown in illustration 4 also has a closed "S" piano-key mechanism, which however, is not operated by the left thumb but by the first finger of the left hand (index finger). This opening lever is placed very close to the first finger-hole on the wing joint, and is set somewhat into the main body of the instrument, so that the left index finger needs only to depress it very lightly. ■

## 2. Bassoon Staccato

A reliable staccato is one of the most valuable possessions of the bassoon player. To achieve this requires careful thought and a great deal of practice. One of the most important parts of a fine staccato is the position of the tongue in relation to the tip of the reed. The usual conception of staccato tonguing is to hit the tip of the reed with the tip of the tongue. This does not work for many young students and actually hinders many in their progress. After much experimenting, a staccato may be improved when one rolls the tip of the tongue slightly downward, touching the reed as much as a quarter of an inch above the tip of the tongue. This is the normal position for most players since it allows a comfortable movement of the tongue with little or no stiffening. Players concerned with abnormal jaw or tooth structure should experiment to discover their individual requirements.

Place the tongue against the tip of the reed and articulate a very short TA. This should be done over and over, always playing the notes as short as possible, as illustrated in the following:



Always be sure to allow plenty of tongue movement, since this will help to prevent any stiffening of the tongue and throat muscles. At the first sign of any stiffness or tiredness, stop practicing for a few minutes. This break will allow the muscles to relax and loosen up.

When the tongue is working fairly well at a slow speed try increasing the tempo. This can be

done with the following exercise: (start in slow 4, then accelerate)



Always make sure to play with good rhythm. The rhythmic changes should be clearly defined.

Often as the speed of the staccato increases, a lack of synchronization will occur between the fingers and tongue. Usually the fingers are at fault, since the player's main concern is centered on the tongue. To overcome this difficulty, the following passage should be played slowly, lifting and lowering the fingers gently, but with precise definition. Careful practice with a metronome and a gradual increase of speed should solve the problem of synchronization.



Always move the tongue rapidly so the staccato notes are played as short as possible. Staccato notes are easy to lengthen if required. In addition, the varied rhythms in the following staccato exercises should be practiced.



Many students have questioned double-tonguing. It is not generally recommended as the end product is never as clean and even as in single-tonguing. It cannot be used at slow speeds and is most unsatisfactory when used during quick tempo changes. Also, a player who constantly uses double-tonguing rarely has a good single tongue staccato. A fine single tongue staccato can meet all requirements. ■

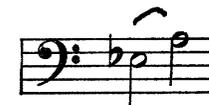
## 3. Speaker-Keys

On most modern bassoons there are three speaker-keys. These keys are located on the wing-joint of the bassoon directly above the C sharp key, and are controlled by the thumb of the left hand.

What purpose do these "speaker-keys" serve? Many upward and downward legato movements, which are otherwise very difficult, are rendered doubly safe and smooth by the use of these keys. Whenever possible, they should be used to facilitate the notes A, B $\flat$ , B $\sharp$ , C, C $\sharp$ , D, and E $\flat$ . The lowest of the three keys is used for A, the middle key for B $\flat$ , B $\sharp$ , C, and the top key only for the extreme high notes: C $\sharp$ , D, and E $\flat$ . Below are various examples of how the "speaker-keys" can be brought into use.

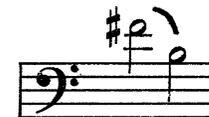


1.

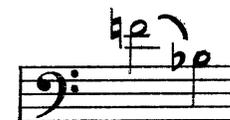


2.

For examples 1 and 2 the lowest of the three speaker-keys is used.

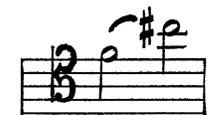


3.



4.

For examples 3 and 4 the middle speaker-key is used.



5.



6.

For examples 5 and 6 the top speaker-key is used.

If a student conscientiously practices with these keys, he will be able to achieve smooth upward and downward legato passages. ■