THE "DUET" SYSTEM
Discussed by K. V. Chidley

The actual date of the invention of the Duet system of fingering for the Concertina is uncertain, but it lies between 1837 and 1844 and was the invention of C. Wheatstone. Two of the prototypes are in the possession of the Wheatstone company and I date them about 1840. It was covered by the original Concertina Patent No. 5903, of 1829; also by the later Patent No. 10041, of 1844.

It derives its name from the fact that it was originated to play two-part music, with the distinct separation of the two parts. This is achieved by having a separate scale on either side, differing from the English system which divides the scale between both sides.

A feature of the Duet system from its origin is the overlap of the scale at the top of the left hand with the bottom of the right hand scale. The amount of the overlap varies from half an octave to an octave and a half according to the range of the instrument. This overlap allows the player to produce many charming harmonic effects which can only be rivalled by a two or more manual organ. The original model had twenty four keys, not in chromatic form but, in the key of G major. The instrument was rectangular, 6" x 4½".

The 1844 Patent shows four more Duet systems; one with eight rows of keys and one with seven rows—both chromatic; one with four rows of keys—chromatic; and one with four rows of keys—diatonic, in E flat. They all were deficient in some or all of the essential qualities I shall enumerate later.

The original system is the best of any Duet fingering that has come to my notice. Why Wheatstone did not make it chromatic we shall never know. It is doubtful if he was a proficient performer on any of the Concertinas, which may be the reason.

In 1861, William, brother of C. Wheatstone, patented among other features: a seven-row chromatic version of the original arrangement. It had some good points but lacked uniformity. After this, the Duet seems to have gone into hibernation for about twenty-five years.

We next hear of it when J. H. MacCann, of Plymouth, applied for and secured, in 1884, Patent No. 4752, for improvements to the original Duet system of Wheatstone, augmenting it in several sizes between 39 and 58 keys and making it chromatic. As he states in his Patent specification, he does not interfere with the original natural scale of the Duet, but, in making it chromatic, he got into all kinds of difficulties, particularly on the right hand side.

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Since then, there has been further modification to this side and it now corresponds to the left-hand side in its lower part.

Who was responsible for these later changes I do not know, probably several people were involved. MacCunn, in his desire not to alter the original diatonic scale made a fundamental mistake, for, although the original scale was good for its simple function of playing single-note two-part duets, it needed some alteration for use in a chromatic form. He should have placed the D sharp (E flat) above the D, and removed the upper A away to the left, above its octave.

I think this error should now be rectified, and the illustration shows what I think the Duet system should be.

The diagram is of a larger compass, i.e. 72 keys, to show the full implication of the change. This arrangement gives much better “flow” to the fingering and brings the chords in the flat keys into a much better disposition. It also improves the sharp keys where D sharp occurs.

This matter of “flow” in a keyboard is of great importance. I mean by “flow,” that smooth rhythm in scale-playing that is essential for the proper performance of music. The English system has this “flow” to a high degree.

Of the many keyboards that have come to my notice, practically all of them lacked this vital point or had it in no more than one or two keys; It should be present in keys up to at least four signatures of sharps and flats to be of practical use.

For a good Duet system, you must have four rows for natural keys and two rows for accidentals per octave; you have to accommodate one accidental in the natural rows.

All Duet keyboards have to be something of a compromise. The one I now put forward does have a good degree of the four essentials namely: uniformity, “flow,” disposition of common chords, reasonable reach and is nearer to the harmonic excellence of the English system.

Except that the English and Duet are both Concertinas, there is little comparison between them—they properly perform different functions. The English is capable of effects not possible on the Duet, and vice versa.
THE DUET CONCERTINA – ITS HISTORY
AND THE EVOLUTION OF ITS KEYBOARD
(written around 1950)

by K. V. Chidley
One of the last managers of Wheatstone & Co.
with notes by Neil Wayne.

The actual date of the invention of the Duet system of fingering from the concertina is uncertain, but it lies between 1837 and 1844, and was the invention of C. Wheatstone. Two of the prototypes are in the possession of the Wheatstone company, and I date them about 1840. It was covered by the original concertina Patent No. 5803 of 1829; also by the later Patent No. 10041 of 1844. It derives its name from the fact that it was originated to play two part music, with the distinct separation of the two parts. This is achieved by having a separate scale on either side, differing from the English system which divides the scale between both sides.

A feature of the Duet system from its origin, is the overlap of the scale at the top of the left hand, with the bottom of the right hand scale. The amount of the overlap varies from half an octave to an octave and a half, according to the range of the instrument. This overlap allows the player to produce many charming harmonic effects, which can only be rivalled by a two or more manual organ. The original model had 24 keys, as shown in diagram No. 1. It will be noted that it is not chromatic being set out in the key of G major. The instrument is rectangular 6" x 4¾" as will be seen from the illustration.

The 1844 patent shows four more Duet systems, one with 8 rows of keys, and one with 7 rows, both chromatic; one with 4 rows of keys, chromatic, and one with 4 rows of keys, diatonic in E flat. They all were deficient in some or all of the essential qualities I enumerate later.

The original system is the best of any Duet fingering that has come to my notice; why Wheatstone did not make it chromatic we shall never know; it is doubtful if he was a proficient performer on any of the concertinas, which may be the reason.

In 1861, William, brother of C. Wheatstone patented among other features, a 7 row chromatic version of the original arrangement. It had some good points, but lacked uniformity. After this the Duet seems to have gone into hibernation for about 25 years.

We next hear of it when J. H. McCann of Plymouth applied for and secured, in 1894, a patent No. 4752 for improvements to the original duet system of Wheatstone, augmenting it in several sizes between 39 and 58 keys, and making it chromatic. As he states in his patent specification, he does not interfere with the original natural scale of the Duet, but it will be seen from diagram No. 2 — taken from his patent specification — that in making it chromatic he got into all kinds of difficulties, particularly on the right hand side.

Since then there has been further modification to this side, and it now corresponds to the left hand side, in its lower part as shown in diagram No. 3. Who was responsible for these later changes I do not know; probably several people were involved.

McCann in his desire not to alter the original diatonic scale made a fundamental mistake, for although the original scale was good for its simple functioning a chromatic form. He should have placed the D sharp (E flat) above the D, and removed the upper A away to the left, above its octave.

I think this error should now be rectified, and in diagram No. 4, I show what I think the Duet system should be. The diagram is of a larger compass, i.e. 72 keys, to show the full implication of the change. The arrangement gives much better flow to the fingering; it brings the chords in the flat keys into a much better disposition and also improves the sharp keys where D sharp occurs.

This matter of "flow" in a keyboard is of great importance. By "flow", I mean that smooth rhythm in scale playing that is essential for the proper performance of music. The English system has this flow to a high degree. Of the many keyboards that have come to my notice, practically all of them lacked this vital point, or had it in no more than one or two keys; it should be present in keys up to at least 4 signatures of sharps and flats, to be of practical use. For a good duet system, you must have four rows for natural keys, and two rows for accidentals per octave, you have to accommodate one accidental in the natural rows. All Duet keyboards have to be something of a compromise; the one I now put forward does not have a good degree of the four essentials.
namely, uniformity, flow, disposition of common chords, reasonable reach, and is nearer to the harmonic excellence of the English system. Except that the English and Duet are both concertinas there is little comparison between them; they properly perform different functions. The English is capable of effects not possible on the Duet and vice versa. I rate the technical perfection of the English keyboard higher than the Duet, I am not biased in favour of it: I like them equally. They are both so good in their proper places. I only keep one concertina at home for such little time as I can play to amuse myself, and that is a 72 key Duet.

Footnotes:

1. I have three of these prototype duets, one in its original case, ther is also one on display in the Science Museum, London. More are numbered and all are stamped with the Conduit St. address.

2. In the Wheatstone factory records, the only duets I can find before 1891 were sold in 1863 as follows.
   - Dec. 10th, bought by Mr. Boucher Mahog. Duet – 12/.
   - Aug. 26th Mr. Curling, 2 Mahog. Duets – £1.12
   - May 16th Mr Smith. Duet £1.1.0
   - Jan. 29th Mr. Forsyth Duet – 15/.
   - The spelling is variable, and the prices for cheaper than English models, then selling for between 5 and 10 guineas.

3. No duets are mentioned in the records for this year, or any year until the detailed lists end in 1891.

4. There is a break in Chidley’s manuscript her.

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DIAGRAMS ILLUSTRATING THE EVOLUTION OF THE DUET KEYBOARD
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The Concertina Newsletter

No. 17 January/February 1974

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Announcing Frank Butler's Handbook for the English Concertina and a New Range of Concertinas