The Pipe Chanter

by Ian Young, Australia

The author of these articles is an experienced player and an exacting craftsman; for too responsible a man to encourage the inexperienced to "monkey" with their pipes. Unless you know exactly what you are about and are absolutely certain that you have diagnosed the fault correctly, you are advised not to attempt any alteration of your instrument. These articles will, however, give you the basis for evaluating your chanter (which may not be all that it might). If you find consistent faults in it, through careful observation over a considerable length of time, and are quite unable to correct these by exercising more care in the tuning, playing, and maintenance of your pipes, you can begin to consider the possibility of altering your chanter. Even then, talk it over with an experienced player. If you are not experienced in working to close tolerances, do not try to do it yourself.

As a starting point for discussion, I shall dissect the chanter into basic sections.

1. **The Reed Seat**
2. **Reed Cone (Small Cone-Tuning Cone)**
3. **Scale Cone (Big Cone)**
4. **Opening Cone (Belling Bottom) — Tuning Cone**

5. Diameter of Throat of the Chanter I would venture to say the basic fundamental is the BIG CONE (No. 3) on which the scale lies. This can vary in two ways:

I. The angle of the cone. After much measuring of many chanters of obviously different types, in practice, I have found this to vary from a 1/17 to a 1/24 cone.

2. The depth of insertion of the cone. In practice, limits exist: from the big cone of a John Bain MacKenzie to the size of a half size or reel chanter.

The angle of the cone, fundamentally, has an effect on the positioning of the scale, as would be expected.

The depth of insertion of the big cone in relation to the scale holes has a fundamental effect on PITCH. The greater the insertion, the lower the pitch.

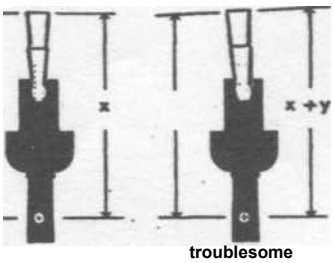
The diameter, or bore, of the Throat of the Chanter has a most critical effect, and any change here will make or mar. This factor, combined with "big cone" and position of the E hole, lays the foundation for the "concert pitch" of the chanter. Naturally, this can be slightly flattened or sharpened by altering the reed position, but I shall leave discussion of this variable factor for further on. Any enlargement — even five thousandths of an inch will flatten the chanter with a most marked effect on the top hand notes.

THE REED SEAT must be so made as to allow the reed to sit concentric with the chanter and also to allow both ends of the broad end of the reed blades to be equal distances from the chanter holes.

The reed seat should be sufficient to allow a reasonable range of sizes to be seated and also to permit a latitude of sinking to allow tuning of a range of reeds.

Many chanters have poor reed seating. Quite often a good reed is discarded because it can't be pushed down far enough to sharpen an apparent flat "top-hand." A sharp reed is used (with all the inherent problems of a sharp reed) and as the reed becomes sharper and is lifted accordingly, the player finds he has run out of

(exaggerated)



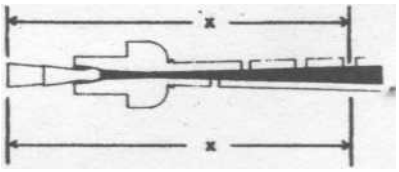
troublesome

wood in which to seat the reed firmly.

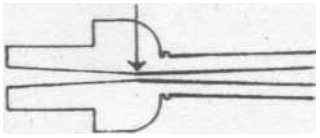
THEORETICALLY we now come to where we have a chanter thus:

where approximately (very closely) we have the reed required, seated at a satisfactory position, required throat diameter, and big cone and E to pitch required. By trial and error, it is possible to find the positions for the other finger holes so as to tune. In practice, at this basic stage, the positioning of A, G, and F holes should be such that they are sharp in relation to E.

This is where the REED CONE (No. 2 in the diagram) comes. The insertion of this cone flattens the top-hand, most particularly A' and G*. The reed cone serves two purposes. It allows individual tuning for each chanter — no two pieces of wood are exactly alike, neither is it



possible to drill the holes exactly the same. Tonally, Jhe top-hand is vastly improved by having an inverted cone to meet the big cone, and it is my opinion that this effect is most desirable.



The reed cone may be of such a size to create its own reed seat, depending on the cone angles used.

SKETCH OF PIPE CHANTER / NOT TO SCALE