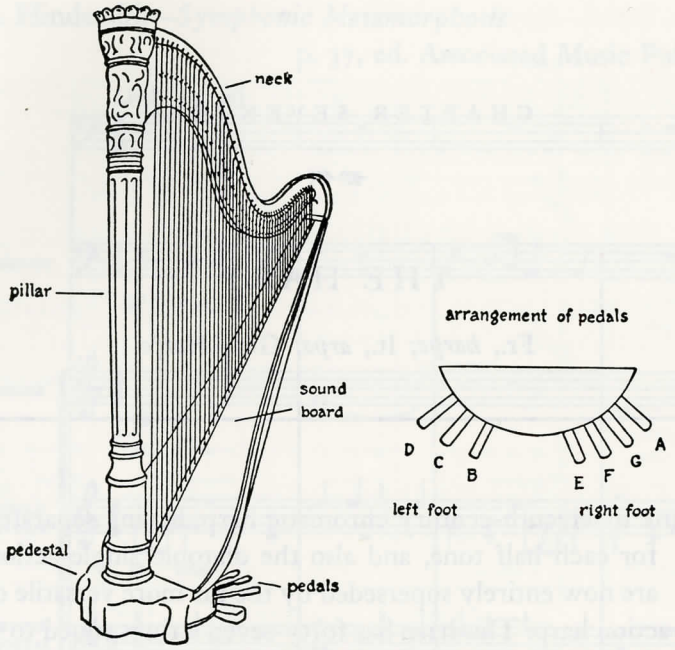


Fig. 105

PEDAL MECHANISM

The pedals project through openings provided with notches for three pedal positions, and they are connected with the mechanism in the neck of the harp by wires running up inside the pillar. The strings are attached below to the soundboard, and above to the pins on the left-hand side of the neck. Each string passes over two discs having pins that act to stop the string as shown in Fig. 106.

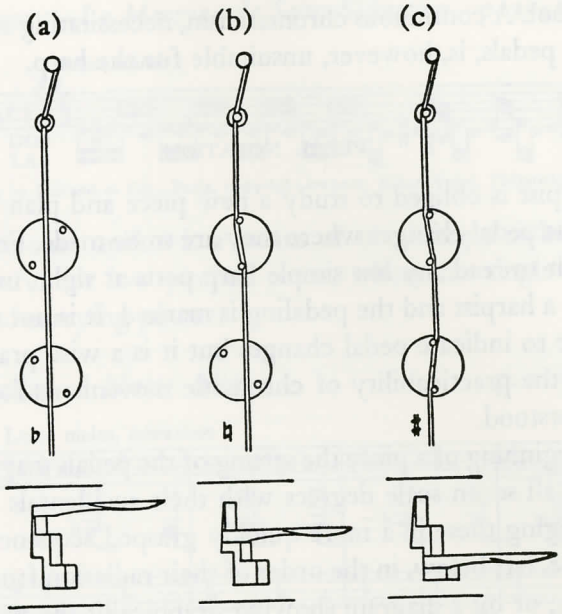


Fig. 106. Pedal Action of the Harp

In position (*a*) the pedal is in the upper notch, the pins on the discs do not touch the string, so the string vibrates in its greatest length—the "flat" position (the strings being tuned to C♭ major).

In position (*b*) the pedal is in the intermediate notch, and the upper disc has turned so that the pins stop the string, raising its pitch a half tone—the "natural position."

In position (*c*) the pedal is in the lower notch; the lower disc has turned, stopping the string and raising the pitch a whole tone—the "sharp" position.

Springs return the pedals to the upper position (flats) when they are released by the feet from the two lower notches. Each pedal acts simultaneously on all the strings of the same letter name. It is therefore not possible to have C♯ and C♮ at the same time, except enharmonically.

The lowest C♭ string lacks this mechanism. It may be tuned to another pitch before playing.

Pedal changes are made swiftly and noiselessly. A pedal may be moved during playing, when its particular string is not in use. Exceptionally, a pedal on the right-hand side may be operated by the left foot, and vice versa, and it is even possible to move two pedals at once with

the same foot. A continuous chromaticism, necessitating an exaggerated use of the pedals, is, however, unsuitable for the harp.

PEDAL NOTATION

The harpist is obliged to study a new piece and plan the pedaling, marking the pedal changes where they are to be made. For this reason, it is difficult to read any but simple harp parts at sight, unless they are written by a harpist and the pedaling is marked. It is not necessary for a composer to indicate pedal changes but it is a wise practice, for by this means the practicability of chromatic movements for the harp is better understood.

At the beginning of a piece the setting of the pedals may be indicated by writing all seven scale degrees with their accidentals (Fig. 107*a*); or by arranging these in a more quickly grasped sequence, right-foot pedals above, left below, in the order of their radiation from the center (Fig. 107*b*); or by a diagram showing graphically the pedal positions (Fig. 107*c*). In the diagram, the marks above the horizontal line represent pedals in the flat position, those on the line are in the natural position, and those below, in the sharp position.

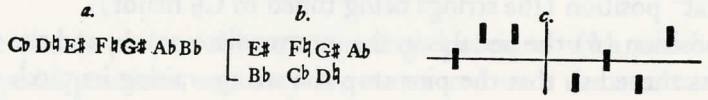


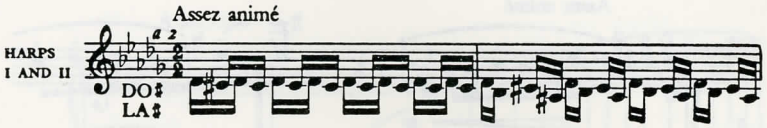
Fig. 107

The initial pedal setting having been given, each subsequent pedal change is shown by announcing the new note in advance of the time for playing it, *e.g.*, F♯, A♮. Examples of this procedure can be seen in the scores of French composers.

ENHARMONICS

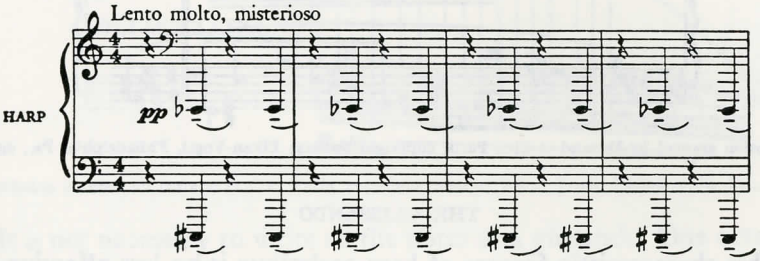
Enharmonic equivalents, called by harpists homophones, are in constant use in harp playing, whether or not they appear in the notation. For instance, an F♯ might be played as G♭ in order to avoid an inconvenient pedal change. Repeated notes are preferably played by alternating two strings tuned alike.

EX. 344. Debussy—*Le Martyre de Saint Sébastien* p. 25, ed. Durand



The enharmonic unison is a means of obtaining a richer sonority, especially useful for low-pitched tones, where the single string may lack body and carrying power.

EX. 345. Casella—*A Notte Alta* p. 1, ed. Ricordi



Passages containing many sharps are often improved in tone quality by playing them enharmonically in flats. The strings are at their best in the flat position, at their greatest length.

It is unnecessary to attempt to anticipate in the notation all of these enharmonic practices. What is more important is to make as clear as possible the harmonic and melodic meaning of chromatic tones. This may involve writing double flats and double sharps, notes that exist on the harp solely in enharmonic form (see Ex. 346, next page).

Enharmonic tuning is frequently used in the harp glissando.