

and plainest description, more especially if the bird is of a full habit of body. There is likewise a species of apoplexy which is produced by the effect of the sun's rays—this is called *coup de soleil*. I have known birds hung in a window where the sun has poured upon them his most refulgent rays during the hottest days in summer, but, fortunately, in most cases, with the upper sash of the window lowered to let in the fresh air; and I have known ladies who kept their birds in this manner, despite many repeated warnings, until they have had what they please to term "the misfortune to lose my poor dickie; and, on asking the cause, they coolly tell you that it "took a fit—the dear creature." How many birds die from this cause alone I am unable to say, but I am only astonished that there are not far more.

SORE FEET

are almost invariably produced through dirt and neglect. Birds get their feet littered up with filth, which forms into little balls, hardens, and produces sores; this state of things ought not to exist. I have known fanciers supply their birds with horsehair or cowhair for the purpose of building their nests, and the birds have worked on with it until it has got so twisted and wrapped round their toes and feet that the disentanglement became a work of considerable difficulty and patience to overcome; and if birds are permitted to go about with the hairs fastened round their toes in this manner for any length of time together, they will most probably lose some of them. When you discover a bird in this plight, catch it, immerse the feet in warm water to free them from dirt, dry, and proceed to cut away the hairs with a sharp penknife or a pair of scissors, and, lastly, anoint any place which appears sore with a little sweet oil.

SWOLLEN JOINTS.

I have known instances of birds having had their feet or legs caught in a loose wire, or in the thin wire used for securing the upright wires to the cross-bars of the cage front, and with struggling in their endeavours to free themselves they have injured their knee or ankle joints, or other portions of their limbs, which have become swollen and inflamed in consequence. When an event of this kind happens, catch the maimed bird and place the injured leg in hot water, as hot as you can bear your hand without flinching; allow it to remain immersed for five minutes, afterwards dry the limb, and apply a little compound tincture of myrrh to the affected part with a feather.

Overgrown claws and beaks are treated upon at the beginning of this subject; hens egg-bound and sweating their young; parasites, and how to get rid of them, will be found fully treated under the head of bird-breeding.

CONSTIPATION

can be relieved by putting a few drops of molasses in the bird's drinking water, or by giving it a plentiful supply of green food, if during the summer months; if in the winter, a little white bread sopped in milk and well sweetened with moist sugar.

THE PIP.

So-called from a small pimple on the rump; in fact, it is the bird's lubricator, so to speak, it being an oil gland, and contains oil used for trimming the plumage; it occasionally gets deranged, and swelling ensues. If it appears to contain a matterly substance, it should, when ripe, be let out with a fine sewing needle, and a little oil or moist sugar applied to the part. When it is ready to be operated upon, the bird appears heavy and sleepy. Whenever a bird is ill it should be removed to a cage kept expressly for invalids—a sort of hospital—and when the disease is of a contagious character it should be removed as far away from the locality of your bed-room as circumstances will permit.

I have now, I imagine, enumerated all the principal ills from which canaries suffer, and pointed out, as far as my experience has enabled me, the best mode of treatment and the best means of cure; and I hope that those who try them will receive as much benefit from the application of many of the ingredients I have recommended as I have done myself, in which case they will have no cause to regret the efforts they made to relieve their little suffering friends; but as many of the ailments from which they suffer can obviously be prevented, I must conclude by calling the attention of fanciers to that ever-to-be-remembered adage, "Prevention is better than cure."—R. L. WALLACE, in *The Country*.

TO MAKE FIRE FLASH FROM WATER.—Pour a small quantity of clear water into a glass, and put a piece or two of phosphoret of lime into it. In a few seconds flashes of fire will dart from the surface of the water, and end in curls of smoke rising in regular succession.

FRET WORK.

(Concluded from page 251.)

The accompanying engraving shows the Machine bolted down as a slide or tee-rest, connected close to the centre—where, say half-an-inch stroke, as will be readily understood. In the figure will be seen clearly illustrated the over-head motion, blower and pipe, and drilling apparatus in front.

To the pattern-maker this modification of the Fret-Saw Machine is truly invaluable. It enables him to do his work with an ease and truth obtainable by no other means. Being portable, the machine can be stowed away in any corner.

The sewing machine occupies the post of honour in the lady's own apartment; why should not the Fretting-Machine be equally honoured? As an ornament nothing truly useful can excel it; as a developer of artistic feeling, as a positive art-teacher, it has no equal. Pleasant it is to see the work grow, as it were, under the hand of the operator. Church or chapel, boudoir or bazaar, all may be beautified and made more attractive by the aid of this machine. Even a superficial glance at the few patterns on the frontispiece will satisfy any one of this; but the number which may be executed—each one differing from the rest—is "legion;" there is positively no limit. In working this there is, perhaps, less labour than in working the sewing machine; so that no lady need fear sitting down to execute even the most complicated pattern—indeed, to foot, as it were, beats time to the dictation of the mind, and the work of the one is quite absorbed in the satisfaction momentarily acquired by the other.

We give an illustration of Barnes' patent foot-power Scroll-Saw, which is adapted to the entire range of scroll or fret sawing, from the cornice bracket three inches thick to the finest wall bracket one-eighth of an inch thick. It takes up no more room than a sewing-machine, it runs but little harder, and weighs but 56 pounds. Being so light and taking so little room, it can be used beside the workman's bench, and for most straight sawing he will turn to the machine and do it quicker and better than he can fasten it in his vice or lay it on his horse and do it. The ordinary motion of the machine when sawing is from 800 to 1,200 strokes per minute. This motion is obtained from a very plain device, only one continuously revolving wheel is used, to which the saw-arms are attached. For driving it there is no crank used, neither pawls nor ratchets—no dead centres: it moves positive on treading down the pedal. The stroke of the pedal can be made long or short between the limits of its throw, to suit the operator, for high or low speed. The saw leaves the work as smooth as it is possible for a saw to do, and it needs no finishing before putting up. The saw blade can be taken out in an instant for inside work. Its special advantages will be found in the perfect and direct application of foot-power, in the saw-blade being attached directly to the blade of the pitman, obviating any possible spring to the parts giving motion to the saw, and in the absence of any crank to annoy the operator by starting it off the centre. Being without pawls or ratchets, all the power applied is used directly on the saw. The stroke of the pedal can be made to suit the operator any distance within the limits of its throw, and it runs, without extra exertion, from 800 to 1,200 strokes of the saw per minute.

For cabinet makers' use, Barnes' Saw is made to work by steam power. The table is 28 inches high, and it will swing 24 inches under the arm.

The Fleetwood Scroll Saw is a meritorious and attractive little machine. It is specially commended for simplicity of construction, the strength of all its parts, its compact and graceful form, quiet movement, and the ease and rapidity with which it works.

It supplies not only to the young, but to older persons, great delight as a pastime. It can be taken to sitting-room or parlor, affixed readily to a table, soils nothing, disturbs no one. Young persons who are apt with tools, will find enticing work in the many beautiful articles they can develop, almost at will, with this machine.

The Saw is adjustable, and can be taken out and replaced in an instant; thus enabling the operator to saw out the inside parts of scroll work readily. A very small hole, through which the saw passes, being required as a starting point. The finest fret saws can be used in this machine.

The drilling apparatus is a new attachment for the Fleetwood Scroll Saw, much needed—indeed, almost indispensable—secured to the machine in a few minutes, and capable of boring rapidly a smooth clean hole 1-64 to 1-8 of an inch in size, in wood or metal; boring in walnut at the rate of 1 inch in depth in 10 seconds or less.