

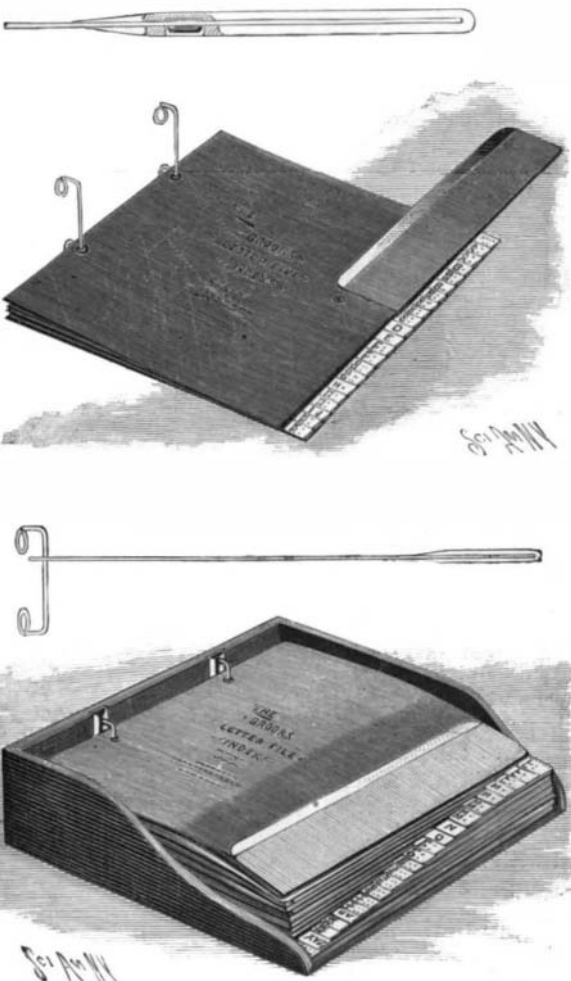
**NEW DEPARTURE IN LETTER FILING CABINETS.**

During the last ten years many improvements have been made and patents issued for all kinds of office devices, notably paper filing devices. However, loose sheet letter file improvements have been confined to some new kind of spring or cam fastening compressor, or some more or less complicated index fastening. A patent just allowed Mr. George H. Richter, of Boston, bids fair to make a decided innovation in this line.

The invention consists first in substituting for a spring a removable weight which is attached to the front edge of the cover of the index. This weight is made of spring brass, and slips over the front edge of the index cover (see Fig. 1). The under part of the weight is doubled upon itself and has a hole through the double thickness. The index cover has an eyelet which is raised on the under side and when the weight is drawn on engages the hole referred to, locking it positively to the cover. When the file is filled with papers and the index is to be transferred with the papers to the transfer case, the weight is drawn off in an instant by springing the lips apart sufficiently to clear the raised eyelet, and is placed on the new index. The weight is a permanent thing that cannot wear out.

Another part of the invention is a very simple device, but a very great improvement of an index fastening. It consists of a continuous piece of heavy wire which forms the pins for the sheets to slide upon, and the loops on either end slip into metal slides set flush into the drawer front. This fastening is so smooth that in shipping or handling it cannot possibly injure the index and cannot be bent out of shape, neither can it pull apart.

The advantages of this file are, first, it clears the drawer entirely of all the obstructions necessitated by a spring and its fixtures. It saves time in referring to letters, as the weight is raised with the index cover and so saves the two motions of first raising and afterward closing a spring when referring to or filing papers. This saving can hardly be overestimated. The weight is at the outer edge of the

**LETTER FILING CABINET.**

cover and so keeps the papers free from dust instead of opening them to the dust, as is done by all spring files, more or less, because they strike papers far back from the front edge. In referring to papers, the weight being very stiff and the full length of index, and being lifted with the index sheets, prevents the falling out of papers. The index wires being formed of one continuous piece allow the cover to tilt back over the front of file entirely out of the way, while springs when used stand perpendicular over the file, overhang the top, or catch the fingers if falling close to the drawer top. It will also be seen that there is nothing to get out of order, to mutilate the papers and make a disagreeable noise.

The index cover is doubled over at back edge, which makes it very stiff and strong, and the two pins used prevent the cover or index sheets from getting above the drawer front.

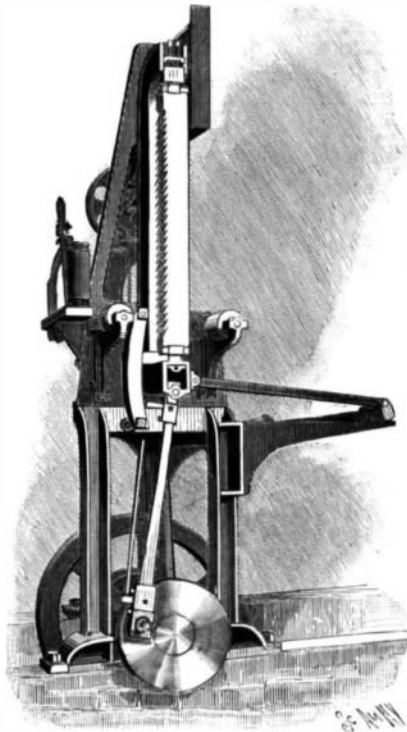
The transfer case, as will be seen, has two metal slides set flush into the wood, as in the file drawer, to

receive the index wire loops, so that reference in the case is as convenient as in the file.

These cabinets can be had from the Office and Library Company, 102 and 104 Fulton Street, New York City.

**AN IMPROVED SAW MILL.**

A saw mill which is designed to economize time and power and save waste of material has been designed and patented by Mr. William H. English, of East Tawas, Michigan. By reference to the engraving it will

**ENGLISH'S IMPROVED SAW MILL.**

be seen to consist of a strong U shaped frame, at the bottom of which is the main drive shaft of the machine which carries a balance wheel, a large and small pulley and two crank disks. To the front disk is attached a pitman which is pivotally attached to the bottom shank of a vertical U shaped sash, which moves in suitable guides and in which are adjustably held the two vertical reciprocating saws, vertical motion being given to the same through said pitman by the revolution of the drive shaft. The desired lateral vibratory movement of the saws is obtained by means of a pitman which extends laterally from the side of the bottom shank of the sash, and engages with a rock shaft, which is operated through a horizontal arm and a pitman by a disk crank keyed upon the main drive shaft at the rear of machine. The amount of said lateral vibration or oscillation is determined by an adjustable connection between the rear arm of the rock shaft and the rear pitman. The proper tension in the saw blades is obtained by means of strong spiral springs which are arranged around the buckles which carry the upper ends of the blades at the top shank of the before mentioned sash. By an ingenious arrangement of bevel gears attached to the buckles which carry the inner saw blade, meshing with similar gears upon a vertical slotted shaft, and a system of friction pulleys operated by a belt driven from the main shaft, the distance between the two saw blades may be varied at will while the mill is running. The invention is adapted for use with a carriage and mechanism of any suitable form, and adjustable rollers are provided as shown in the engraving, to guide the log in its passage through the mill. The inside saw is set in the gate about one inch ahead of the outer saw, so that the outside board is cut off first, an arrangement which enables the lumber to get away freely from the saws.

**The Grafting of Living Tissues.**

The German biologist Dr. Born has been grafting portions of one tadpole on another. The subject has been treated facetiously by the lay press and at last a novel has been based upon it. The editors of *Natural Science*, of London, make the following statement concerning it:

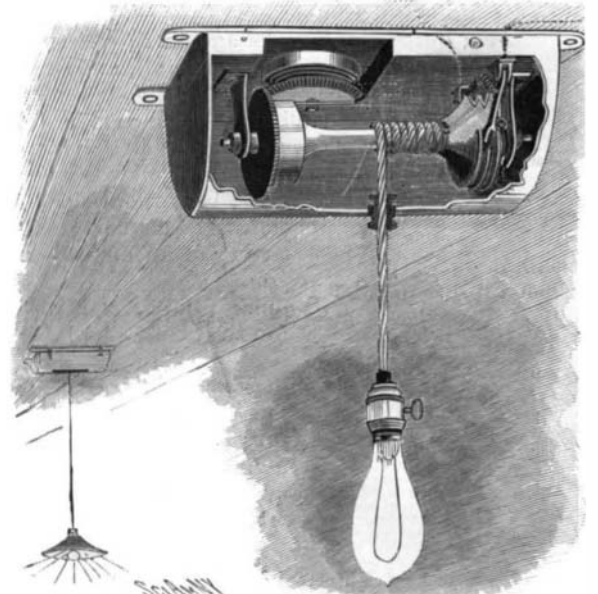
"The original experiments of Hunter, in which he transplanted structures from one animal to another, probably led to the modern attempts at bone and skin grafting. A few years ago, surgeons were confident that grafts of bone from rabbits and calves might be transferred to human bodies, while it was a current belief that skin might easily be grafted, or blood transfused. Mr. H. G. Wells, whose scientific novels have been a feature of the last two years, has based the plot of his recent 'Island of Dr. Moreau' on the artificial production of semi-human beings from animals. Dr. Moreau is a ferocious vivisector, with something of the hypnotist thrown in, and, by carving living animals (without anesthetics) for many consecutive weeks, he has produced, and turned loose on his island, a set of amusing creatures, such as wolf-hyena-

men, ox-hog-men, goat-vixen-ladies, and a puma-dog-lady who escaped in an incomplete condition, to the subsequent destruction of her artificer. The story is grolsme and exciting to a high degree; but we have no doubt that our readers, who have missed great delights if they have not read the earlier scientific novels and stories of Mr. Wells, will form their own opinion of the qualities of the 'Island of Dr. Moreau.' From the scientific side, however, Mr. Wells seems to us to have allowed his imagination too free a run in his new story. . . .

"Recent work on [transplantation and transfusion] [is] conclusively against the success of operations conducted upon animals of different species. Transplantations from one species to another almost invariably have proved unsuccessful. Most often the transplanted pieces become centers of suppuration; in the most favorable cases, they serve as inert centers around which new growth takes place. Histological examination shows that they die. So extreme is the aversion of a body to extrinsic material, that transplantations from other individuals, even of the same species, rarely hold. They are treated as foreign bodies. The successes are almost entirely confined to plastic operations, in which material from one part of a body is adapted to another part of the same body."

**AN ELECTRIC LAMP HANGER.**

A convenient device for regulating the height at which an incandescent lamp is suspended is shown in the accompanying illustration. It has been patented by Mr. Joseph Schmidt, of 257 East Seventy-eighth Street, New York City. It consists of a base block of insulating material, provided with a removable cover, beneath which block is arranged a winding spindle, upon which the suspending circuit wires are wound, and from which the lamp depends. The spindle, which is made of insulating material, is provided with two V shaped grooves in which are seated metal contact bands, which are engaged by two brushes, in the form of rollers, held against them by coil springs. The brushes are pivotally connected with plates, with which the line wires connect. The lamp wires pass through the body of the spindle and connect with the above mentioned contact bands. The end of the spindle is provided with gravity dogs, which engage notches formed on a collar of the fixed rod upon which said spindle revolves. On the opposite end of the spindle is mounted a bevel gear, which meshes with a horizontal bevel gear, mounted in a recess formed in the base block, the said gear wheel being provided with a coil spring. The lamp wires pass down through a tubular carrier which slides in a horizontal slot formed in the bottom of the cover. In operation, when the lamp is pulled down, the rotation of the spindle winds up the spring, the dogs holding it in any desired posi-

**SCHMIDT'S ELECTRIC LAMP HANGER.**

tion. To raise the lamp, it is pulled slightly downward, thereby releasing the dog from the notch, when the spring will rotate the spindle and wind the wires thereon, the action being similar to that of a spring roller shade.

At the annual meeting of the British Ornithological Union, a proposal is to be discussed for a classification of birds, in a handbook divided according to the six great geographical parts of the world. Each division would form a volume containing 2,000 species, with a Latin diagnosis and a few selected synonyms. The proposal is made by Mr. P. L. Sclater, the secretary of the Zoological Society of London. The scheme has been on the whole approved, but it will have to undergo much discussion, and some species will be difficult to classify in the way of geographical distribution. The common crow, for instance, is popularly supposed to be found in all climates and all corners of the world.