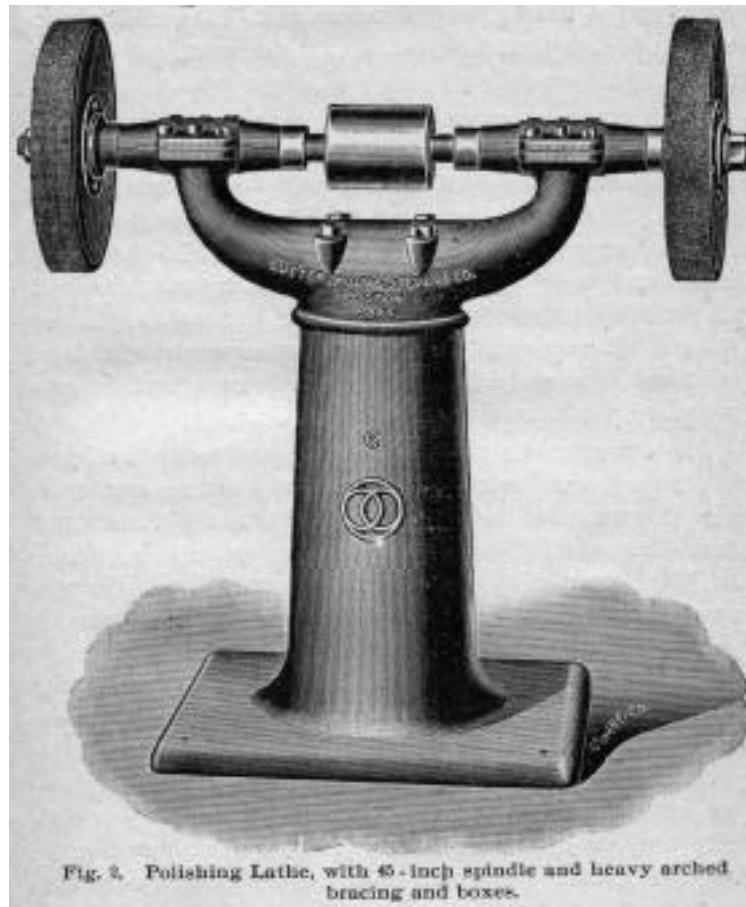


## CHAPTER 3

### THE POLISHING ROOM , ITS MACHINERY AND MANAGEMENT

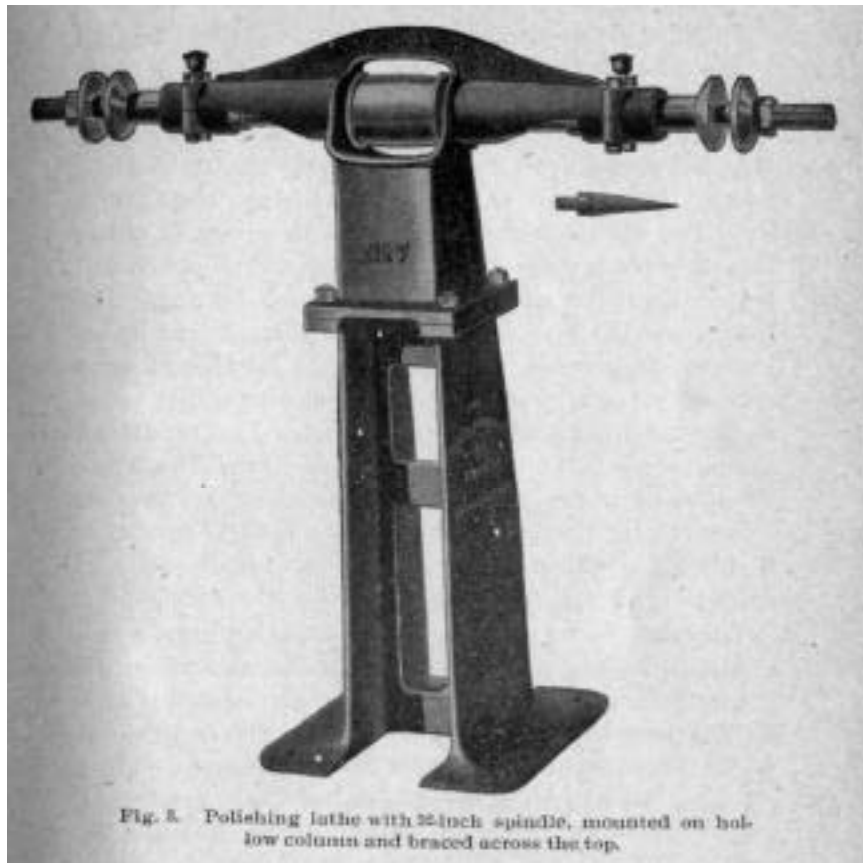
One of the commonest mistakes made by inexperienced persons who are embarking in the Plating business is in laying out the plating rooms is conveniently as possible with the Space at hand, without taking into serious consideration the amount of space and light required in the polishing department. Such persons will usually give this very important branch of the business any space that may not be necessary for other work, while, as a matter of fact, the polishing and buffing room should be given the preference in the matter of space and light: and this latter course is always followed by those who are experienced sufficiently to know the value of sufficient room for handling the required work and also the absolute necessity of a



good light in order that polishing may be properly done rapidly and cheaply.

Of course the amount of floor space and the arrangement of the polishing machinery in the room will depend entirely upon the class of work to be handled, Large work, such as flush pipes, tubing and other plumbers' supplies, also railings, large panels and other bulky pieces, either of brass or iron, require sufficient room about the polishing lathes to handle the work freely and easily, without interfering with the workmen at the adjacent machines. The room space should also be large enough to permit of turning end for end any piece of work you may be called upon to do.

Smaller work, such as cutlery bicycle trimmings, hardware and small brass goods, do not require as much floor space for Polishing, as there are no, large pieces to turn about and move in several different Positions while being polished ; therefore the Polishing lathes may be set much closer together and also have much less room - at their fronts and backs than could be permitted if there were a liability of frequently receiving long and large pieces to be polished. It is a fatal mistake to fit up a plant for polishing and plating of any kind without considering the polishing as of the first importance, for unless the work comes to the plating room properly polished and highly finished, firstclass work cannot be expected in the plating or the finishing of the work. Of course each plant will have to be laid out as best suits the amount of room and light



available, considering the class of work to be done and leaving as much margin as possible for those occasional large jobs that may come to you because the other fellow cannot polish them properly at a profit.

In large manufacturing or jobbing plants, where large quantities of rough work are handled, such as brass or iron castings, plates or stampings, it is usual and quite necessary to have the grinding and polishing done in a separate room from that in which the buffing and finishing of the plated work is performed, as when both operations are done in the same room the small particles of metal and emery from the grinding

and polishing wheels will fly about the room and become lodged in the buffing wheels, on the work to be buffed, or on the buffing compound, causing the work to be scratched while being finished. This should always be avoided when possible, as it detracts much from the appearance of the finished work if allowed to go out, or causes unnecessary expense and delay if the scratches must be polished out again, besides rendering the buffs and composition unfit for fine work, on account of the difficulty of cleaning out the coarse particles from the buffs when they have been allowed to get into them.

In fact, in any large and well arranged plating establishment, there are four departments which should be separated by partitions of wood or glass, or both, namely: the grinding and polishing room, the buffing room, the plating room and the lacquering room, if a class of work is handled that requires lacquering. This is not meant to be laid down as a necessity, but as indicating what should be the arrangement of a well appointed shop turning out large quantities of first-class work. Of course, for the great majority of small shops, this would be too great an expense to incur, particularly in cities, where rents are high; so these shops usually content themselves with two rooms, a polishing room and a plating room, preferring to take chances on getting the work out in a satisfactory manner, rather than incur the expense of partitions and larger rents.

Some shop owners are so careless, or lacking in professional pride, as to attempt to do the polishing, buffing, plating and lacquering all in one room-and a small room at that. Where this practice is indulged in, good work is next to impossible, as the lint from the buffs, the flying rouge and emery dust get into the plating solutions and on the lacquered work, causing no end of trouble. Unless the plant is very small and the amount of work to be done is limited in quantity the several departments should be separated by parti-



Fig. 4. Overhanging polishing lathe with slender arch neck and 8-inch arbor. A popular type.

tions with close fitting doors.

The machinery in this, as in every progressive business, is changed and improved from time to time, and it is always a mistake to purchase any but the latest and most improved machinery in fitting up a plant, as the cost of doing work depends very largely upon the means for doing it, and a less cost on your work always means that you can work at a profit where your poorly fitted competitor will make no profit, or even a

loss. We do not advocate low prices in the plating business, but there always has been and always will be price cutting when, work is slack, or when a new competitor enters a field in which there is insufficient work to keep the new establishment fully employed without trenching upon the business of the older establishments; then, too, there is the shrewd buyer, who is always looking for a chance to reduce costs, and he usually does it by manipulations that will start competing platers to cutting prices. In such a case it is always the best fitted shop that starves the other out, and if such games are tried on you, you may have cause to be thankful that your machinery is all new, of the latest patterns and well adapted to its purposes. While the patterns may vary, certain characteristics are to be found in the goods of all manufacturers, and we desire to have it understood that we do not mean to indicate that the illustrations used in this connection were chosen as the only ones that are worth purchasing, but only that they will serve as types of their special classes and illustrate the requirements of the machines which should be purchased in fitting up a plating and polishing establishment that is to take its place in the market, fitted to fight for business as all concerns frequently must do.

Polishing lathes should be selected that are best adapted to the class of work to be done. For large, heavy work, where large wheels are to be used and considerable pressure is put on the wheel by the operator in removing scale, sand holes, etc., from castings, polishing heads should be selected that are made particularly for strength and durability. They should be mounted on cast iron posts or Pillars capable of being well secured to the floor and should be well braced along the spindle from bearing to bearing. The flanges or collars at each end of the shaft should be set close to the bearings, thus allowing the machine to carry without springing, wheels of a size and weight that would be impossible without a system of bracing as illustrated. Boxes should be adjustable to take up wear. The whole construction of this machine should be calculated to make it firm and rigid under the heaviest strain; at the same time it should be built in such a manner as to leave plenty of space to handle and turn the work below the wheel.



Then there is the overhanging or projecting lathe, which carries its wheels or buffs farther out and away from the post or column upon which the head is fastened than is done by any other form of polishing lathe. This machine is valuable for special work, or for any large work requiring plenty of room, such as large pieces of sheet metal, pipe, rods, brackets, chandeliers or brass beds, or other articles. From these heavy machines the lathes on columns range down through various sizes, from those sufficiently heavy and strong to run wooden polishing wheels up to 16 inches diameter, to those adapted to carry buffs 9 or 10 inches in diameter at 3,000 revolutions per minute; then on to the light polishing head, adapted to run on a

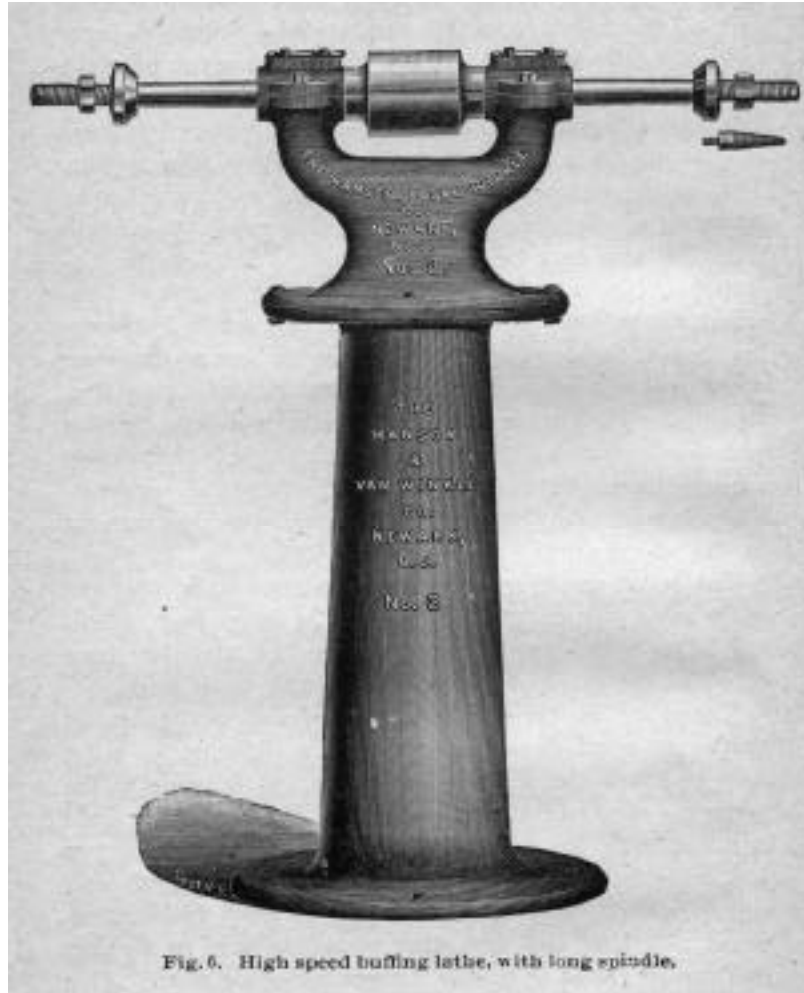


Fig. 6. High speed buffing lathe, with long spindle.

bench, without a countershaft. The various classes of spindles shown separately may be fitted in most of these lathes. Then there are the foot-power machines, and the electric, or motor polishing head. The latter is very neat and serviceable for the smaller classes of work. It requires no belting or countershaft, which is frequently a big item; it can be run at any desired speed, having a lever to increase or reduce the speed at will; it is practically noiseless, and it may be set up and run wherever electric lights are used. When not in use all expense ceases; there are no rattling countershafts to keep oiled and no greasy belts to scatter dust and dirt about the room. The first outlay in fitting up with these machines is considerable, but their advantages are such that they must come into extended use in the lighter shops in cities, and also in the newer plants for heavier work that are being fitted up with electric distribution of power. Larger sizes of this machine are now being made with ring oiling bearings and regular connections for power circuits. The man who puts them in should bear in mind that polishing lathes generally use from three to five horse power, and make his electric installation accordingly.