

the latter is clearly proven to be the cheapest, on account of its greater durability, while doing its work almost as well, and being much more convenient for use.

The principal objections to the old glue and molasses roller are, that it hardens or softens too easily, ferments on the stock, soon loses suction, and the uncertainty in always getting the materials in a uniform condition of which to make them. The basis, glue, is manufactured so variously in form and properties as to tax severely the best judgment of the most experienced, and syrups and molasses are equally without a standard in their manufacture as to quality and weight. The difference in glue renders it impossible to judge accurately of its capacity for absorption in the water-bath, and the difference in the weight of syrups makes it equally difficult to judge of the necessary proportions. Consequently, when a roller is made under such varying circumstances, an uncertain result must follow.

In view of the above facts, and after a very varied experience extending over a term of at least twenty years, we are forced to the conclusion that the best interests of city as well as country printers demand that they should select a ready-made composition that is reliable and suited to their work. They will find that economy and convenience will be the result.

It is claimed for some compositions that they will re-cast perpetually under all circumstances—but this cannot be supported by fact. The economy of re-casting old rollers would prove no small item, but too much must not be expected in this particular. If a roller has been in use a long time, the effect is to make it tough, and, as it were, change the elastic nature of its components. With our knowledge of the ingredients composing all the principal compositions now in use on this continent, we affirm that after a few months' use on a cylinder press, but very few first-class working rollers can be re-cast with advantage. The process for re-casting is very much the same for all compositions, and with a slight variation in the details, made understandingly, and not mechanically, some of them can be re-cast once, or, perhaps, twice with advantage. Of course, a great deal depends upon the treatment they receive while in use.

When the roller is new, it should be washed only in oil. If washed in water, the water will be absorbed and the surface will be destroyed.

If oil is used for cleaning, the surface will be preserved and evaporation checked. When the roller has acquired more firmness of surface, then turpentine may be used for cleaning. A roller should never be washed in water, lye or benzine, until the surface has acquired a reasonable degree of hardness. Oil and turpentine should be used as long as they will answer as cleansers. When turpentine is used, it is absolutely necessary that it should be wiped off quickly or the roller put in to work immediately. *More rollers are spoiled by injudicious washing than by wear.* The palm of the hand should be used in washing at all times, more especially as long as they come under the denomination of "fresh," instead of the prevailing practice of using a sponge, or even a brush, as some have been known to do, in order to save the hands. This process, we admit, is not the most agreeable to pressmen or feeders, but "business is business," and as the protection and preservation of the roller is of the first importance, the dirtying of the hands must be a secondary consideration. A little soap and water soon removes it, and the skin of the hands is preserved as well as the skin of the roller. When rollers come under the definition of "hard," many good and experienced pressmen wash in lye to advantage, taking care to wind up copiously with water.

All printers agree that the condition of the rollers must be "just so" to produce good printing; but in what this "just so" consists lies the difficulty. If too fresh, the return of the roller is apt to partially take off the ink from the edges of the form, and make irregular deposits, though freshness is necessary for charging and covering the entire surface, particularly if the type is a little worn. If too firm, the deposit of ink is never so clear or clean, and though the edges of the form do not suffer as with the fresh rollers, yet the result is far from satisfactory. If the "happy medium" is attained, the general result, though better, is still unsatisfactory; for it lacks the necessary qualifications of the fresh and the hard rollers. What, then, is to be done, if neither the hard, the soft, nor the medium roller will answer? Why, simply use one of each—the medium roller in front, the soft one in the middle, and the hard in the rear. Long experience and observation points to this method as the one that will give the most genuine satisfaction.