

York. Competition, however, did not follow the usual law, for prices were higher when there were two foundries than when one only was going. In 1827 there were nine or ten, and prices had gone down again. Between 1841 and 1850 type casting machines had produced considerable effect, and prices were lowered to a smaller figure than before or since known. This resulted in an agreement between the type founders, who raised prices somewhat in the decade before the war, although it cannot be stated to exactly what figure. During the war prices nearly doubled on the larger sizes, but afterward they sunk again, although never reaching the minimum of 1850.

The present English prices, as quoted by Caslon for fonts of 120 pounds, are as follows: Pica, 27 cents; small pica, 29 cents; long primer, 31 cents; bourgeois, 35 cents; brevier, 37 cents; minion and emerald, 39 cents; nonpareil, 54 cents, and ruby, 66 cents. In this computation a shilling has been taken at 25 cents and a penny at 2 cents; the latter, however, is a trifle less than the true value, and the former a trifle more.

COMPOSITION ROLLERS.

PROBABLY few substances are so susceptible to the influence of the atmosphere as printers' rollers. They are generally made from glue and molasses, which enter into a mechanical but not chemical union. When first made they are so tender that they ought not to be washed, but after a little they become harder and can then have detergents applied. But whatever is used takes away a portion of the molasses, as does the atmosphere, and when the roller is old it becomes nearly a solid mass of glue on the outside. What is preserved of the molasses is in the centre of the roller, where it does no good. It follows, therefore, that there is a great change in what the roller can do from its beginning with a surface as soft as a baby's skin and at the end as hard as a piece of leather. No good workman, indeed, would use one in this condition, but there are many pressmen who do not know how to handle them. Glycerine rollers also get harder.

One chief reason for the great cost of modern presses is the large number of rollers used. On a single press there may be ten or twelve, half of them going over the form. Each roller adds to the resistance of the press and renders necessary that much more power. There must also be places provided for stationing and fastening these rollers, and as it is necessary for every one of the form rollers to pass over the entire surface of the pages the size of the bed is cut down. A press of the highest standard and doing the best work will not print a sheet of more than three-quarters of the size that an ordinary cylinder will, which shall take no more floor space and weigh the same. Then rollers, too, are very large, the core being surrounded with a very thick envelope. The care which is needed is consequently far greater than was necessary when only two rollers were used, or even one, as in hand presswork. Without attempting, therefore, to lay down any extended rules, some few observations may be made.

A roller ought not to be used very long. In cities no one ever attempts to make it last a year, yet in country regions that time is sometimes doubled and tripled. The shortest of these times is too much, for the instrument has lost its softness and elasticity. It may not be cracked or broken, but it does not touch every point on the distributing table or in the form. It is like a wooden roller; when it approaches this condition it should be abandoned, and a new one obtained. Neither should a roller be put to hard use when very new. Its extreme softness allows the ink and type to tear it apart, or to pull little specks from its surface. Such rollers should be used very slowly and carefully. Neither ought the same rollers to be employed summer and winter. Those cast in summer have the most glue in, and those in winter the most molasses. Composition hardens

very easily in winter, and it is difficult to bring the rollers to a proper condition in the morning by heating them near a stove. The fire should not be allowed to go down in a pressroom the night before a roller is to be used. As temporary helps, placing little furnaces or having tin cases of hot water under the bed of the press may be used. The latter probably would answer best in Canada and Minnesota, as they can easily be attended to. But it may be laid down as a rule that no roller will work well when it is too warm or too cold for a compositor to set type with comfort. That is between 66° and 80°. More heat than this can be endured, but rollers are apt to run when it approximates 90°, and are sure to do so when it reaches 100°, unless made of a hard mixture. In cold countries, by having thick walls and double windows, no door opening directly from the pressroom into the open air, very little delay ought to be experienced, if good fires are kept up. In hot countries, by using awnings and mechanical blowers, temperature can be kept down, except for a few days from 12 o'clock till 6. As this, though, would be in July or August, when work is the dullest, it ought to be easy to shut down for the half day on the few occasions which would require it. It is unnecessary to observe that ink cannot be well distributed when cold.

Much of the same care necessary to guard against unduly high or low temperature is required to take precautions against moisture and dryness. The latter is easier to manage than the other, for by placing water near the roller box or sprinkling that part of the room enough will evaporate to charge the air. So, also, a sponge can be used. But in towns where there is little wind, like Cincinnati, and where pressrooms are in cellars and close to bodies of water, it is more difficult. A muggy day seems to take all of the life out of the rollers. In this case pretty much all that can be done is to have a second set of rollers upon the highest floor, where air can get free access. Many rollers are condemned when used under circumstances for which they are not fitted, although perfectly good otherwise.

MECHANICAL PREPARATION OF COPY.

JAMES E. MUNSON, of New York, has lately shown his new invention, a help to type setting machines, to a number of members of the trade. Originally conceived nearly seven years ago, work has been steadily prosecuted for about four years. The plan consists in so perforating a strip of paper that each combination of perforations will answer to a letter, the strip afterward being fed to a machine which is provided with an electric battery. As the perforations reach the discharging point of the battery the keys are depressed in obedience to the signals. Far greater speed can be attained in this way than by hand manipulation, and inexpensive labor can be applied to the perforating machine, which also justifies the matter by making the required space before the line is set. The exhibitions given were satisfactory, but it will be some time before the invention can be used, the present machine being merely experimental.

SEEN AND HEARD.

I DID not mention last month the death of William Mackellar, once a printer and a brother of Thomas Mackellar, the type founder and poet. For more than fifty years death had not entered their family. Mr. Mackellar began life as an apprentice to Harper & Brothers at a time when they had but one power press, although there were a couple of dozen hand presses. He then became a lawyer and afterward city editor of the *Evening Post*, being the first person in New York who made the systematic collection and presentation of local news a feature. After this he became chief clerk to the Mayor and act-