

GLASGOW UNIVERSITY BUILDINGS.

The University of Glasgow (Scotland) having sold its old site and buildings to a railroad company, erected a new structure on Gilmore Hill, in the suburbs of the city. Sir George Gilbert Scott was commissioned to prepare plans for the erection of a new building, large enough to accommodate the rapidly growing institution, to be built in a style worthy, both as to solidity and beauty, of the purpose for which it was destined. Of the extent of the new structure, some idea may be formed from our engraving. It is a large oblong rectangular pile, about 600 feet long by 300 feet wide, and divided in the middle by a building which separates two quadrangles, each of which is about 180 feet square.

The great tower in the center forms the main entrance for the students; on the first floor is the court room, with direct communication into the great forehall. Besides the belfry, clock room, etc., in the upper stages, there is the cold air chamber in the sub-basement, through which every hour 1,000,000 cubic feet of fresh air are to pass, for the supply of fresh and hot air for the heating and ventilating of the whole building, the cold air chamber being fed through four large extraction shafts, in height about 150 feet. The tower is 200 feet; the wooden spire, covered with lead and slate 110 feet high. With each class room is a professor's private room, in connection with a mezzanine above, fitted up as a private library or museum, as the case may be. On the ground floor is the valuable collection of books and coins by Dr. Hunter, from whom it derives its name, the Hunterian Museum. The library contains over 100,000 volumes, with extensive premises for workshops, etc., in the basement. The attics are used for model rooms and museum purposes. The professors' court, at the west of the college buildings, consists of 13 houses. The students' recreation ground contains about 5 acres.

The dimensions of some of the principal apartments are as follows: Library, 120 feet by 60 feet; museum, 120 feet by 60 feet; central hall, 114 feet 6 inches by 70 feet; Latin, chemistry, natural history, and Greek class rooms, each 40 feet by 40 feet; laboratory, 52 feet 7 inches by 34 feet; moral philosophy, 37 feet 10 inches by 34 feet; physiology, 34 feet by 34 feet; medical jurisprudence, 34 feet by 30 feet; small museums, each 30 feet by 22 feet 6 inches; reading room, 73 feet by 51 feet. The amount expended is over two millions of dollars.

PHOTOGRAPHIC HINTS.

It is sometimes desirable, if not necessary, that a photographer be able to take a picture of a specified object without including in the view any other undesirable object, as, for example, an old brick wall. The following method is exceedingly suggestive, and, if skilfully managed, very good. We

once saw it practically tested by a photographer under the following circumstances:

In a certain garden in London, there is a beautiful statue of black marble which had been repeatedly brought under the "eye" of the camera, but always without pictorial success, on account of the close proximity of one or two trees and a brick house, which were only twenty feet behind the statue, and which invariably appeared in the picture with a most unbecoming and undesirable degree of prominence. Having been consulted by the proprietor, we suggested that the offensive brick building might be excluded from the view presented to the camera, either by placing a large background of uniform color behind it, or, still more readily, by burning

background upon which neither trees or brick edifice were visible. The success of the experiment was most complete. In repeating this experiment, however, care must be taken that not a curl of smoke, even of the most delicate kind, be allowed to obtrude between the camera and the object being photographed, otherwise failure will be the certain result, for smoke is frequently of a highly intense actinic color. *British Journal of Photography.*

Prices and Qualities of Rubber Springs.

So long as the market price of crude rubber rules as high as it now does and is likely to do for some time to come, the minimum price of a fair standard quality of spring cannot fall below fifty-five cents per pound.

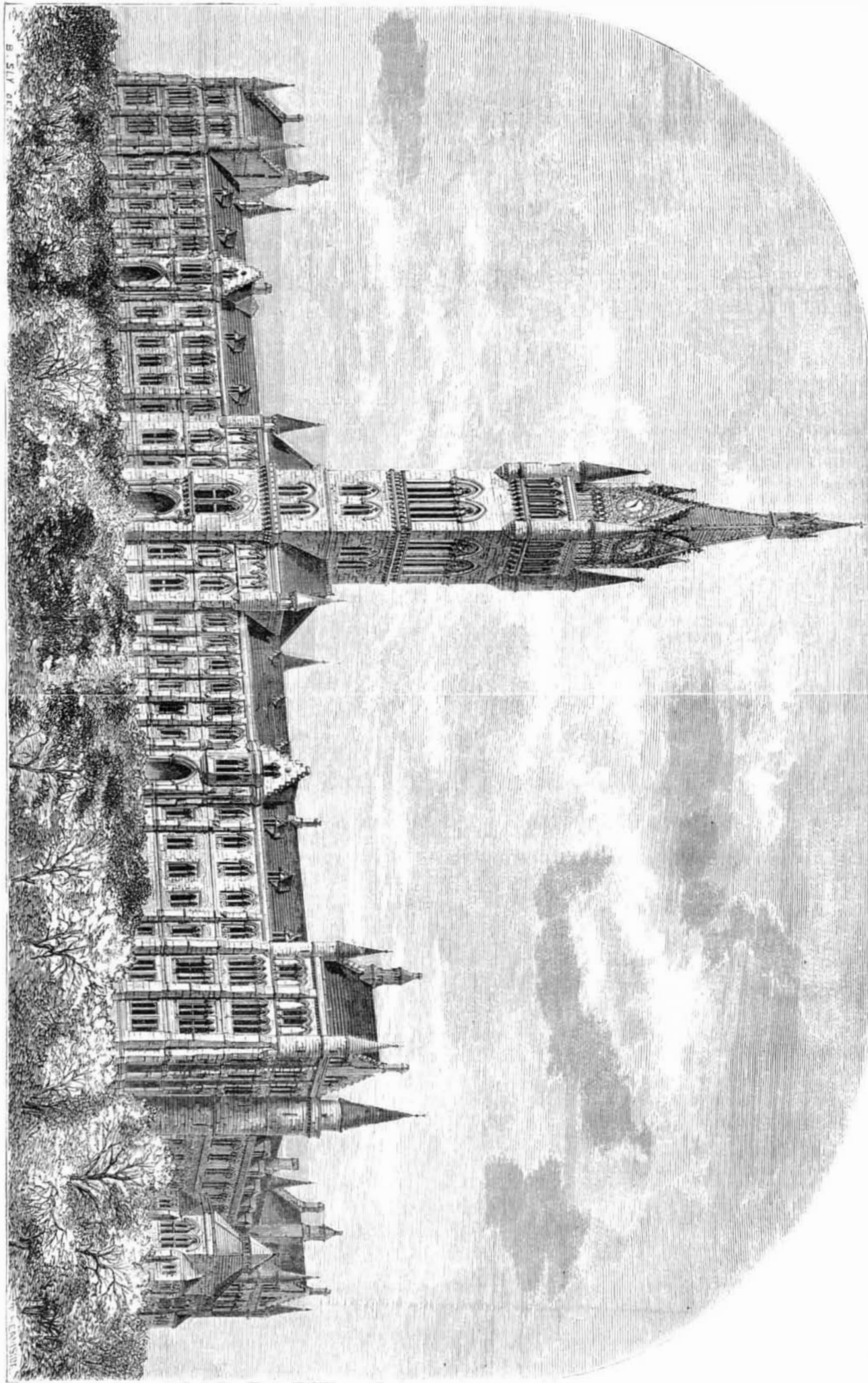
The first essential of a good spring, says the *National Car Builder*, is a suitable quantity of fine Para gum, pure and dry. A good quality of fine sheet Central American may be used with the Para in proper proportion. These will absorb a certain amount of dry white lead and bolted whiting, but no more than is requisite. Sulphur is also used merely as a vulcanizing agent, its action being analogous to that of yeast in bread making. There is a definite and fixed relation between the quality of the pure or crude gum and the quantity of foreign ingredients necessarily combined with it, not for the purpose of adulterating and cheapening, but to impart to the mass of material constituting the spring a body and solidity it could not have in any other way. The cheap springs offered in the market do not contain more than twenty-five per cent of good gum, the remainder consisting of coarse and inferior grades, with hold rubber frequently mixed with it, and capable of absorbing a much greater quantity of adulterating material than good and fine gum.

The tenacity, power, and durability of the spring are impaired just to the extent that bad material enters into its composition, and the foreign ingredients are out of proportion to the rubber. Springs can be made to weigh less by using less lead and more whiting, but the quality suffers in a corresponding degree, as the lead has a metallic and durable body, and the whiting a perishable one.

It requires but a very little figuring to form an idea of the adulteration of low priced springs. Fine Para rubber is worth to-day eighty-five cents in the market, and fine Central American sheet rubber sixty-five cents, and the difference between these prices and the lowest spring quotations indicates very clearly the nature of

the process by which low-priced springs are produced.

THE Chicago and Alton Railroad Company have just completed, and are now running as day express on their road, one of the most complete trains in the world. It consists of a baggage and mail car, four coaches, and a palace dining car. It is equipped with Thornton's spark arrester and patent dust shield, Goodale's steam brake, Creamer's safety brake, Blackstone's patent platform and coupler, and Reniff & Buttolph's ventilators. The managers announce that the whole road will shortly be equipped in the same way.



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a quantity of damp hay between the statue and the house, the smoke from which would obliterate the details of the latter. This advice was promptly acted upon; and the wind being in a favorable direction—that is, blowing from the direction of the camera towards the statue—three heaps of litter were quickly raked together and ignited, these being placed in a line about ten feet behind the statue and a few feet apart. A plate was now exposed, and, so fantastical had been the gyrations of the smoke and so well had it played its part that, when the photographer developed the picture, the statue stood out in excellent, nay brilliant, definition on a