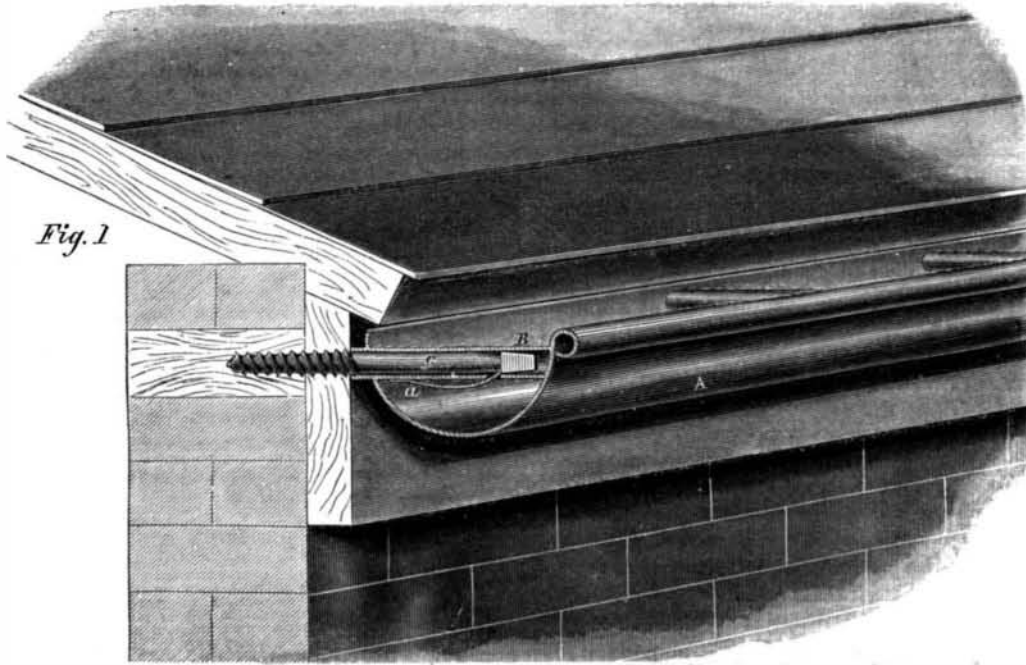


Improved Patent Gutter.

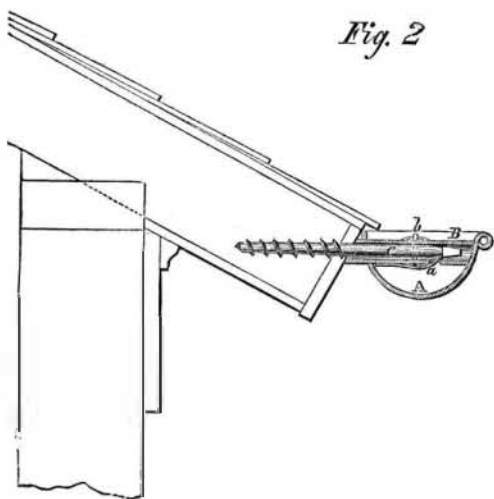
We publish this week, for the benefit of our readers, an engraving of an improved mode of hanging gutters or the eaves-troughs of buildings. It consists of the ordinary metal gutter, A, provided at certain distances with tubes, B, which are open at one end and closed at the other. These tubes are slipped over the points of bolts, C, which are screwed into the frame of the house. Upon the under side of the pipe, B, is a small spring *a*, which works through a slot in the tube aforesaid, and takes against the shoulder of the bolt, C; it is thus kept securely in its position, and the danger of being blown off or detached in any way is entirely obviated.



YAPP'S PATENT GUTTER.

Fig. 2 shows a section of the roof and eaves-trough, with the plan of attachment, very plainly. In this instance the bolts, C, are screwed into the rafters of the roof. This is necessary in some styles of architecture, as the rain drip would entirely overshoot the gutter were it in any other position. Another mode of fastening the trough to the bolt is proposed and here illustrated. It is simply the substitution of the pin, *b*, shown in dotted lines, for the spring.

The arrangement of this apparatus is very neat and tasty. It is also stronger than the old method, does



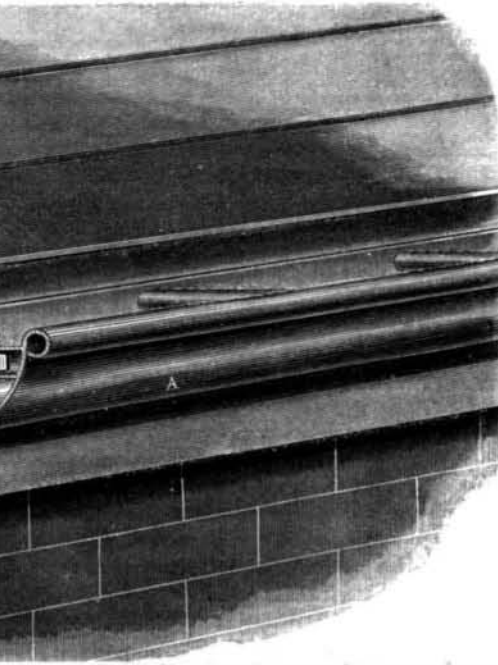
not injure the shingles, and is easier to adjust in its place. Any kind of metal may be used in constructing the gutter, or any modification of shape desired, to correspond with the architecture of the edifice, can be given it.

The patent for this invention was procured through the Scientific American Patent Agency, Nov. 4, 1862, and further information can be obtained by addressing Wm. Yapp or J. P. Abbott, Box 2,434, Cleveland, Ohio.

Hamburg International Agricultural Exhibition, 1863.

Agricultural exhibitions, more especially cattle shows, seldom interest beyond the immediate locali-

ties in which they are held; but the committee of the Hamburg association have decided that their next display shall be an international exhibition. A glance at the map shows Hamburg to be connected by rail and steamer with all the principal cities of northern Europe, as also by ocean steamers with New York and other foreign cities. American manufacturers will, therefore, have every facility for exhibiting their products; and it is particularly requested that all those who intend to compete should make their application to the Secretary, Dr. G. Hachman, at Hamburg. All necessary information will be supplied by Messrs. Austin & Baldwin, of the American and European Express, 72 Broadway, New



AN EFFECTIVE RAT TRAP.

A correspondent in St. Louis, Mo., seeing an article in our paper a few weeks since, relating to the destruction of rats, thinks that he cannot do his country more service than by publishing his experience with rodents. He takes a small barrel, and covers it with green hide, upon the fair and honest surface of which he nightly spreads a banquet to which all rats



of high and low degree straightway through. This free lunch is continued for a number of nights until the pests aforesaid have come to look upon it as a settled "institution." When this point in the plot is achieved, two slits are cut in the hide at right angles with each other, and the viands set out as before. Now when the doomed vermin rally at night, all unsuspecting of disaster, they leap immediately upon the treacherous skin and fall plump into the water with which the barrel is half filled; once there, they swim to a stone that rears its friendly summit above the flood and forthwith squeal vociferously. Other rats, being socialists by nature, immediately rush to the aid of their distressed fellow-sufferers, but by reason of the hide resuming its normal position after each victim's disappearance, the whole brood are

involved in one common ruin; at least so says our informant, and he further adds that he has destroyed either 11 or 77 (his figures stand for either) in one night.

This trap is similar in some respects to the one alluded to in our former article; the substitution of the untanned hide in this, however, for the swinging head in ours, doubtless makes it more effective. A smart rat might save himself by jumping from the latter arrangement; but no amount of "ground and lofty tumbling" could avert his fate through the slits.

Our engraving explains the trap very clearly, and we hope that those afflicted with rats may find relief by adopting the remedy of our correspondent.

NEW PROSPECTUS OF THE Scientific American. FOR 1863! VOLUME VIII.—NEW SERIES.

The publishers of this popular and cheap illustrated newspaper beg to announce that on the third of January next a new volume will be commenced. The journal will be issued in the same form and size as heretofore, and it will be the aim of the publishers to render the contents of the paper more attractive and useful than ever before.

The SCIENTIFIC AMERICAN has been published weekly for eighteen years, and is the most popular and largely-circulated journal of its kind in the world.

Owing to the enormous increase in the price of printing paper the publishers are, to their regret, compelled to increase the subscription price of the SCIENTIFIC AMERICAN to \$3 per annum for single subscribers.

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The SCIENTIFIC AMERICAN has the reputation, at home and abroad, of being the best weekly journal devoted to mechanical and industrial pursuits now published, and the proprietors are determined to keep up the reputation they have earned during the eighteen years they have been connected with its publication.

To the Inventor!

The SCIENTIFIC AMERICAN is indispensable to every inventor, as it not only contains illustrated descriptions of nearly all the best inventions as they come, but each number contains an Official List of the Claims of all the Patents issued from the United States Patent Office during the week previous; thus giving a correct history of the progress of inventions in this country. We are also receiving, every week, the best scientific journals of Great Britain, France and Germany; thus placing in our possession all that is transpiring in mechanical science and art in those old countries. We shall continue to transfer to our columns copious extracts from those journals of whatever we may deem of interest to our readers.

Chemists, Architects, Millwrights and Farmers!

The SCIENTIFIC AMERICAN will be found a most useful journal to them. All the new discoveries in the science of chemistry are given in its columns, and the interests of the architect and carpenter are not overlooked; all the new inventions and discoveries appertaining to those pursuits being published from week to week. Useful and practical information pertaining to the interests of millwrights and mill-owners will be found published in the SCIENTIFIC AMERICAN, which information they cannot possibly obtain from any other source. Subjects in which planters and farmers are interested will be found discussed in the SCIENTIFIC AMERICAN; most of the improvements in agricultural implements being illustrated in its columns.

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No person engaged in any of the mechanical pursuits should think of doing without the SCIENTIFIC AMERICAN. It costs but six cents per week; every number contains from six to ten engravings of new machines and inventions which cannot be found in any other publication. It is an established rule of the publishers to insert none but original engravings, and those of the first class in the art, drawn and engraved by experienced artists, under their own supervision, expressly for this paper.

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