

THE  
CRYSTAL PALACE,

AND ITS CONTENTS;

BEING

AN ILLUSTRATED CYCLOPÆDIA OF THE GREAT EXHIBITION OF THE  
INDUSTRY OF ALL NATIONS.

1851.

EMBELLISHED WITH UPWARDS OF FIVE HUNDRED ENGRAVINGS.

WITH A COPIOUS ANALYTICAL INDEX.



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1852.

so much excellence as to be willing to vie in the Exhibition with the oldest and most celebrated houses in the world.

On the south side of their portion of the building, the contributors from the States exhibited, under the general classification of raw material, many very excellent specimens. There were among these a large variety of articles, such as Indian corn, ground, hulled, and in the ear; rye, oats, barley, wheat, rice, cotton, tobacco, minerals, chemicals, woods, brooms, beef, pork, lard, hams, and almost everything else identified with the productions of that country. Next in order were to be seen daguerreotypes, paintings, herbaria, and prints, with some samples of stained glass suspended from the galleries, and cottons, carpets, wrought quilts, calicoes, and needlework, tastefully displayed around. Considering the distance from which these had to be conveyed, not only across 3000 miles of ocean, but often from little short of that distance inland—and considering, too, that it is not in her manufactures that America makes her chief impression upon the world—we regard this portion of her exhibition with great interest. In pianofortes there was a show highly creditable to the manufacture of musical instruments in the United States. Pierson exhibited a seven octave grand pianoforte; Chickering a semi-grand, and other instruments of less pretension but of much merit. There were two from the manufactory of Conrad Meyer, of Philadelphia, in neat and very unpretending cases, combining all the best qualities of the highest rank of pianos. In breadth, freedom, and evenness of tone, in promptness and elasticity of action, and in a combination of everything that is rich and sweet in this description of instrument, he claims to be unsurpassed.

Among cordage, boats, oars, and models of favourite ships, were exhibited two ship-ventilators, by Frederick Emerson, of Boston. These are intended to supersede the ordinary wind-sail now in use for sending pure air into the recesses of ships. The inventor has given much attention to the subject of ventilation, and his success has been honoured by several gold medals in the United States. How far this application of his invention may be superior to the methods now in use for the same purpose is uncertain. In the minds of sailors there is always an objection to fixtures above deck, which would be likely to impede their general introduction.

Together with daguerreotypes, before alluded to, there were exhibited camera obscuras by C. C. Harrison, of New York, the results of which, in the pictures that hung above them, were exceedingly favourable. There were shawls from the Bay State mills, of beautiful colour and a high perfection of manufacture; white cotton goods, which, in bleaching, finishing, and putting up, appeared equal to Manchester products; some very beautiful flannels, single milled doe-skins and wool-black cassimeres of thorough fabric; tweeds, well mixed and of good colours; a salamander safe, well made; and Newell's improved bank lock, ingenious and well executed, (which will be noticed under the head of "LOCKS;") a patent paying machine for pitching the seams of vessels, the box being provided with a ventricle wheel, which receives the hot melted material, and applies it neatly, economically, and directly to the seam to be covered; an air exhausted coffin, with glazed aperture at top; car wheels for railroads, wood and cork legs, clocks, watches, dentists' tools and works, India-rubber goods of various forms, mathematical and solar instruments, a self-determining variation compass, trunks, boots and shoes, hats, specimens of printing and binding, together with pistols, rifles, and other weapons of offence and defence. Of these rifles, manufactured by Robbins and Lawrence, it is but just to say that they are among the best, if not the best, of any rifles manufactured in the world, the Americans claiming to excel in this species of manufacture. They are made from the best selected Copake cold blast forge iron, and are of an unpretending style, but remarkable for a plain, substantial, and perfect finish; they are strong, simple, and thorough in their workmanship, and eminently adapted for real service. Colt's revolvers will be noticed in our article on "ARMS AND ARMOUR."

Two bell telegraphs, exhibited in the central avenue, very deservedly attracted much attention. The bell telegraph, otherwise called an "annunciator," is an invention made to supersede the awkward array of bells in houses and hotels. It is an extremely neat and beautiful article, and indicates whence the bell was rung, by uncovering a number corresponding to the number of the room; and this, too, for any length of time afterwards, until, by the touch of a spring, the number is re-covered. In the large hotels in the United States, and in many private residences, it is much used.

In the moving machinery department, among other objects of interest from the United States, was a machine exhibited by Mr. Charles Morey, called a stone dressing machine. A machine for dressing stone by power has long been regarded as a great desideratum, and has been the object of many expensive, though unsuccessful experiments. One great difficulty has been found in making the cutting tools of a quality to stand the action of stone, unless at such cost as to render their use unprofitable. This difficulty is overcome by the present invention, which consists in the employment of chilled cast-iron burrs, or rolling cutters. Iron, as is now known, may, by a peculiar process of chilling in casting, be converted to a diamond hardness, that perfectly fits it for reducing, with great facility and economy, the surface of stone. The burrs made in this way retain a sufficient degree of sharpness for a long time, and can be maintained at a small cost, being wholly formed and finished in casting. In dressing circular forms, the stones are made to revolve, when the burrs, which are mounted in sliding rests, are brought into action. For straight surfaces, however, the stones are laid upon a transverse bed, and the cutters, mounted upon a revolving cylinder, are placed above them. The burrs or

cutters are so arranged as to turn freely on their axis when brought in contact with the stone, and as they roll over it, they crush it away in the form of scales and dust. By varying the shape and arrangement of the burrs, ornamental surfaces may be produced.

Among the agricultural implements exhibited which claim the attention of agriculturists particularly, are reaping machines, ploughs, cultivators, fan mills, and smut machines. The American reapers are worked by a single span of horses abreast, with a driver and a man to rake off the grain as it is cut down by moveable knives. On land free from obstructions, these reapers will cut from twelve to twenty acres of wheat in a day, depending somewhat upon the speed of the horses and the state of the grain. The grain is left in a proper condition for the binders, who follow after the machine, and the grain is cut quite as clean as by any other method, either by the sickle or the cradle. McCormick's Virginia reaper (already described by us), is in very general use, 1,800 machines having, we believe, been sold in the United States in 1850. Hussy's reaper (also already described by us), is in general use, and operates remarkably well. These implements will enable the farmer to gather his crop in a very short time, securing the wheat and other grain at the very time it is in proper condition for harvesting, thus avoiding the alternative to which he is now obliged to resort, of harvesting a portion of his field before fully ripe, and a portion after it is too ripe to make the best flour. In point of economy they are very important, reducing the expense very much from that of the ordinary methods. In a climate as variable as that of Great Britain, the importance of these reaping machines must be apparent—enabling the farmer often in a single day to secure a crop which otherwise might be materially injured by the unfavourable state of the weather.

The ploughs exhibited are of various sizes, and adapted to various purposes, but have been already described. The cultivators exhibited appeared to be convenient and useful implements, at very moderate prices. The fan mills for cleaning grain are believed to possess some properties which are not found in those generally used—cleaning grain which is damp most perfectly. The smut machines exhibited were made of iron, very compact, very durable, easily repaired, and warranted to clean from 15 bushels to 150 bushels per hour, according to the size of the machine. These implements are in very general use in the United States and in Canada, and are worthy the attention of all who are engaged in milling grain.

#### ARCHITECTURAL MEDALS.—BY WIENER.

M. WIENER, of Brussels, exhibited a very interesting collection of medals, with views of cathedrals and other public buildings in Belgium. That which we engrave (p. 300) is of the Exchange at Liège, formerly the bishop's palace.

#### CARVED CABINET AND GLASS.—BY HANSON AND SONS.

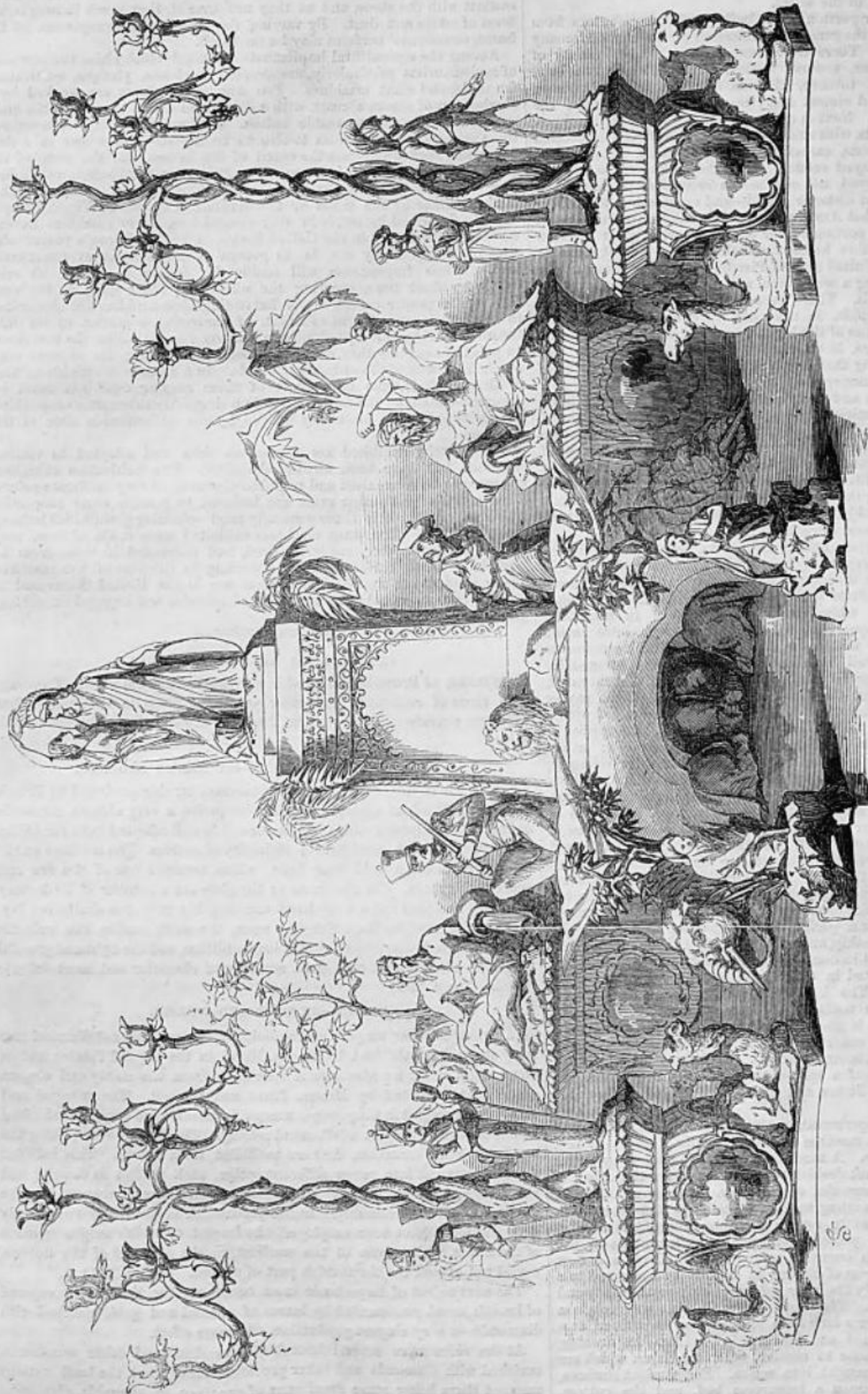
AMONGST the choicest and beautiful specimens of carving produced by British skill, we noticed, as especially calling for praise, a very elegant commode or cabinet, by Hanson and Sons. In form it is well adapted both for utility and ornament, with considerable originality of outline. The carvings on the cabinet represent a wild boar hunt, which reminds one of the fire and energy of Snyder's. On the frame of the glass are a number of birds, very naturally designed: the wary hawk securing his prey, the chattering jay, the cunning magpie, the twittering wren, the swift martin, the welcome cuckoo, the warbling blackbird, the lonely bittern, and the light and graceful egret, are all wrought with great accuracy of character and most delicate detail. (See p. 293.)

#### JEWELS.—BY HUNT AND ROSKELL.

In a former number we gave an engraving of the magnificent diamond and ruby stomacher exhibited by Messrs. Morel in the Crystal Palace; and in the present sheet we give several specimens from the costly and elegant assortment exhibited by Messrs. Hunt and Roskell. The principal and all-attractive object in the group is a magnificent diamond bouquet, exhibited as a specimen of the art of diamond setting. The flowers (comprising the anemone, rose, carnation, &c.) are modelled from nature. This brilliant structure divides into seven different sprigs, each perfect in design; and the complicated flowers, by mechanical contrivances, separate for the purpose of effectual cleaning. In the production of this costly work nearly 6000 diamonds have been employed, the largest of which weighs upwards of ten carats, whilst some of the smallest, in the stamens of the flowers, would not exceed the thousandth part of a carat. (See p. 289.)

The next object of importance is an ornament for the head, composed of branch coral, ornamented by leaves of enamel and gold, enriched with diamonds—a very elegant production, of chaste effect.

At the sides were several brooches, bracelets, and other ornaments, enriched with diamonds and other precious stones; not the least curious amongst them being some specimens of ear-rings in emeralds, diamonds, carbuncles, &c., after the sculptures from Nineveh. (See p. 291.)



THE ELLENBOROUGH TESTIMONIAL.—SILVER SERVICE.—HUNT AND ROSKELL.

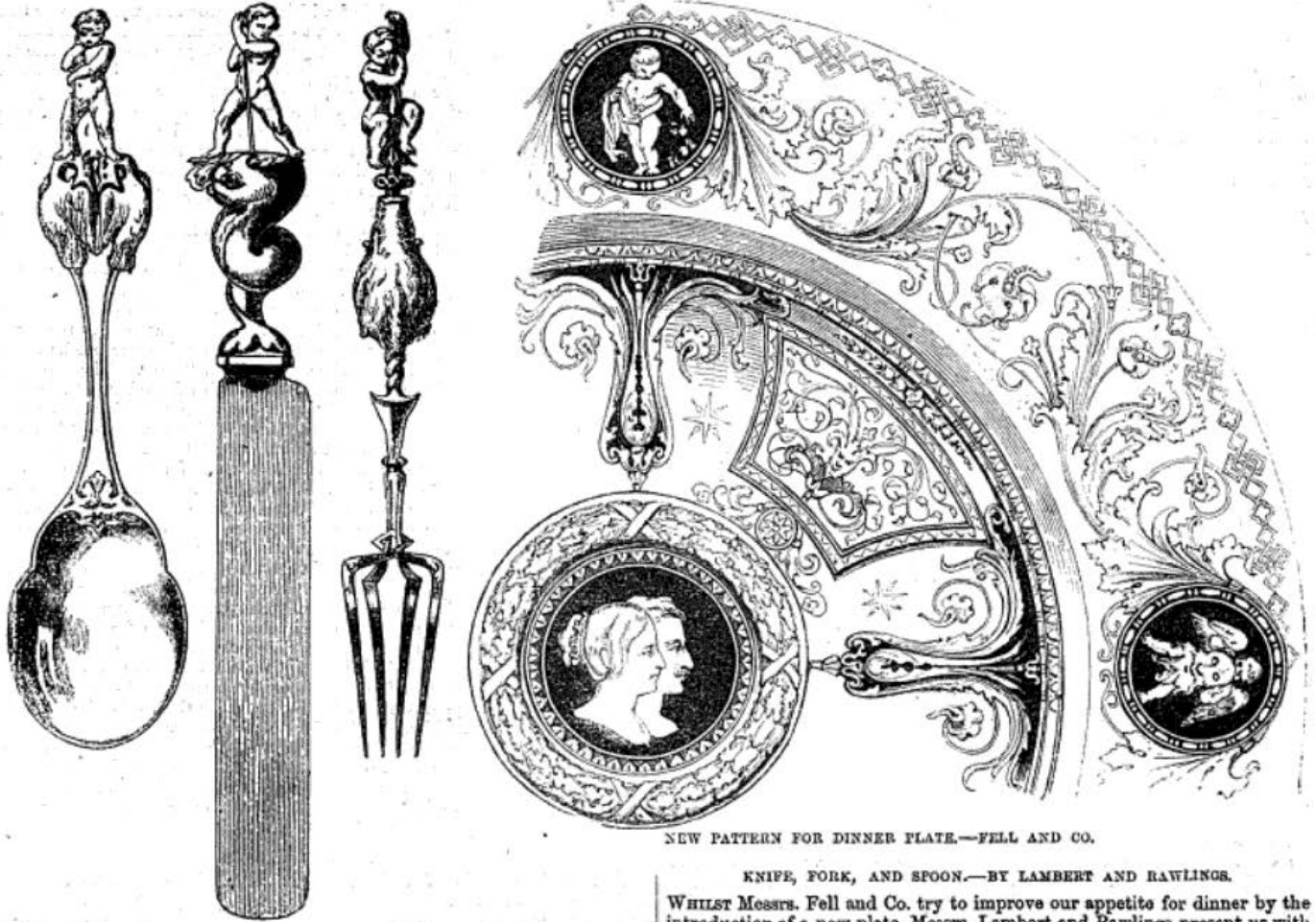
## THE ELLENBOROUGH PLATE.

AMONGST the magnificent works in silver exhibited, by the house of Hunt and Roskell, the service of plate (or portions of one) presented to the Earl of Ellenborough, by his Lordship's friends in India, occupied a prominent position, and commanded attention, on account not only of the beauty of the compositions themselves, but the historical events which they commemorate. The principal object is an ornament for the centre of the table, of massive monumental character, surmounted by two figures, typifying Asia crowning Britannia. The *bassi relievi* present four subjects—the ratification of the treaty of Nankin, and views of Calcutta, Cabul, and Canton. On the base are figures of Afghan and Chinese captives, and of a British sepoy. The architecture is of Indian character, embellished with palms, and supported by recumbent elephants.

## NEW PATTERN FOR DINNER PLATE.—FELL AND CO.

ON the opposite page is a pattern of a new dinner plate of common earthenware, contributed by Messrs. Fell and Co., St. Peter's Pottery, Newcastle-upon-Tyne. It was devised at the Newcastle School of Design, and is called "the cinque-cento Queen and Prince Albert pattern." The ornamentation is very beautiful *per se*, Italian in style, the scroll-work of the rim being extremely light and graceful. The decorations of the centre are highly ambitious, and are finished with care, but we doubt if they will ever become so popular as many old patterns. The eye should not be tasked to a too critical observation of details, in a vessel of daily requirement, more particularly when its use is to minister to the craving of another organ of sense, whose claims for the moment should be paramount. Nevertheless, we would by no means discourage the enterprising spirit which has led to the production of this very





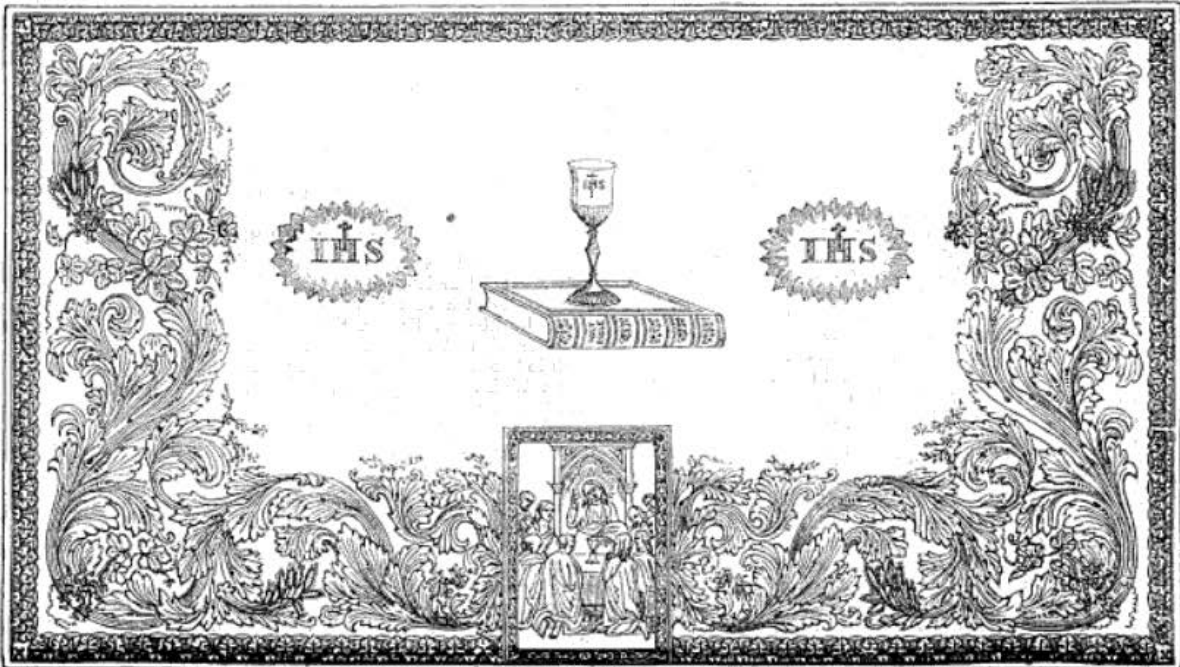
KNIFE, FORK, AND SPOON.—LAMBERT AND RAWLINGS.

NEW PATTERN FOR DINNER PLATE.—FELL AND CO.

KNIFE, FORK, AND SPOON.—BY LAMBERT AND RAWLINGS.

elaborate piece of composition; the same industry and expense applied upon a simpler subject may be happier in its results. It remains to be added of the colouring, that the ground of the circular parts is vermilion, and painted by hand; in other respects it would not be a costly article.

WHILST Messrs. Fell and Co. try to improve our appetite for dinner by the introduction of a new plate, Messrs. Lambert and Rawlings present us with a knife, fork, and spoon, of novel and fanciful device, emblematic respectively of fish, flesh, and fowl, three out of the "four elements" (vegetable alone being unrepresented) of which the humblest repast and the most *recherché* combinations of the *cuisine* consist. They will bear and repay inspection—between the courses. Messrs. Lias also exhibit a specimen of table plate of a simpler fashion, ornamented with a handsome scroll, and which they consider may form an acceptable substitute for the old "fiddle" pattern.



DAMASK COMMUNION CLOTH.—FEGLER.