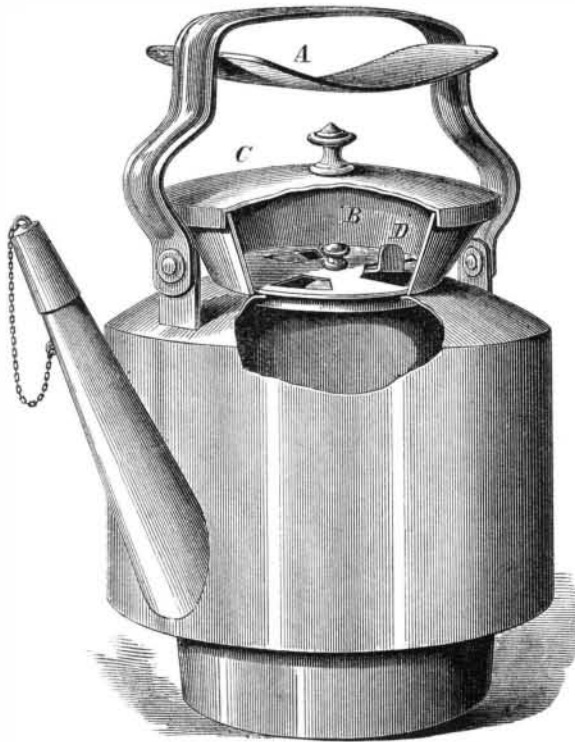


**IMPROVED TEA KETTLE.**

This is an age of utilizations. It is a province of invention to prevent waste—to economize everywhere—facts well exemplified in the device illustrated herewith, the object of which is to usefully employ the steam which issues from the tea kettle, and thus to enhance the value of that indispensable vessel. Incidentally the invention serves to prevent water boiling over upon the stove, and also offers a convenient funnel for filling the kettle.

About the main portion of the kettle and about the handle there is nothing peculiar, save that the latter is provided



with a metal guard, A, to protect the hand from the steam. The opening of the vessel, however, has a funnel-shaped rim, B, the space inside which may be utilized for steaming, cooking, or warming various articles placed therein, and enclosed by the cover, C. The top aperture of the kettle is closed by an interior perforated cover, which has a centrally applied slide piece, D, and button, so that the opening for the escape of the steam into the upper chamber can be increased or diminished at will.

Patented through the Scientific American Patent Agency February 16, 1875. For further information, address the inventor, Mrs. Harriet Gray, lock drawer 5, Marquette, Mich.

**COMBINED SCISSORS AND RIPPING KNIFE.**

Combination implements are coming more and more into use. Every day brings us new forms of instruments, more or less complicated, designed to reduce the number of tools which an operative must have at hand by placing several tools in one handle. Many of these devices show considerable invention, and save expense in first cost, as well as time and trouble in manipulation.



The annexed engraving shows the device very clearly.

Mr. C. M. Johnson, of New York city, is the inventor of an ingenious arrangement of a knife blade with a pair of scissors, the object of the knife being to cut or rip seams or perform other operations incidental to the seamstress' labor. One blade of the scissors is made a little thicker than usual, and a longitudinal slot is cut in it, in which the square part of the knife is received. The latter can be pushed out or in, as desired, and is secured in any position by an ordinary clamp screw.

**RECENT HOSPITAL CONSTRUCTION.**

There has recently been erected in London a hospital for children, in the construction of which there are many novel and important features. The building is from a design by Mr. Edward M. Barry, R. A., and it consists of a center block and lateral wings, the former containing the hall, main staircase, chapel, operating theater, and administrative offices, the wings containing the wards, which run longitudinally, being lighted on both sides. The hospital is intended to accommodate 200 in patients, and a dispensary, for the relief of out patients, is located in the basement. The chapel is small, being about 26 feet square; but the *Building News* states that so unique and costly a gem of art, for its size, has seldom been seen. It is the gift of an anonymous donor, and no expense has been spared on its decoration. The richest marbles and alabaster are used in its walls, and the pavement is mosaic.

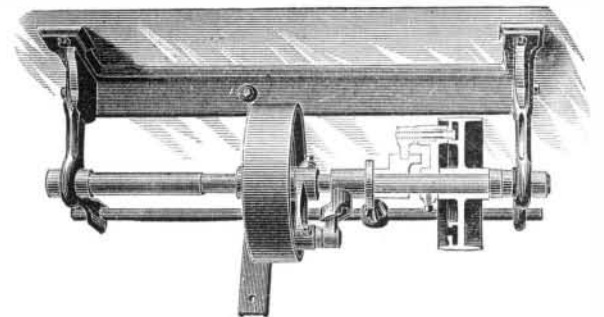
The wards are about 80 feet long by 23 feet wide, and 13 feet high, and each contains 18 beds; thus each patient has about 1,200 cubic feet space. Five such wards are provided,

besides separate apartments for infectious and surgical cases. At the end of each ward are bath rooms and closets, each bath being provided with flexible tubes for filling portable baths for the small children; and each closet is flushed every time a child pushes the door. Slate and glass are used for utensils and for shelving, for cleanliness' sake, and the walls are made double to secure warmth and dryness, the inner surface being of glazed brick, which is easily washed, and is so completely non-absorbent that it gives no foothold for the spread of infection. The floors are of teak, so perfectly laid that they are waterproof; and they are polished so that simply sweeping them insures cleanliness.

The exterior of the building, as shown in our engraving, is of the modern classic order. The ornamental piers, which are striking ornaments, contain the smoke and air flues, while the shafts for admitting the pure air and extracting the foul are in the pyramidal roofs of the end towers. Colored brick and tile are freely used in the work, and serve to show how highly ornamental a structure can be, by the hands of a real artist, constructed of brick.

**IMPROVED FRICTION CLUTCH PULLEY.**

This engraving represents Bean's patent friction clutch pulley applied to a countershaft, such as is used over engine lathes and other machinery requiring quick and positive change of motion. This countershaft has innumerable



advantages. It runs without noise, and it is strong and durable. It is not complicated in its construction, and is consequently always in working order, the few wearing surfaces being so arranged that they can be very easily and quickly adjusted.

For use on heavy machinery where it is necessary to start and stop gradually, to prevent strain or breakage, and upon line shafting where it is desirable to stop a part or the whole without slackening the speed of the engine, the application of this friction clutch pulley is guaranteed by the manufacturer to give full satisfaction.

One of these countershafts can be seen in operation at the Fair of the American Institute. For circulars and particulars apply to D. Frisbie & Co., New Haven, Conn.



HOSPITAL FOR SICK CHILDREN, GREAT ORMOND STREET, LONDON