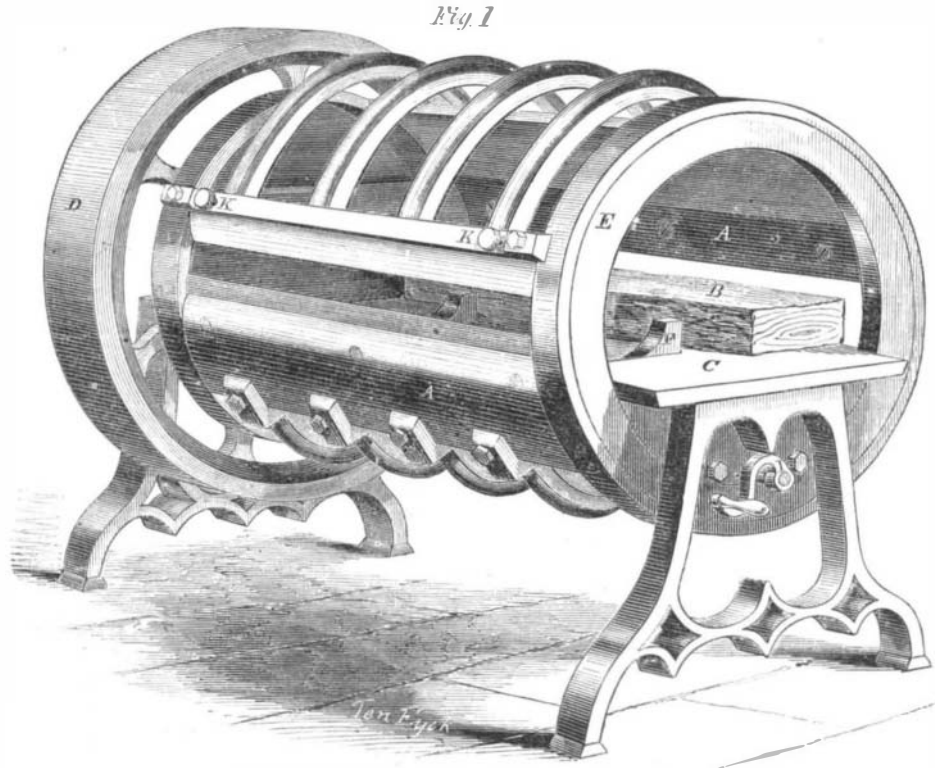


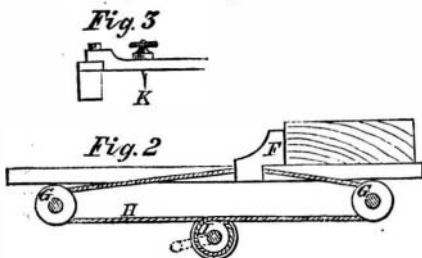
LITTLE'S STAVE-CUTTER.

The value of flour exported from this country in 1858 was \$19,328,884, requiring at least 4,000,000 of barrels, besides the millions that were demanded for the flour of our domestic consumption. When we add to this all the barrels necessary to contain our pork, beef, rice, sugar, meal, &c., we may form some faint idea of the immense number annually made, and of the value of improvements in this extensive industry. Our inventors seem to have just begun fully to realize the importance of this field of improvement, and we have no idea that they will ever let the matter rest unless a machine is produced which will take the growing tree, or at least the solid log, and turn it into a finished barrel, all hooped, with the head in, ready for market!

The machine which we here illustrate is intended for cutting or riving staves from the block. Two knives, A A, are attached to a revolving cylinder, within which cylinder the block, B, to be rived is placed upon the horizontal table, C. The outer end of the table, C, is supported by the frame of the machine, and the inner end by the shaft of the pulley, D. One end of the cylinder turns upon an axle of the usual form, the same one that carries the pulley, D; while the opposite end, in order to be open for the admission of the block, revolves upon the ring, E, which forms an annular or open journal. The tendency of the revolving knives being to push back the block, it is held in place by two dogs, F (Figs. 1 and



LITTLE'S IMPROVED STAVE-CUTTER.



2), and these dogs are pushed forward to feed the block to the knives as it is cut away by an arrangement clearly shown in Fig. 2. Two pulleys, G G, are let into the table, and an endless cord, H, is carried over them and wrapped around the shaft, I. A crank, J (Fig. 1) being secured to this shaft, the dogs, F, are moved back and forth by turning the crank; or the shaft may be turned by a pinion upon it connected with the machinery. Two knives, K K (Figs. 1 and 2), project inward in the cylinder for cutting off the ends of the staves.

The patent for this invention was procured (through the Scientific American Patent Agency) on March 8, 1859; and any one desiring further information in relation to it will please address James Little & Brothers, at Evansville, Ind.

A RICH FIELD FOR INVENTORS.

—The last year's cotton crop of the United States amounted to 4,500,000 bales, which is just about a million of tuns, and as the weight of the seed is somewhat more than the weight of the fiber, there were not less than a million of tuns of cotton seed produced in this country last season. Now, this seed is full of valuable oil, which has always been wasted for want of some economical process for extracting it. The attention of inventors has recently been directed to the matter, and a

beginning has been made towards working this vast mine of wealth. We see it stated that a company chartered by the last Legislature of Tennessee is about putting in operation, at Memphis, a factory for the extraction of oil from cotton seed, converting into the gold of commerce that which, but a few years ago, was a troublesome surplusage of the southern plantations. The present capacity of the works is 500 gallons per day. The processes

which travel freely on ways at each side of the valve. The top plate, A, of the valve projects at the ends, and rests upon two gibs, B B, between which gibs and the valve seat the rollers, C C C, are interposed, the gib and rollers, and the ways or track on which the rollers traverse being made of steel. The rollers are short and are guided by their contact with the valve on one of their ends or faces, and with the side of the steam chest on the other, while the gibs, B, are so constructed, as represented, that the series of rollers on each side are prevented from traversing too far in either direction.

The valve is made so that the pressure may at first come upon the valve face, in the ordinary manner, but as this is worn away the pressure is transferred to the rollers, which then come into play, thus preventing further wear of the face, but still allowing it to slide in steam-tight contact with the seat.

Large valves are cast in two pieces, the upper piece, A, fitting by a movable, but steam-tight, joint into the lower piece, D. The lower piece is allowed to take the pressure until it has worn itself perfectly tight upon the seat, when the set screws, e e, are tightened, and the pressure is brought upon the rollers. If, at any subsequent period, it should be apprehended that steam may soon leak through between the valve and its seat, the set screws, e e, are slackened and the lower or face piece, D, is allowed again to descend, to bear upon the face.

The patent for this invention was issued June 29, 1859. It has also been patented in Great Britain and France. R. C. Bristol, Esq., of Chicago, Ill., is the patentee, to whom all inquiries may be addressed.

RECENT EXTENSIONS OF PATENTS.

Hat-body Machinery.—In the year 1846, H. A. Wells, of this city, obtained a patent for an improved machine for manufacturing hat bodies. The patent was assigned to other parties, and it has proved to be, in the hands of the assignees, one of the most valuable inventions ever patented by our government. The inventor himself being dead, his widow lately applied, as administratrix, for an extension of the patent, which was granted by the Commissioner of Patents on the 16th inst. That our

readers may have some idea of the enormous value of some patented inventions, we will state that it was proved on the above trial that the ascertained value of the invention to the public was \$12,000,000. It was also proved that the inventor's receipts fell below his expenditures, and that the family of the inventor was poor, and wholly dependent upon the gratuitous payment to them of \$1,200 per annum by the assignees of the patent. We have no doubt that this patent will be worth to its owners, for the next seven years, more than \$150,000 annually.

Printing Telegraph.—The Commissioner of Patents has also extended the patent of Royal E.

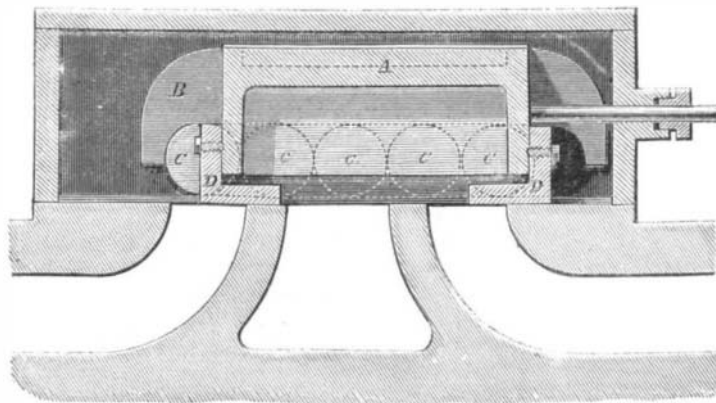
House, for a printing telegraph, for seven years, from the 18th inst. The application met with no opposition.

On the 11th of March, the British House of Commons, by a majority of 53, abolished the excise or internal tax upon paper. Thus, the great champions of ignorance in England—the nobility and the church—are being driven from one position after another by the increasing power and intelligence of the people.

of extracting and utilizing this oil are well worthy the attention of the thousands of ingenious minds which are scattered through the cotton States.

BRISTOL'S ANTI-FRICTION VALVE.

The pressure on the valve of a large locomotive amounts to some six or seven tuns, and each valve, in its sliding motion back and forth, is pushed, under this great load, more than 4 miles for every 100 miles traveled by the locomotive. Of course the friction on the face of the valve, notwithstanding the parts are polished very smooth and kept well lubricated, is very great, and much study has been devoted to devise some means of diminishing it. One of the most obvious plans is to place the valve upon wheels, and several modes of doing this have been proposed, but, for some reason, none have been extensively introduced.



BRISTOL'S ANTI-FRICTION VALVE.

The valve illustrated in the annexed cut is found to work satisfactorily, and is being rapidly introduced on the principal railroads in the country. It is already in operation on the New York Central, the Galena, and the Michigan Central roads, and arrangements are made for putting it into locomotives on the Reading and the Rock Island roads. It is also in highly successful use on several large propellers.

In this invention the valve is supported on rollers