with the bases of the frustum, circular grooves being pre­viously cut in these frames to correspond with the circum­ferences of the two ends of the proposed frustum ; the saw being worked in these grooves will manifestly cut the conic surface from the block. This, we believe, is the contrivance of Sir George Wright.

The best method of drilling the hole through the middle of the proposed cylinder seems to be this. On a carriage running upon four low wheels let two vertical pieces, each having a hole just large enough to admit the borer to play freely, be fixed two or three feet asunder, and so contrived that the pieces and holes to receive the borer may, by screws, be raised or lowered at pleasure, while the borer is prevented from sliding to and fro by shoulders upon its bar, which are larger than the holes in the vertical pieces, and which, as the borer revolves, press against those pieces; let a part of the boring bar between the two vertical pieces be square, and a grooved wheel with a square hole of a suit­able size be placed upon this part of the bar ; then the ro­tatory motion may be given to the bar by an endless band which shall pass over this grooved wheel and a wheel of a much larger diameter in the same plane, the latter wheel being turned by a winch-handle in the usual way.

Circular saws, acting by a rotatory motion, have been long known in Holland, where they are used for cutting wood used in veneering. They were introduced into this country, we believe, by General Bentham, and are now used in the dock-yard at Portsmouth, and in a few other places ; but they are not as yet so generally adopted as might be wished, considering how well they are calculated to abridge labour, and to accomplish with expedition and accuracy what is very tedious and irksome to perform in the usual way. Circular saws may be made to turn either in horizontal, vertical, or inclined planes, and the timber to be cut may be laid upon a plane inclined in any direction ; so that it may be sawn by lines making any angle whatever, or at any proposed distance from each other. When the saw is fixed at a certain angle, and at a certain distance from the edge of the frame, all the pieces will be cut of∙the same size, without marking upon them by a chalked line, merely by causing them to be moved along, and keeping one side in contact with the side of the frame ; for then, as they are brought one by one to touch the saw revolving on its axle, and are pressed upon it, they are soon cut through.

SAWARDIN, a Kalmuck melody, sung while dancing.

SAWBRIDGEWORTH, a town of the hundred of Braughin, in the county of Hertford, twenty-six miles from London. It had once a market, but it has totally declined. The population amounted in 1801 to 1687, in 1811 to 1827, in 1821 to 2071, and in 1831 to 2231.

SAXE, Maurice, Count of, was born on the 13th of October 1696. He was the natural son of Frederick Au­gustus II. elector of Saxony and king of Poland, and of the Countess of Konigsmarc, a Swedish lady, celebrated both for her wit and her beauty. He was educated along with Frederick Augustus, the electoral prince, afterwards king of Poland. His infancy announced the future warrior. Nothing could prevail on him to apply to his studies but the promise of being allowed, after he had finished his task, to mount on horseback, or exercise himself in arms.

He served his first campaign in the army commanded by Prince Eugene and the Duke of Marlborough, when only twelve years old. He signalized himself at the sieges of Toumay and Mons, and particularly at the battle of Mal- plaquet. In the evening of that memorable day, he was heard to say, “ I’m content with my day’s work.” During the campaign of 1710, Prince Eugene and the Duke of Marlborough made many public encomiums on his merit. Next year the young count accompanied the king of Po­land to the siege of Stralsund, the strongest place in Po­merania, and displayed the greatest intrepidity, swimming

across the river in sight of the enemy, with a pistol in his hand. His valour shone no less conspicuously on the bloody day of Gaedelbusck, where he commanded a regiment of cavalry. He had a horse killed under him, after he had three times rallied his regiment, and led them to the charge.

Soon after that campaign, his mother prevailed on him to marry the Countess of Lubin, a lady both rich and beau­tiful. This union lasted but a short time. In 1721, the count procured a dissolution of the marriage ; a step of which he afterwards repented. The countess left him with regret ; but this did not prevent her from marrying soon afterwards. The Count of Saxe was too fond of variety to submit to the duties which marriage imposes. In the midst, however, of the pleasures in which he sometimes indulged, he never lost sight of his profession. He carried along with him wherever he went a library of military books ; and even when he seemed most occupied with his pleasures, he never failed to spend an hour or two in private study.

In 1717 he went to Hungary, where the emperor had an army of 15,000 men commanded by Prince Eugene. Count Saxe was present at the siege of Belgrade, and at a battle which the prince gained over the Turks. On his return to Poland in 1718, he was rnade a knight of the Golden Eagle.

The wars in Europe being concluded by the treaties of Utrecht and Passarowitz, Count Saxe went to France. He had always professed a partiality for that country. French, indeed, was the only foreign language which during his in­fancy he was willing to learn. He spent his whole time during the peace in studying mathematics, fortification, and mechanics, sciences which exactly suited his genius. The mode of exercising troops had struck his attention when very young. At sixteen he invented a new exercise, which was taught in Saxony with the greatest success. Having obtained a regiment in France in 1722, he formed it him­self according to his new plan. From that moment the Chevalier Folard, an excellent judge of military talents, predicted that he would be a great man.

In 1726 the states of Courland chose him for their so­vereign, but both Poland and Russia rose in arms to oppose the election. The Czarina wished to bestow the duchy on Menzikoff, a happy adventurer, who from a pastry-cook’s boy became a general and a prince. Menzikoff sent eight hundred Russians to Milan, where they besieged the newly- chosen duke in his palace. Count Saxe, who had only sixty men, defended himself with astonishing intrepidity. The siege was raised, and the Russians were obliged to retreat. Soon afterwards he retired to Usmaiz, and prepared to de­fend his people against the two hostile nations. Here he remained with only three hundred men, until the Russian general approached to force his retreat, at the head of four thousand. That general invited the count to a conference, during which he intended to surprise him, and take him prisoner. The count, informed of the plot, reproached him for his baseness, and broke up the conference. About this time he wrote to France for men and money. Mademoi­selle le Couvreur, a celebrated actress, pawned her jewels and plate, and sent him the sum of forty thousand livres. This actress had formed his mind for the fine arts. She had made him read the greater part of the French poets, and given him a taste for the theatre, which he retained even in the camp. The count, unable to defend himself against Russia and Poland, was obliged in the year 1729 to leave his new dominions, and retire into France. It is said that Anne Iwanowa, duchess dowager of Courland, and second daughter of the Czar Iwan Alexiowitz, had given him hopes of marriage, and abandoned him at that time because she despaired of fixing his wavering passion. This inconstancy lost him not only Courland, but the throne of Russia itself, which that princess afterwards filled.

Count Saxe, thus stripped of his territories, devoted him­self for some time to the study of mathematics. He com-