living with his wifes. The court had never previously, I believe, had before it a case under the Edmunds-Tucker law, and the Judge imposed a sentence of three months' imprisonment, also a fine of $300 and costs. His Honor acknowledged immediately after court had adjourned that he had intended to say "six months," and also omitted the usual formula, "and stand committed until the fine and costs are paid." The result was that at the completion of his three months' sentence Mr. Fotheringham was discharged without any settlement of the fine and costs. Today he was astonished at receiving a summons from Deputy Marshal McGary to come to his office, as "he had some papers to read to him." On his going there at once the deputy produced a document, and commenced to read: "Attorney-General's office, Washington, D. C. In the matter of the United States vs. Wm. Fotheringham, etc "; the tenor of the paper being that the defendant owed the United States $300 and costs of court with legal interest thereon and directing the deputies to collect the same at whatever cost. Mr. Fotheringham thought at first that the Attorney General was probably going to honor him with some office, but when the title of the case was reached that possibly he had been guilty of an intentional wrong and had been indicted. Recovering his breath, however, at the close of the reading, he blandly informed the "dep." that he was utterly unable to liquidate the debt, to which that gentleman retorted that he "would levy on something anyhow," and forthwith had a two days' search made of the county records. Discovering, as McGary thought, a lot of unconveyed, because apparently unrecorded, property in the name of the defendant, officers were sent out and found that each holder of such property had a duly verified deed of it, in some cases fifteen years old, but which through some negligence on the part of the grantee had not been placed on record.

Luckily some of the stockholders were non-"Mormons," and as is usual in such cases, that fact brought them to a sudden stop, and now it is a matter of "advisement" with the officers as to what shall be done. The moral to the Latter-day Saints is obvious: Always see that your land titles are perfect, and that each conveyance is properly placed on the county records. PLUVIUS.

March 12, 1890.

INCREASE OF TRACTIVE POWER IN DRIVING WHEELS.

Numerous and persistent efforts have been made to increase the tractive power of driving wheels on railways, but a long and unbroken series of failures has been recorded. When electricity was made practical use of in motors for the propulsion of cars, it was claimed that a means had been discovered whereby a greater traction was obtained; but careful experiment proved that such was not the fact. Locomotive wheels continued to slip and lose power with heavy loads or while going up grades, and the expense of providing additional power was as heavy as ever on the railroads. But now comes a new suggestion which seems to have the merits claimed for it, and to open the way, to a great extent, for relief. This is nothing less than a polygonal wheel. This substitution for a cylindrical surface of a driving wheel of a many-sided prism is a radical departure from the theories hitherto acted upon.

The new invention is called the Swinerton wheel, and its claim to obtain greater traction seems to be well substantiated. The first test engine was completed December 1, 1887, with drivers five feet six inches in diameter. With the new feature, this gives a polygon with sides one inch long—210 sides for the entire circumference. To a casual observer these sides are hardly noticeable; but with the light shining at a right angle upon the periphery of the wheel they can be clearly distinguished. A short strait-edge discloses the existence of facets by the rocking or oscillation as it passes from one to the other.

Numerous tests have been made, and all with the most satisfactory results in the way of increased tractive power. The locomotive used had but a singe pair of drivers, but it hauled, from Boston to Lowell, for several days, 65 to 70 cars of coal—a feat equal to that of four driver-engines with cylindrical wheels. Then for several months it was used in drawing the Portland, Maine, express over 115-mile trips, with the same success that attended the other trials. Last July another series of tests was begun, a gradient of 37 feet to the mile being selected. The experiments were made with and without sand. With sand the weight of cars and load drawn was 2,328,346 pounds; with sand it was 859,550 pounds. Then the wheel tires were planed off round and the trials repeated. The result was that without sand 320,500 pounds were drawn, and with sand 830,870 pounds. This proved beyond doubt that the tractive power had been largely increased by the polygonal tires, which, when used without sand, enabled the locomotive to draw over one hundred and sixty-six per cent above that of the smooth wheels, while with sand the increase was about sixty per cent.

In practical use it is found that the engine runs as quietly as any other, the departure from the circle being too slight to cause rattling. In the first experiments two-inch facets were tried, and were found to run quietly. In wearing, the facets do not disappear. A flat spot upon a tire does not wear off; and in a running wear of 60,000 miles the polygonal tires wore down three-eighth's of an inch from their periphery, but the flat surfaces were fully preserved. If the success that has attended the Swinerton patent is maintained in future practice, it will make quite a revolution in kind of surface for tires on driving wheels.

HE GOT A PARDON.

Mr. Edwin Crowther, whose residence during the past three years has been part of the time in Coalville, Summit County, and the remaining portion in this city, was before Commissioner Greenman on March 14, having been arrested on a charge of unlawful cohabitation. The complaint named Lydia Crowther and Elleu G. Hefferan as the defendant's wives. A plea of not guilty was entered. Neither of the wives was present at the commencement of the case, the only witness who had appeared being a daughter of the defendant.

While the witnesses were being waited for, Mr. Crowther handed out a paper, remarking that he supposed they would not care to examine it. Judge McKay took the document and read it. It was a pardon granted to the defendant in 1886, by President Cleveland. The amnesty was secured on Mr. Crowther's representations, endorsed by the Utah Commission, the judges of the Territorial Supreme Court, and the Governor, that he had been a polygamist, but had abandoned the relationship, and no longer gave the doctrine any countenance and support.

Then Ella G. Crowther was called as a witness, and testified—I am the defendant's daughter; my mother is Elleu G. Crowther; I have been living with my mother's sister, Mrs. Snarr, at Park City, since April, 1889; father has had two wives, one my mother and the other Lydia Crowther; father lives now with the latter, who is his first wife; during the past three years he has been at my mother's house a number of times; has not stayed there over night; mother has seven children, the youngest about a year old; it was born February 15, 1889; in May, 1888, he came to our house about two o'clock in the morning and remained in mother's room till morning; he came at 2 or 3 a. m. on several occasions; mother has not been married again; I heard father say to her that she need not say who was the father of the youngest child.

To the defendant, the witness said—You left me and two others in the Theatre one night, to go home alone; I stayed at my aunt's, and when I got home next morning you were in bed in mother's room; mother was up and dressed when I got home; that was in the summer of 1888. When you got the pardon I told you that you had disowned me and the rest of us; I clung to you until the last, and that is what I got for it; I never said I hated you, though you have done enough to make me do so.

During this examination Crowther intimated that he was not the father of his plural wife's youngest child, and caused the closing testimony of the witness to be given with such vehemence as to plainly indicate that she felt keenly the position in which the defendant was endeavoring to place her mother, in addition to the situation into which she had been cast by his renunciation of their relationship.