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IMPROVED WHEEL AND AXLE.

THE accompanying illustrations represent an improved patent wheel and axle which is about to be introduced in Canada by Mr. W. H. Banfield, of Toronto, who has obtained the agency for Canada from the owners of the patent in the United States.

Fig. 1 shows the combination of wheel and axle

The explanation of Fig. 2 is as follows: *B* is the square bed of axle, conforming in shape and size to the common axle. *A* is the neck, its diameter equal to the cornerwise thickness of the bed. *O* is the arm or bearing, its diameter being considerably greater than the neck. *C* is collar or sand band, of malleable iron, forced upon the neck. Entering between back end of hub and box, as shown, it helps to form the annular recesses *M* and *N* to fill with spent grease and exclude sand, grit, etc. *D* is axle box of best quality grey iron. It is without taper inside and outside and is forced into the malleable iron hub. This box has a flange *e* cast solid inside near its front end and the leather washers *f* and *g* on either side cushion the end of the axle arm and the flange *d* of the nut in either direction. *H* is axle nut of malleable iron, hollow as shown, and screwed into the hollow end of axle arm. *I* is malleable iron cap screwing on end of box, preventing loss of axle nut or escape

WHY INDEED!

London Miller: "A friend writes us to say that on a recent visit to a mill at Toronto, he was asked by the principal, "Why do not English millers start elevators in the Northwest?" To this question our friend, who

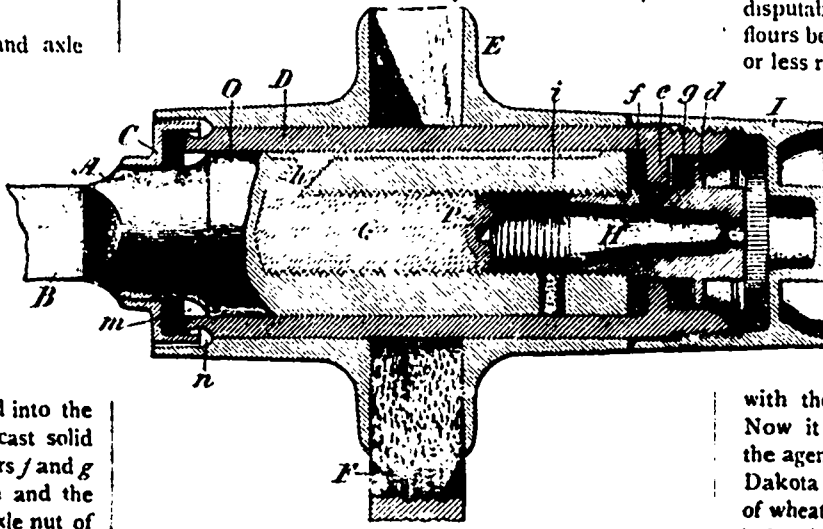


FIG. 2.

is himself an Englishman, replied, "Because they are so slow." We are afraid that, in this case at any rate, the

one makes any difficulty in recognizing. It is admitted by all that the millers of Minneapolis and of the Northwestern states generally, send flour to British markets which is in high favor among our bakers because of its strength and general baking qualities. It is equally indisputable that our American competitors produce these flours because they are able to command wheats more or less rich in a good quantity of gluten. These two

propositions granted, there remains a third, of which many people lose sight, and that is this:

The Northwestern millers purchase these excellent wheats on very favorable terms, because at present they practically form the Northwestern farmer's only market. That simple fact, in our opinion, constitutes the keystone of their fabric. Raise the price of their raw material, and they will inevitably be compelled to raise the price of their finished product.

In other words, their margin for competition with the British miller will be narrowed by so much.

Now it is certain that one result of the appearance of the agents of a British syndicate among the farmers of Dakota would be a raising of the values of the better sorts of wheat, and that upward movement in grain would before long have its necessary and natural effect in the shape of a rise in the better grades of Minneapolis flour. The outlay that would be incurred in forming a syndicate

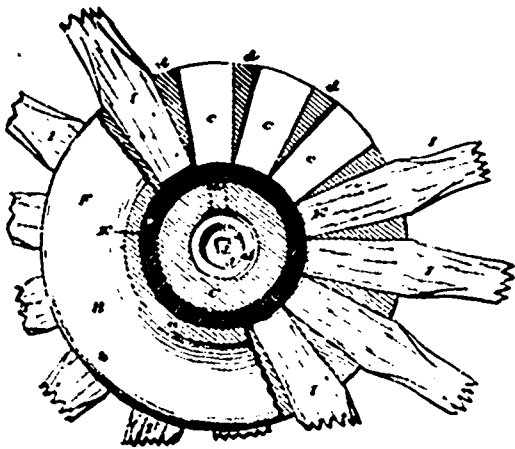


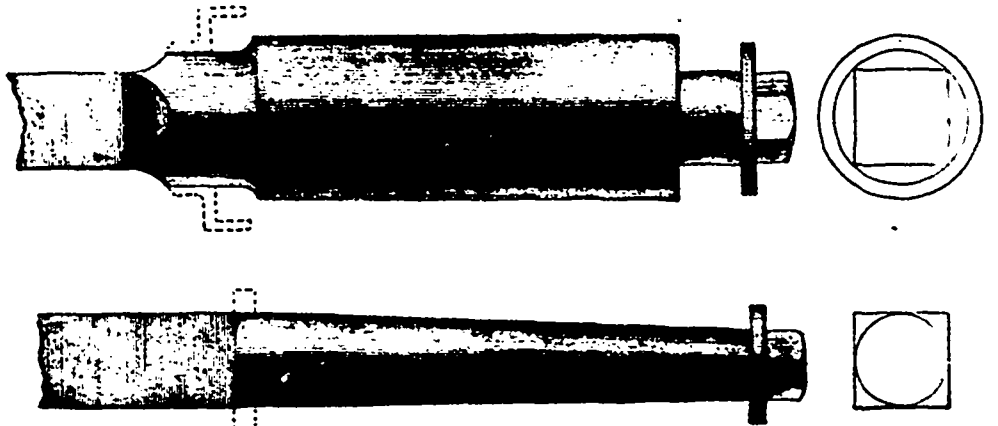
FIG. 5.

of lubricant and excluding all dirt or grit. *G* is supply of grease filling hollow of arm. By removing cap *I*, insert key through *j* in the nut into socket in piston *P*, and turning forward the grease is expelled through *h* and along groove in top of arm to the bearing.

Figs. 3 and 4 are designed to accurately represent and show the relative size and strength of this and the common axle. The makers claim for this axle that it contains double the metal and consequently more than double the strength of the common style, and being made without a square-cut shoulder, will never crystallize or break. Again, in the construction of these axles a better large enough for the arm is used, the neck and bed being forged out, thus giving hammered stock throughout, which is much stronger than the rolled bar used in ordinary axles.

Fig. 5 shows a cross section of the hub, and exhibits the spoke mortises and spoke tenons in position. For all sizes the taper or wedge of spoke tenons is the same—1 in 8.

Any further particulars concerning this device may be obtained from Mr. Banfield, the Canadian agent, 80 Wellington Street West, this city.



FIGS. 3 AND 4.

charge of slowness against the British millers is only too well founded. The advantages of organizing syndicates financially strong enough to purchase on the spot the best wheats grown either in the northwestern regions of the United States, or in Manitoba and the adjacent states of Canada, has been again and again pointed out

and dispatching a trustworthy agent to the Western States of America (armed of course with power to appoint sub-agents where he thought fit and proper) would not be very great, and it might well repay those who took it on their shoulders, even though nothing further was effected than such a raising of flour values. But properly

conducted, such an enterprise would effect much more than this. Here in Great Britain, which is in truth the port of the world, we can command many excellent kinds of grain, but unfortunately we do not always get enough of those strong glutinous wheats which have built up the great mills of Budapest and Minneapolis. From the western regions of the United States and of the Dominion of Canada we can procure a practically unlimited stock of sound strong grain, and it will be strange indeed if a short time hence the same question is asked which stands at the heading of this note.

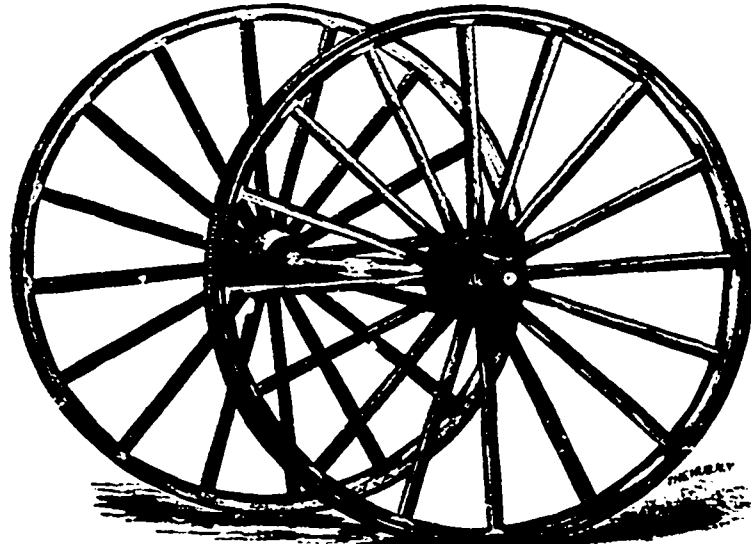


FIG. 1.

in the pages of *The Miller*, but this subject is, at this crisis in British milling, of such moment that no apology is needed for treating it once again. There is one factor in the problem of American competition which no

The *Lindsay Post* says: On Thursday last the east ward numbered among its citizens doing business three very excited, heated and angry men. Two grain buyers got into an altercation. Presently the affair assumed the dimensions of a fight. Subsequently it reached the proportions of a positive riot. Two grain buyers were more or less shook up, and a third party—who incautiously extended the olive branch of peace over the combatants—had the olive branch thrust aside and his features somewhat obliterated. The general public are now convinced that solid competition exists at Lindsay in the grain-buying business.

The finishing touches are being put to McLaren's new elevator at Brandon, Man.

Messrs. Martin & Sons are making alterations in their mill at Mount Forest, with the view of going into the manufacture of pot barley. The barley mill is designed to have a capacity of 12 barrels per day. Messrs. Martin & Sons are an enterprising firm, and have done much for the town in which they are located.