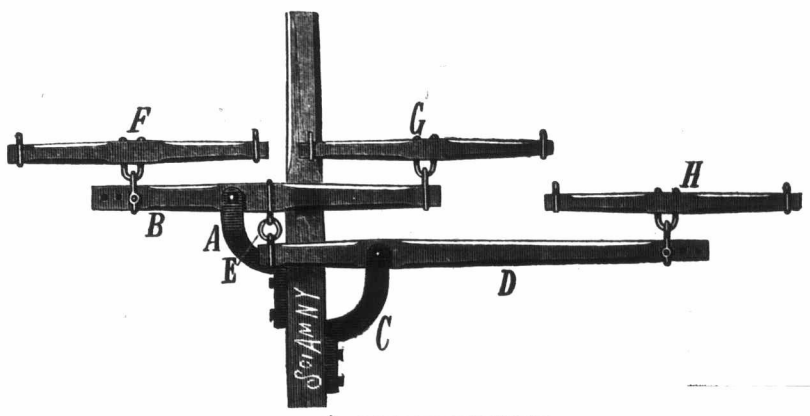
Improved Draught Equalizer.

The engraving represents a draught equalizer for three horses, so constructed that the draught is direct, and each horse exerts a like draught. The arms, A C, are fastened to opposite sides of the tongue, and the pivots in their ends are at equal distances from the tongue. To the free end of the arm, A, is pivoted a double tree, B, to one end of which a single tree, G, is held permanently, and to the opposite end a single tree, F, is held adjustably by a pin which is passed through a clip on the single tree and through one of a series of holes in the end of the double tree. The double tree is pivoted about two-fifths of its length from the outer end. To the free end of the arm, A, is pivoted a double tree, D, on the outer end of which a single tree, H, is held by a pin passing through a clip and one of a row of holes on the end of the tree, D. The inner end of this double tree is connected by loops E, with the middle of the double tree, B. The double tree, D, is pivoted about one-third of its length from its inner end. The middle horse may have a leverage of two-thirds over the horse on the other side of the tongue, while the horse attached to the tree, H, will have a compound leverage over the middle horse.

By means of the holes in the ends of the two double trees the leverage can be varied to suit conditions. The direct draught of the tongue is in the centre of the two draught points. To turn, the horse at F eases up while the horse at H pulls, and the turning in this direction is accomplished without the aid of the neck yoke. The device is simple in construction, and can be easily adjusted in varying conditions.



BOWERS' DRAUGHT EQUALIZER.

This invention has been patented by Mr. John Bowers, of Brookville, Illinois.

Which is the best self-binder, is a question that has been frequently asked us. Every salesman claims to command the best. We have had some complaints about the inefficiency of some binders to work in lodged grain, as there is a likelihood of there being a good deal lodged this year from present prospects. During last year's harvest we had an opportunity of seeing three machines work. Two were working in standing grain and did good work, but some of the observers remarked that they could do nothing in lodged grain. We saw a binder made by A. Harris, Son & Co., of Brantford, Ont. It was working in a field of oats on a side-hill farm near Paris, Ont. The grain was lodged and twisted in every conceivable manner, and laid as flat as any we have seen. The machine went through and through the piece without stopping, and took the crop off cleaner than it could have been taken off with the cradle. This was the first time we had ever seen a binder go through a field of real lodged grain without stoppage or breakage. We do not say that no other machine can equal this, but we say we have never seen it done, and it takes a great deal of talking to make us believe all that some attempt to.

Feeding Grain on Pasture.

The farmer who has not utilized the soiling system will not likely go a step further and feed grain to his cattle on the pasture field. Grass is the natural food for cattle, just as milk is the natural food for calves, and from this standpoint it is difficult to see how the addition of grain would produce profitable results; but the practice is fast gaining ground amongst the better class of dairy farmers in Europe and the United States. There are principles, however, upon which the practice can be justified. Some grasses have a lower feeding value than the fattening or the milk-producing standard, others a higher value, in which cases the ration can be regulated by the addition of grain; but this pre-supposes that the farmer has not sown the proper mixture of grass seeds. Again, grain is a more concentrated food than grass, and has a higher digestive co-efficient. The practice may also be defended when the grass is getting scarce or parched, but this is just the time when the soiling system works to advantage. Experiments have proved that cattle will, under most all circumstances, increase their weight or their dairy products when grain is fed to them on pasture; but this extra increase is often produced at a loss, which can only be justified when feeding for the show ring, or for gilt-edged butter.

Prof. Sanborn, of the Missouri Agricultural College, has been making extensive experiments in this line, and has summed up the results of his observations in the following language:—

The facts given do not determine, nor is it practicable to determine, the exact value of meal when added to pasture. First, when eating grain less grass will be eaten; second, the manure, added to pasture, has some value; the English often pasture feed to enrich their pastures; third, the steer will fatten quicker and dress more per hundred pounds live weight and sell a little better. Our steers, meal fed, showed to better advantage as manifested in the looks of their hair; fourth, dairymen assert that the butter is of better quality and that the cows will be more vigorous, giving more milk per day the year round. The value of these points cannot be measured. The great butter producing herds, selling also high priced butter, with which I am acquainted, pasture feed. Upon good pastures of mixed grasses, these trials and other observations lead me to believe that it is very doubtful whether any food can be economically added to them for the best months of the season, for steers grown for beef; and open to question whether it will pay for cows and other stock in the West at present. Breeders who make growth with less reference to cost than to early maturity and appearance, and dairymen who sell fancy butter whose quality is affected by small factors, will reason from a different basis.

No sharp line of demarcation can be drawn between pasture-feeding and soiling, providing the pasture is flush, and contains a dense foliaged thicket of shade trees, so that the same remarks will apply to both systems of feeding.

A bank that will never break—Your soil.

Importations to be Stopped.

We are pleased to see that the cause we have been espousing for years relating to live stock importations, is endorsed by calm-headed and independent stockmen and agricultural journals in the United States, notably the New York *Tribune*. We regard this journal to be one of the highest authorities on all matters pertaining to agriculture and live stock. In a late issue it treats of the subject in the following manner:—

"Mr. F. D. Coburn, editor of the *Live Stock Indicator*, objects decidedly to further EXPOSURE of the vast cattle interests of the United States by continued importations from the infected fields of Europe of cargo after shipload, any one of which might result in planting the germs o deadly pestilence among the herds and flocks of the entire continent. 'Put up the bars,' he says, and this is his sound argument:

'Originally the object of importation was to secure better blood than this country possessed for the improvement of the common or scrub stock, but that is no longer a necessity, as Americans now have large numbers representing each of all the more desirable breeds, that are of as great excellence as any in the world, while at the same time nine-tenths of the importing now done is for mere speculation, and not at all for any good results that may accrue from careful, systematic breeding. The man who wants breeding animals and cannot be suited with such collections as can be made on this side of the Atlantic, cannot be suited anywhere, and if he simply desires to bring animals from infected regions beyond the seas, to speculate with, when there are such enormous dangers to the community connected with and involved in it, he should be heartily—legally if need be—encouraged to let well enough alone, and for a time at least lend his energies in some other direction than jeopardizing the fortunes and homes fo tens of thousands of his fellow-countrymen. In consideration of these facts, it would surely result in on loss and possible millions of gain, if Congress should at once prohibit the bringing within our borders of any cattle, sheep or swine from abroad for a term of years.'

"There is, happily, a growing sentiment among disinterested, thoughtful stockmen to the same effect. It is not sufficient to depend upon quarantine. This has been especially demonstrated of late at Portland, Me., where the inefficience of officers under Government pay was so conspicuous as to call for the severe criticism which we quoted a week or two ago."

Ominous.

At the last meeting in Toronto of the Board of Agriculture and Arts, the minutes of the previous meeting were read, the Secretary had omitted to insert a resolution of a vote of thanks voted to Mr. Weld, and the Secretary was ordered to enter same on minutes. The truthful reason of the omission should be made known to every farmer. As one member of the Board introduced the term "boycotting," this also should be fully explained. There were also other subjects discussed at the meeting alluded to which are of untold interest to the live stock interest of the country.

Messrs. Woods and Fellis, of Brewster, Ont., have purchased a complete set of machinery for manufacturing syrup from the Early Amber sugar cane. The variety is better adapted for this climate than any other. It ripens earlier and is almost certain to be harvested before the fall frosts. The most satisfactory results have been experienced by farmers and others in places where this industry has been tried.

Grass—A lazy man's crop.

Crude petroleum preserves wood.

Throw all rubbish on the compost heap.