

Get Our Thresher Catalog

Read about the Fairbanks-Morse 24x46-inch Combination Outfit, powered by the 30 h.p. Townsend Twin-Cylinder Kerosene Engine. It gives you an accurate and detailed description of every part—the strength of materials that enter into the construction, and the assembling of all parts by expert mechanics into a perfect, sturdy, dependable thresher. You'll also read about the Fairbanks-Morse Standard Separator—the heavy 18-inch bar cylinder—1 1/2 diameter over bars being 22 inches and between cylinders 4 1/2 inch, 28 inches—1/2 inch feature in the Fairbanks-

The Canadian Fairbanks-Morse Co.

Limited

Wholesale: Saskatoon, Calgary

Morse Standard Separator. The increased area of concaves and grate allowed by greater circumference naturally permits of increased capacity of separation.

Your Copy is Ready

Write us direct or ask your local dealer for a copy. You'll be interested in the well printed illustrations of the various parts. It's good reading. Get it today.



Here's an Outfit

You'll be proud to own. It's a labor saver, a grain saver, and it cuts down threshing bills for it threshes in record time. If you have a 10-20 h.p. tractor or larger, you will want this separator mounted separately. Be sure to note the extra width of body—46 inches, which provides extra area of deck to take care of the separation.

The Greatest Help a Farmer Ever Had

This is the book that over 100,000 Canadian farmers are now using as a text-book for the improving of their farms. In it you will find 100 pages of valuable advice—each page devoted to some one money-saving improvement that you can make yourself quite easily of CONCRETE

Tells how to build a Silo, a root cellar, a water-trough, a culvert, a retaining wall, or a gate post. Explains why it is better to build these (and numerous other farm utilities) of concrete, than of any other known material. Gives simple yet complete directions. All the buildings and small jobs the farmer needs to build can be constructed of concrete, which is nothing more nor less than a combination of cement, sand, pebbles or crushed stone—all staple products easily and cheaply obtainable.

Consider these important advantages of Concrete: fireproof; water-tight; durable, vermin-proof; sanitary; weatherproof; rigid; rapidly built; no repairs; no painting.

Write for the book—check off on the coupon below the subjects in which you are interested.

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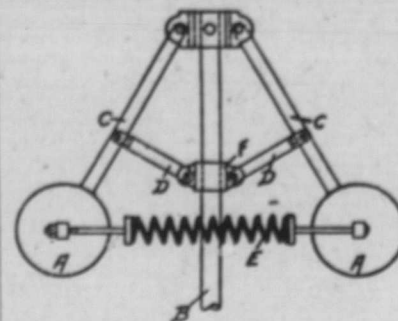
or more to enter as the load increases. This is called "throttle" governing. Occasionally the quality of the mixture is varied to suit different loads, but this alone is not now commonly used. It is, however, often used in conjunction with "throttle" governing, where both the quantity and quality of the mixture are varied to suit the load.

For maintaining constant speed, "throttle" governing is much superior to "hit or miss" governing, as it allows some mixture to be drawn into the cylinder on every suction stroke, which results in an impulse on every power stroke. The "throttle" governor, by varying the amount of mixture, prevents the filling of the cylinder under full pressure at all loads; consequently, less compression is obtained under light loads than under full loads. High economy is dependent upon high compression, so that lower economy will be obtained at light loads than with a "hit or miss" governor.

"Throttle" governing is much superior to "hit or miss" governing for engines burning the heavier fuels, such as kerosene or distillate. To successfully burn these heavier fuels, the temperature of the cylinder must be kept quite high. With a "hit or miss" governor, the temperature is lowered every time the engine is governed. This is especially true at light loads, where the engine may miss ten or twelve impulses between power strokes. During all this time the exhaust valve is held open, and if ten impulses were missed, it would mean that the piston drew in air through the open exhaust twenty times and exhausted air twenty times. Filling the cylinder twenty times with cold air would certainly lower the temperature to such an extent that kerosene or distillate entering the cylinder would not be readily vaporized. If a governor is to maintain constant engine speed, its various parts must work freely, and there must be no lost motion in any of the connections.

Principles of Governing

Most automatic governors rely upon centrifugal force for their operation. The illustration shows a simple fly ball



governor, which makes use of centrifugal force to control the speed of the engine. The weights A are suspended from the shaft B by means of the arms C. The shaft B is generally gear driven from the cam shaft or crank shaft of the engine, but is sometimes belt driven. The speed, therefore, will vary with the speed of the engine. The weights A rotate with the shaft, and a centrifugal force is set up, which has a tendency to throw the weight away from the shaft. The weights are generally held together by two springs, one of which is shown at E. As the tension of the springs is increased, more centrifugal force is required to throw out the weights; that is, they have to be rotated at a higher rate of speed. The outward motion of the weights is transmitted to the collar F through the links D. As speed increases, the weights fly out and the collar F is pulled up; as speed decreases the weights drop in and the collar is pushed down. For a "hit or miss" governor an arrangement is made whereby the exhaust valve is held open by a detent arm when the governor weights fly out a certain distance, and the valve is released when the weights drop back. For a "throttle" governor, the upward and downward motion of the collar F closes and opens a valve between the carburetor and the engine, thereby regulating the amount of mixture entering the cylinder at each suction or intake stroke.—From The Gas Engine, by A. C. Campbell, Manitoba Agricultural College.



Farm Prosperity is Directly Dependent on Good Roads

The only kind of road surface that will not be torn by either fast moving vehicles or heavy slowly-driven trucks are those known as Permanent Highways of Concrete.

Concrete is just as important a factor in improving Road conditions as it is in bettering a farm. It makes a Road as durable and satisfactory as your Concrete Silo, Concrete Tank or Concrete Barn Foundation.