No. 793,601. PATENTED JUNE 27, 1905.

E. W. MOORE.

GEARING.

APPLICATION FILED JULY 29, 1904.

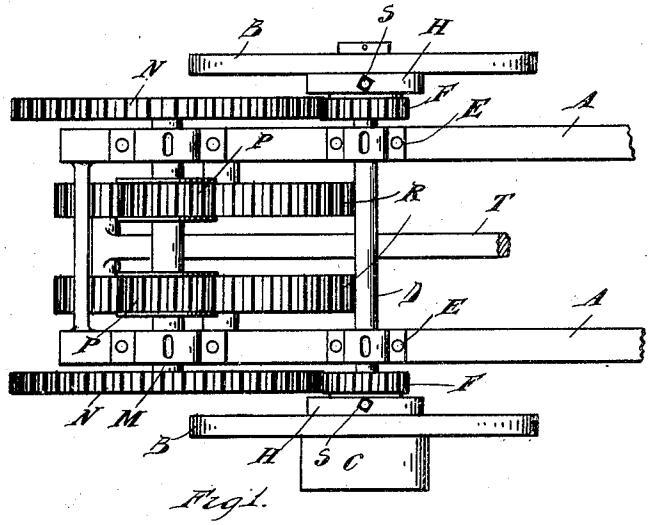


Fig. 1.

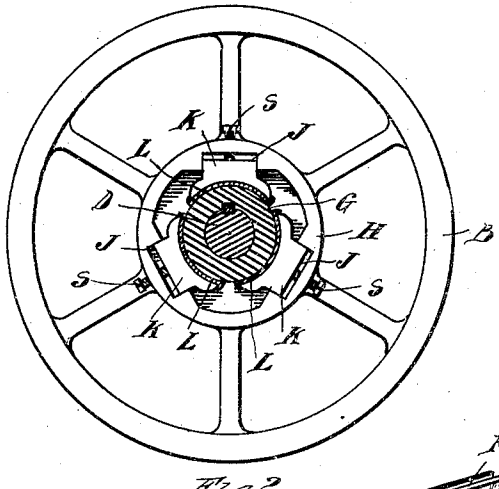


Fig. 2.

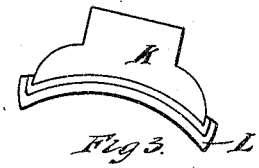


Fig. 3.

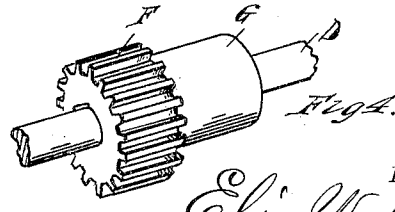


Fig. 4.

WITNESSES.

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UNITED STATES PATENT OFFICE.

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GEARING.

SPECIFICATION forming part of Letters Patent No. 793,601, dated June 27, 1905.

Application filed July 29, 1904. Serial No. 218,599.

To all whom it may concern:

Be it known that I, ELI W. MOORE, a citizen of the United States, residing at Ann Arbor, county of Washtenaw, State of Michigan, have invented a certain new and useful Improvement in Gearing; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to gearing which is particularly adaptable to hay-presses; and it consists in certain friction devices interposed between the fly-wheel and the power-shaft, operating the beater and such power-shaft, whereby in case of any unusual obstruction the fly-wheel can continue its revolution without producing undue strain or breakage and yet be sufficiently rigidly connected to the shaft to operate it under ordinary circumstances; also, in means for adjusting such frictional appliances to attain the results specified; and it consists in the arrangement and combination hereinafter described and claimed.

Inasmuch as hay-presses of this character are now well known and as they have been the subject-matter of a patent lately issued to me—to wit, No. 700,697—it is unnecessary to describe them in detail.

In the drawings, Figure 1 represents the plan view of a portion of the gearing of such a hay-press, showing the driving-shaft, balance-wheels, and the gearing. Fig. 2 is a sectional view of such gearing, the fly-wheel being shown in the circumferential lines to which reference-letter B is attached. Fig. 3 is an elevation of one of the friction-sectors somewhat enlarged. Fig. 4 is a perspective view of part of the shaft, one of the pinions, and of the friction-drum.

Similar letters refer to similar parts.

In the drawings, A A represent the framework and sides of the hay-press. B B are the fly-wheels. C is a driving-pulley. The fly-wheels and driving-pulley are mounted upon the shaft D. This shaft is journaled in boxes E E on the framework. F F are pinions also mounted upon the shaft D, being keyed thereto in the usual manner. Each pinion is cast with the drum G, Fig. 4, which is integral with it, and consequently fixed to the shaft by the same means that the pinion is fixed. Integral with each fly-wheel is a hub H H, which has preferably three jaws J J cast therein. Slidably inserted in these jaws are friction-sectors K K. Firmly attached to the faces of each of these sectors are friction-plates L L, made of any friction material, such as leather or soft metal, like annealed copper or any other suitable friction material. These friction-sectors K K are controlled in the jaws J J by means of the set-screws S S, whereby they may be forced into close engagement with the drums G G. It is obvious that by forcing them into such engagement the fly-wheel, which otherwise might turn loose upon the shaft D, would be frictionally connected thereto through the drums G G, and thereby held rigidly against turning thereon. In case, therefore, the shaft D and fly-wheels being turned under rapid motion if anything occurs to arrest the shaft in such motion the friction-sectors K K would slide upon the outer surface of the drums G G with a resistance proportionate to the amount of pressure given by the set-screws S S. The pinions F F, driving the spur-wheels N N, are attached rigidly to the shaft M, on which are also mounted rigidly two spur-pinions P P. These in turn operate the racks R R and which through the medium of the connecting-rod T control the feeders. (Not shown.)

The mode of operation is sufficiently clear from the foregoing description.

What I claim is—

1. The combination of the shaft D, the drum G, the pinion F being cast integral therewith and both rotating with said shaft, a fly-wheel hub, friction-sections adjustably mounted therein and engaging the drum G, and set-screws engaging between said hub and said friction-sections whereby the pressure of said sections on said drum may be controlled, substantially as described.

2. The combination of a shaft D, a drum

rigidly mounted thereon and rotating therewith, said drum having cast integral with it the pinion-piece F, a plurality of friction-sectors surrounding the plain portion of said drum and engaging the same with their inner surfaces, a fly-wheel hub concentric with said shaft and drum and surrounding said sectors, and set-screws bearing against the inner face of said hub and against the outer portions of said sectors whereby the pressure of said sectors against said drum may be regulated, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

ELI W. MOORE.

Witnesses:

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