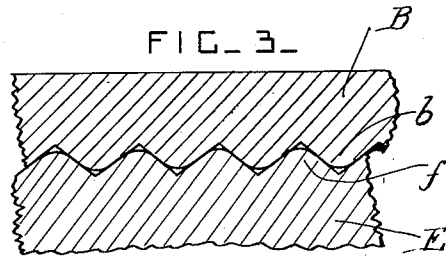
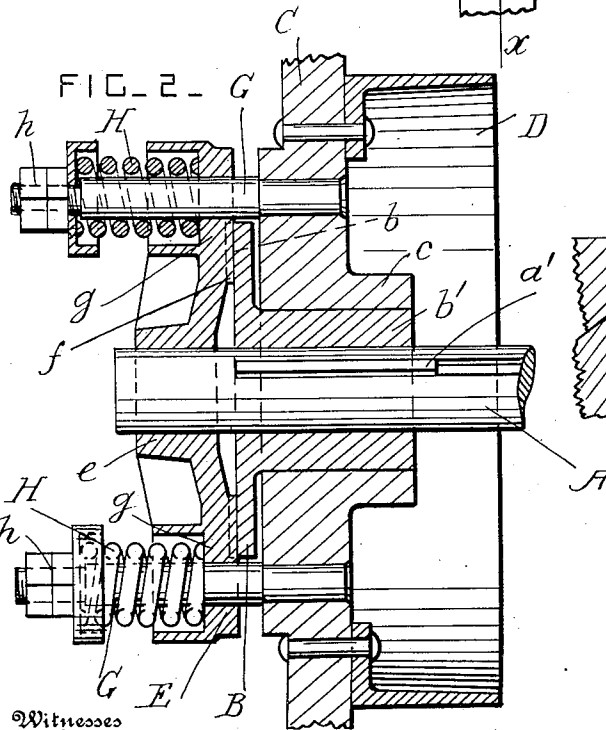
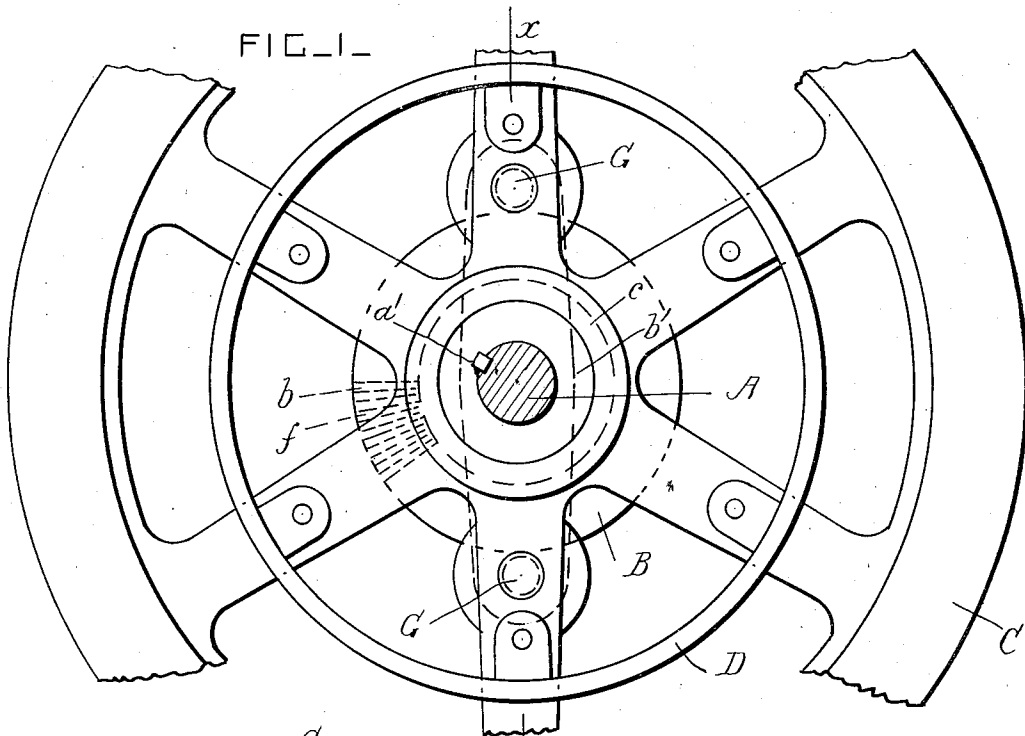


D. S. BEARD.
DRIVING CLUTCH.

APPLICATION FILED JUNE 1, 1909.

954,774.

Patented Apr. 12, 1910.



Inventor

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By

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Witnesses

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UNITED STATES PATENT OFFICE.

DANIEL S. BEARD, OF WAYNESBORO, PENNSYLVANIA, ASSIGNOR TO THE GEISER MANUFACTURING COMPANY, OF WAYNESBORO, PENNSYLVANIA.

DRIVING-CLUTCH.

954,774.

Specification of Letters Patent. Patented Apr. 12, 1910.

Application filed June 1, 1909. Serial No. 499,424.

To all whom it may concern:

Be it known that I, DANIEL S. BEARD, a citizen of the United States, residing at Waynesboro, in the county of Franklin and State of Pennsylvania, have invented certain new and useful Improvements in Driving-Clutches; and I do hereby 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 appertains to make and use the same.

This invention relates to driving clutches or couplings which slip and disengage automatically when the load exceeds a prearranged amount; and it consists in the novel construction and combination of the parts hereinafter fully described and claimed.

In the drawings, Figure 1 is a side view of the clutch with portions of the fly-wheel broken away. Fig. 2 is a longitudinal section, taken on the line $x-x$ in Fig. 1. Fig. 3 is a detail view showing the teeth or serrations of the clutch members.

A is the shaft of a machine which is driven by means of the clutch. This shaft is preferably the driving shaft of a hay-baling press or other machine in which the resistance is variable, and in which sudden and greatly increased resistances occasionally occur.

B is a clutch-member rigidly secured on the shaft A by a key a' and provided with a disk having teeth or serrations b on its face.

C is a fly-wheel, the hub c of which is journaled to revolve freely on the hub b' of the clutch-member B.

D is a driving-pulley, or other equivalent driving-device, which is rigidly secured to the fly-wheel C, and which is driven from an engine by means of a driving-belt in the usual manner.

E is a slidable clutch-member the hub e of which is slidable and revoluble on the shaft A. The clutch-member E is provided with a disk having teeth or serrations f which are normally held in engagement with the teeth b .

G are driving-pins which are secured to the fly-wheel, and which project through holes in lugs g on the clutch-member E.

H are springs arranged around the pins G, and h are adjusting nuts screwed on the free end portions of the pins G and pressing

the springs H against the slidable clutch-member E.

The power of the engine is applied to the fly-wheel by means of the driving-pulley D, and when a sudden load comes on the shaft A of the press or machine, the slidable clutch-member E is forced longitudinally of the shaft out of engagement with the clutch-member B, so that the fly-wheel continues to be revolved without causing any accident or injurious strain to any part of the mechanism. The angle of the clutch teeth, and the pressure of the springs, are arranged and adjusted so that the clutch-members are automatically forced out of engagement with each other when the load on the shaft A exceeds a prearranged amount.

What I claim is:

1. The combination, with a revoluble shaft for transmitting power, and a clutch-disk rigidly secured thereon; of a fly-wheel journaled to revolve independent of the said shaft and provided with means for revolving it, said fly-wheel being arranged to one side of the said disk, a slidable and revoluble clutch-disk mounted on the said shaft on the other side of the first said disk from the fly-wheel, and driving connections provided with springs and arranged between the fly-wheel and the slidable clutch-disk, said springs operating to press the two clutch-disks together so that they normally revolve simultaneously and slip when the said transmitting shaft is subjected to an excessive resistance.

2. The combination, with a revoluble shaft for transmitting power, and a clutch-disk provided with a hub on one side which is rigidly secured on the said shaft; of a fly-wheel journaled loose on the said hub and provided with means for revolving it, a slidable and revoluble clutch-disk journaled loose on the said shaft, and driving connections provided with springs and arranged between the said fly-wheel and the slidable and revoluble clutch-disk, said springs operating to press the two clutch-disks together.

In testimony whereof I have affixed my signature in the presence of two witnesses.

DANIEL S. BEARD.

Witnesses:

G. A. ANDERSON,
J. STOVER PRICE.