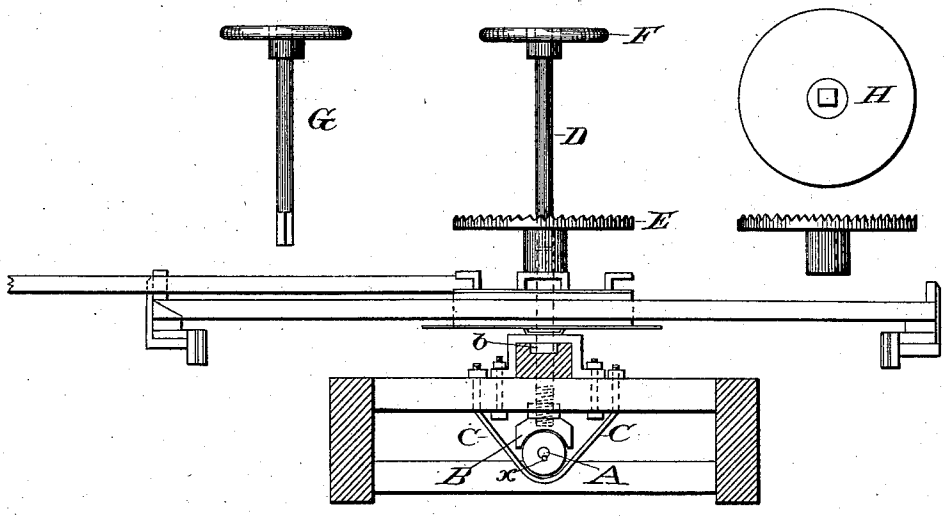
(No Model.)

H. WAGNER, Sr.

FRICTION BRAKE FOR HARVESTERS.

No. 294,416. Patented Mar. 4, 1884.

Fig. 1.



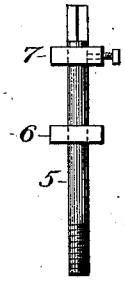


Fig. 3.

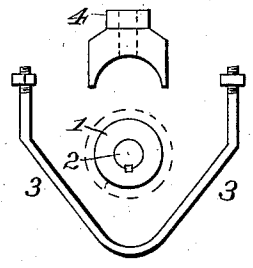
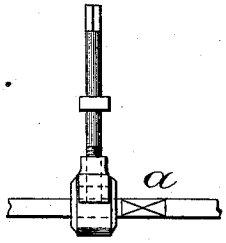


Fig. 2.



Witnesses:
by Lynch
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Inventor:
Hubert Wagner Jr

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

HUBERT WAGNER, SR., OF BURLINGTON, WISCONSIN.

FRICTION-BRAKE FOR HARVESTERS.

SPECIFICATION forming part of Letters Patent No. 294,416, dated March 4, 1884.

Application filed August 27, 1883. (No model.)

To all whom it may concern:

Be it known that I, HUBERT WAGNER, Sr., a citizen of the United States, residing at Burlington, in the county of Racine and State of Wisconsin, have invented a new and useful Double-Friction Brake for the Pitts Horse-Power, of which the following is a specification.

My invention relates to improvements in brakes for the Pitts horse-power, in which the friction or power by which the motion of the horse-power is controlled is obtained by a direct pressure or resistance to the main shaft, and more particularly the manner or means of obtaining or applying this pressure or friction on the main shaft, or, in other words, its manner of conveyance to the said main shaft, as distinguished from the principle of friction as a means of retarding motion.

The object of my improvement is to provide a means of more effectually governing and controlling the motion of the Pitts horse-power at all times and under all emergencies.

I am aware that the principle of friction as a resistance of motion is elementary, and the claim which I make for my improvement is the manner of applying the friction, and also the mode of conveying it to the point of contact. In order to obtain any considerable friction we must have a leverage to produce it, and in my invention I obtain my friction by the aid of a screw or direct leverage, and I also claim in my invention a double friction, which is obtained by no other brake known to me.

I obtain the object of my invention by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a section of the Pitts horse-power, showing the brake in position, the drawing being an end section of the power, showing the range and position of the power-platform and the sweep. Fig. 2 is the brake complete, with the exception of the brake-wheel and foot-rest, and showing the relation of the brake to the main shaft of the power. Fig. 3 represents the entire brake disconnected and separate.

In Fig. 1 A is a flanged wheel fitted onto the main shaft of the horse-power *x*, and held firmly in its place by a key, as shown in the drawings.

B is a friction yoke or shoe let down into and between the flanges of the friction-wheel A, and when the power is in motion is within a quarter of an inch of contact with the face of this wheel between the flanges. C C is an iron strap suspended from the center girt of the horse-power frame, and passes under and around the lower part of this friction-wheel between the flanges, and it is this strap C C which produces the double friction when the brake is applied to this friction-wheel A.

D is the brake-rod, which passes through the center of the foot-rest E, which is a solid circular sheet of cast-iron, with notches cut into its surface, so as to provide a foothold for the driver, and also directly through the center of the bull or main wheel, acting as an axis on which the bull-wheel revolves entering the top of the friction-yoke B directly beneath the center girt of the horse-power frame. On the lower end of this brake-rod is cut a thread which works inside of a screw-thread cut in the friction-yoke B, as is more fully shown in Fig. 3. While this brake-rod revolves, when the brake is being applied, it is arranged so that it does not move up or down. To accomplish this it is held firmly in its place in the center of the horse-power by two shoulders, one being stationary directly under the bull-wheel, and the other a movable shoulder being let down on the brake-rod to the bull-wheel and secured to the brake-rod by a set-screw. The thread on the end of the brake-rod D and the thread cut into the friction-yoke B are cut in such a manner that if the brake-rod D be revolved the friction-yoke B will be carried up or let down the thread on the brake-rod D in accordance with the way the wheel is revolved. For instance, if the brake-rod D is revolved from left to right, the friction-yoke B will be forced down upon the friction-wheel A, and vice versa.

F is the brake-wheel, and while used as a means of revolving the brake-rod it is also designed as a stationary seat for the driver. The brake-rod is cut in two after entering the foot-rest E, so as to be more easily handled while moving the power. The foot-rest always revolves with the brake-rod when the brake is applied.

G represents the upper half of the brake-rod detached; and H represents the circumference of the foot-rest, showing manner in which the brake-rod enters it. Now, it is obvious that if the brake-rod be revolved it will force the friction-yoke B down upon the friction-wheel A, and the friction-wheel A will in turn be forced

down upon the friction-strap C C, and the double friction will thus be obtained—that is, a friction both above and below—and, if sufficient pressure be brought to bear, the motion of the main shaft entirely retarded.

Fig. 2 shows the relation of the brake to the main shaft *a*. Fig. 3 represents the brake in its entirety detached from the power, and each important part from itself, 1 being the friction-wheel; 2, the point where the main shaft passes through the friction-wheel, 3 3 being the friction-strap; 4 being the friction-yoke, showing the thread cut through its center; 5 being the brake-rod, showing the thread cut upon its end; 6 and 7 being the shoulders on the brake-rod, which prevent its working up and down, thereby making it necessary for the friction-yoke to work up and down upon the brake-rod.

I am aware, as before noticed, that the principle of friction as a means of retarding motion is elementary. I therefore do not claim that principle, broadly; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, in a brake for Pitts horse-power, of a friction-yoke, B, and a friction-strap, C C, with a friction-wheel, A, being the method by which I obtain a double friction, all substantially as set forth.

2. In a brake for Pitts horse-power, the combination of a perpendicular brake-rod, D, with a screw cut on its end, which enters a screw-thread cut into a friction-yoke, B, the brake-rod D having two shoulders upon it, so as to prevent its working up or down upon being revolved, and the thread cut in such a manner that upon the brake-rod D being revolved the friction-yoke will be forced down upon or lifted from the friction-wheel A, as substantially specified.

HUBERT WAGNER, SR.

Witnesses:
EDWARD E. MILLS,
JNO. REYNOLDS.