

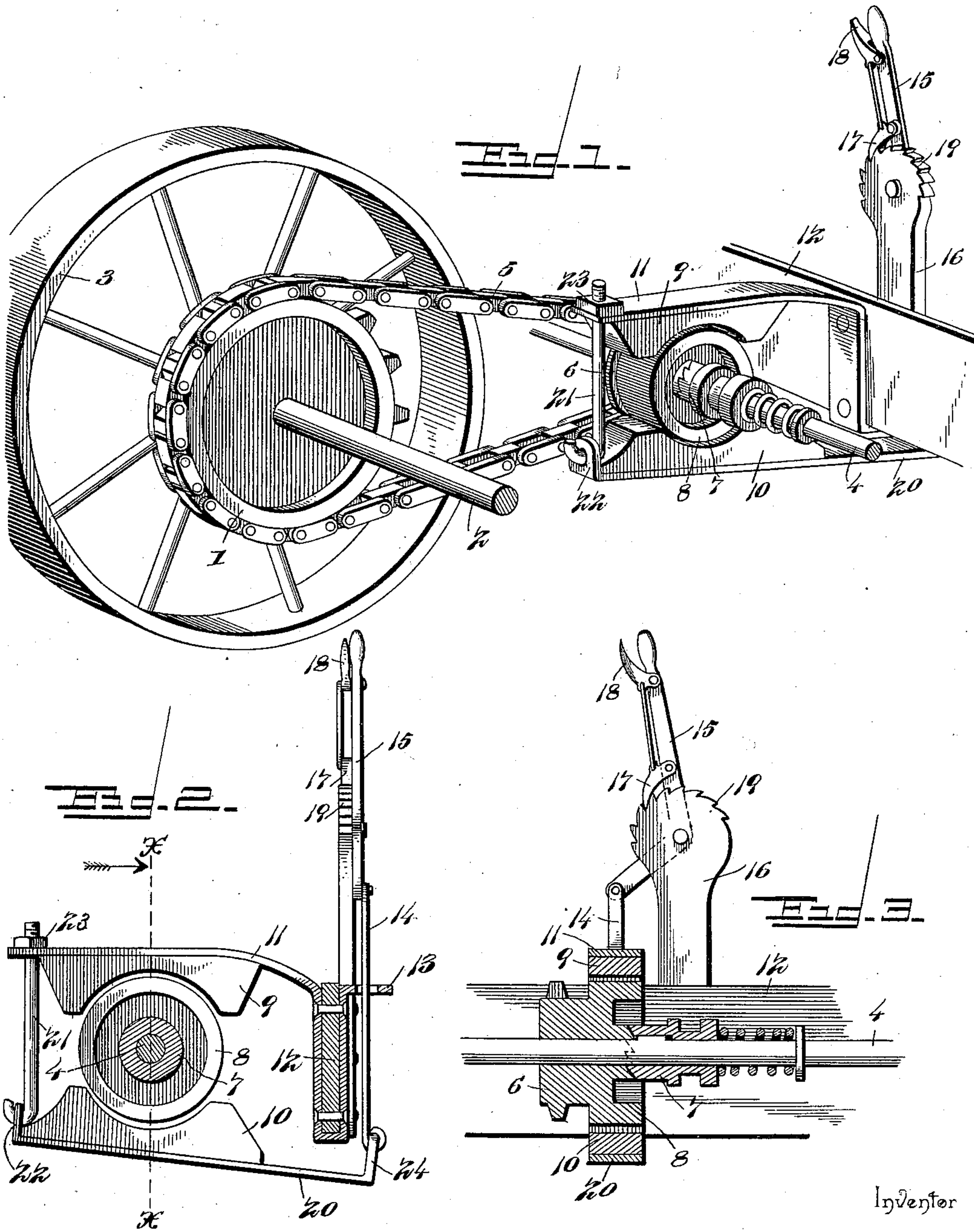
(No Model.)

C. H. ANSPACH.

BRAKE MECHANISM FOR BINDERS AND MOWERS.

No. 588,941.

Patented Aug. 31, 1897.



Inventor

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UNITED STATES PATENT OFFICE.

CHARLES H. ANSPACH, OF CEDAR GROVE, INDIANA.

BRAKE MECHANISM FOR BINDERS AND MOWERS.

SPECIFICATION forming part of Letters Patent No. 588,941, dated August 31, 1897.

Application filed September 24, 1896. Serial No. 606,844. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. ANSPACH, a citizen of the United States, residing at Cedar Grove, in the county of Franklin and State of Indiana, have invented a new and useful Brake Mechanism for Binders and Mowers, of which the following is a specification.

In operating binders and mowers considerable difficulty has been experienced in making a square turn when the end of a swath has been reached prior to recrossing the field, the turn usually being round, particularly so if the ground is rolling, thereby resulting in the grain-wheel rolling down a quantity of the grain which the divider has failed to gather. These objections are obviated by the present invention, which provides a simple and effective brake mechanism for holding the machine in check on sloping ground, when making a turn on a hillside, and when transporting the machine over a declining surface, whether a field or road.

The brake mechanism is applied directly to the shaft receiving its motion from the drive-wheel or axle and from which the operating parts of the machine derive their motion. Inasmuch as the shaft in question is driven by means of a sprocket-chain and sprocket-pinion from a sprocket-wheel applied to either the drive-wheel or axle, it has been found expedient to apply the brake mechanism to the sprocket-pinion, the latter for this purpose being supplied with a brake-wheel upon which brake-shoes are caused to bear when it is required to retard the movement of the machine.

For a full understanding of the merits and advantages of the invention reference is to be had to the accompanying drawings and the following description.

The improvement is susceptible of various changes in the form, proportion, and the minor details of construction without departing from the principle or sacrificing any of the advantages thereof, and to a full disclosure of the invention an adaptation thereof is shown in the accompanying drawings, in which—

Figure 1 is a detail view in perspective showing the means for transmitting motion from the drive-wheel of a harvester, binder, or mower to the shaft for actuating the operating parts and illustrating the application of

the invention. Fig. 2 is a detail view in elevation of the brake mechanism. Fig. 3 is a sectional detail on the line X X of Fig. 2, looking to the right, as indicated by the arrow.

Corresponding and like parts are referred to in the following description and indicated in the several views of the drawings by the same reference-characters.

The sprocket-wheel 1 may be secured to either the axle 2 or ground-wheel 3, and motion is transmitted therefrom to the power-driven shaft 4 by means of the sprocket-chain 5 and sprocket-pinion 6, the latter being secured to the shaft 4 by means of the usual clutch 7. The sprocket-pinion 6 is mounted loosely upon the shaft 4, and the clutch 7 is movable upon the said shaft, so as to clutch or release the sprocket-pinion, as required, and is caused to revolve with the shaft by a feather-and-spline connection in the ordinary way.

A brake-wheel 8 is applied to or formed with the sprocket-pinion 6, and its peripheral surface is smooth, and brake-shoes 9 and 10 are disposed above and below the brake-wheel and are adapted to be brought forcibly in engagement therewith when it is required to retard the forward motion of the machine. These brake-shoes 9 and 10 have their inner sides recessed to conform to the curvature of the brake-wheel, so as to secure an extended frictional engagement therewith. A spring-arm 11 is attached to a sill or beam 12 of the framework of the machine and carries the brake-shoe 9 and normally holds the latter out of engagement with the brake-wheel.

The end of the spring-arm 11 adjacent to the beam 12 is bent so as to embrace the bottom and adjacent sides of the beam, and its terminal portion is bent to extend about at right angles to the said beam 12, as shown at 13, and is apertured for the passage thereof of a link 14, which is connected at its upper end to a bell-crank lever 15, fulcrumed to a standard 16 and carrying a pawl 17, operated by means of a hand-latch 18 in the ordinary way. The upper end of the standard 16 is curved and toothed, as shown at 19, and the pawl 17 is adapted to engage with any one of the series of teeth 19, so as to hold the lever 15 in a located position.

A plate 20, having its end portions bent ver-

tically, carries the brake-shoe 10 and is connected at one end with the spring-arm 11 by means of a hooked rod 21, whose upper end is threaded and passes through an opening in the free end of the arm 11 and whose lower end is hooked and engaged with the bent end 22 of the plate 20 by passing through an opening therein. A nut 23 is mounted upon the threaded end of the rod 21, so as to relatively adjust the parts 11 and 20, bearing the brake-shoes. The lower end of the link 14 connects with the bent end 24 of the plate 20.

The normal tendency of the spring-arm 11 is to hold the brake-shoe 9 away from the brake-wheel 8, and the connections 21 and 14 for supporting the plate 20 are so adjusted as to admit of the lower brake-shoe standing away from the said brake-wheel. In the event of it being required to apply the brake mechanism the lever 15 is operated and causes the brake-shoes 9 and 10 to be brought together and grip the brake-wheel from diametrically opposite points, thereby retarding the motion of the machine, the application of the brakes being regulated by moving the hand-lever 15, so as to cause the brake-shoes to grip the brake-wheel more or less firmly.

Having thus described the invention, what is claimed as new is—

1. In a harvesting-machine, the combination of an axle, a ground-wheel, a sprocket-wheel mounted to revolve with the ground-wheel, a shaft in operative relation with the operating mechanism of the harvester for transmitting motion thereto, a sprocket-pinion loosely mounted upon the said shaft, a sprocket-chain between the sprocket-wheel

and sprocket-pinion, a brake-wheel applied to the sprocket-pinion to turn therewith independently of the shaft, a brake applied to the brake-wheel for retarding the movement of the machine or ground-wheel whether in or out of gear, and a clutch for connecting the brake-wheel and sprocket-pinion with the aforesaid shaft, substantially as specified.

2. In a harvesting-machine, the combination of a power-driven shaft, a brake-wheel having clutched engagement therewith and driven directly from the drive-wheel, a spring-arm overhanging the brake-wheel and bearing a brake-shoe normally held out of action, a second brake-shoe located below the brake-wheel and suspended from the spring-arm, and a hand-lever operatively connected with the second brake-shoe for applying the brakes, substantially as set forth.

3. In a harvesting-machine, the combination of a power-driven shaft, a brake-wheel mounted thereon, a spring-arm extending over the brake-wheel and provided with a brake-shoe, a plate located below the brake-wheel and bearing a brake-shoe, means for loosely and adjustably connecting one end of the plate with the free end of the spring-arm, and a hand-lever operatively connected with the other end of the said plate, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CHARLES H. ANSPACH.

Witnesses:

CHARLES SANWINE, Jr.,
 WM. BUNZ, Jr.