

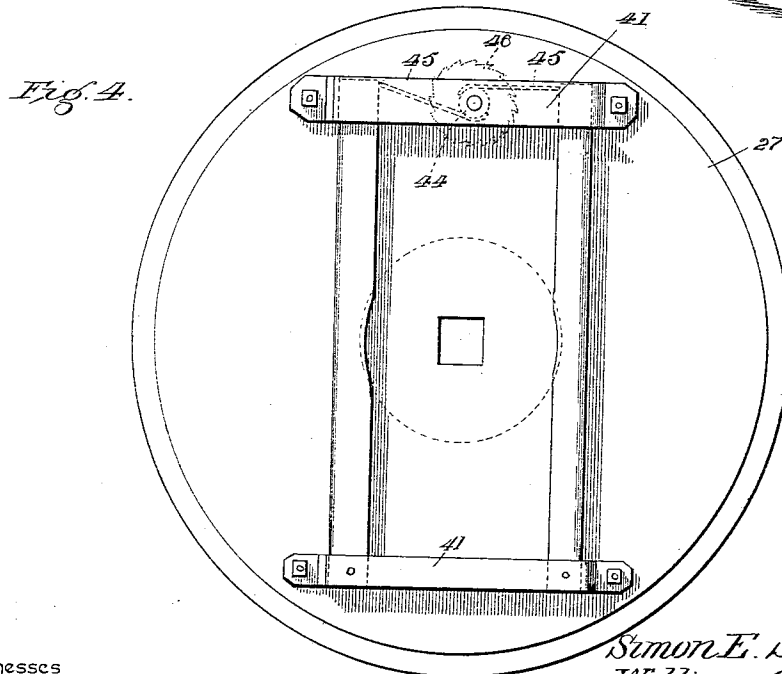
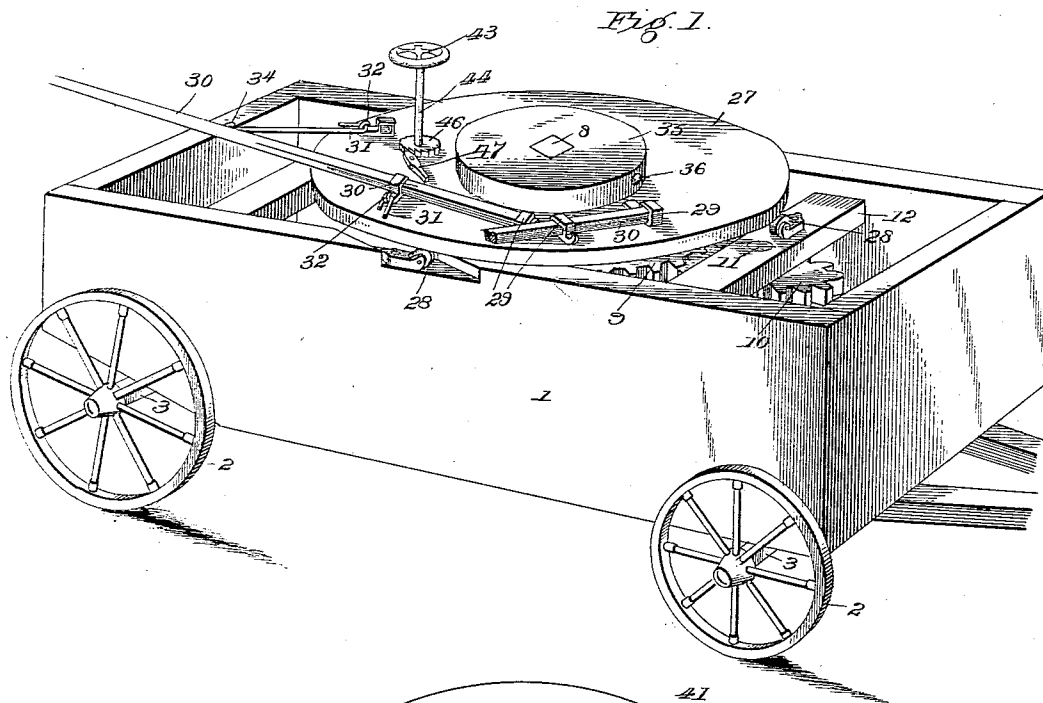
(No Model.)

3 Sheets—Sheet 1.

S. E. STROBEL & W. C. CONE.
HORSE POWER.

No. 559,914.

Patented May 12, 1896.



Witnesses

J. M. Johnson
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By their Attorneys.

Inventors

Simon E. Strobel and
William C. Cone

C. A. Snow & Co.

(No Model.)

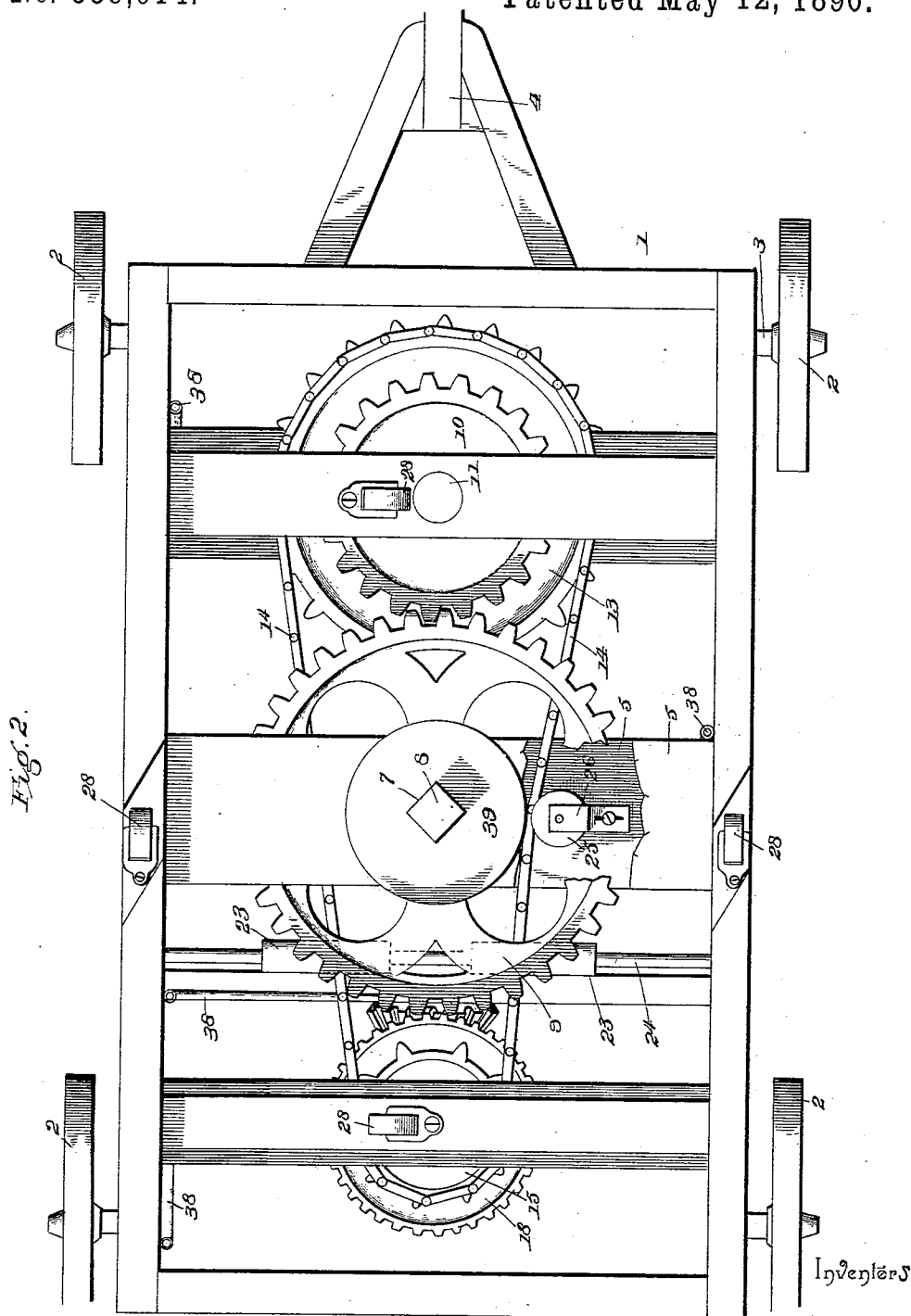
3 Sheets—Sheet 2.

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A. Johnson
W. C. Cone

By their Attorneys.

Simon E. Strobel
William C. Cone

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

SIMON E. STROBEL AND WILLIAM C. CONE, OF DE SMET, SOUTH DAKOTA,
ASSIGNORS OF ONE-THIRD TO NANCY M. PATCHEN, OF SAME PLACE.

HORSE-POWER.

SPECIFICATION forming part of Letters Patent No. 559,914, dated May 12, 1896.

Application filed November 15, 1894. Serial No. 528,892. (No model.)

To all whom it may concern:

Be it known that we, SIMON E. STROBEL and WILLIAM C. CONE, citizens of the United States, residing at De Smet, in the county of Kingsbury and State of South Dakota, have invented a new and useful Horse-Power, of which the following is a specification.

Our invention relates to a horse-power for driving machinery, such as baling-presses, threshing-machines, and the like; and it has for its objects to provide a simple, inexpensive, and efficient apparatus adapted to multiply the speed of the driving-shaft, the same being provided with simple means for controlling the speed to suit the machine in connection with which it is used.

Further objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claim.

In the drawings, Figure 1 is a perspective view of a machine embodying our invention. Fig. 2 is a plan view, partly broken away, to show the multiplying mechanism below the platform. Fig. 3 is a longitudinal section of the same with the platform or table occupying a position at a right angle to that shown in Fig. 1 to illustrate the brake-bars in cross-section. Fig. 4 is a bottom plan view of the platform or table. Fig. 5 is a detail sectional view of the brake-bar-operating mechanism.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a portable frame mounted upon the ground-wheels 2, the front wheels being mounted upon a pivotal axle 3, to which is attached a tongue 4. At the center of the frame, which is in the form of a wagon-body, are arranged the upper and lower parallel cross-bars 5, provided at their centers with bearings 6, in which is mounted the vertical drive-shaft 7, provided above the upper cross-bar with a squared or angular terminal 8. Fixed to the drive-shaft between the upper and lower cross-bars is a master-gear 9, which meshes with a pinion 10 on the vertical counter-shaft 11, mounted in bear-

ings in the parallel upper and lower cross-bars 12. This counter-shaft carries, in addition to said pinion, the sprocket or chain wheel 13, of large diameter, which is connected by the chain 14 with a small chain-wheel 15 on a second counter-shaft 16, arranged near the rear end of the framework and mounted in upper and lower cross-bars 17. This second counter-shaft is provided at its lower end with a bevel-gear 18, meshing with a bevel-pinion 19 of the horizontal longitudinally-disposed driven shaft 20, mounted in suitable bearings 21 near the bottom of the framework. This driven shaft is provided with squared terminal 22 for engagement with a socket of a connecting-shaft of the ordinary construction. (Not shown.) Intermediate portions of the chain travel upon the antifriction-rolls 23, mounted upon the transverse spindle 24 and support the weight of the intermediate portion of the chain to prevent deflection and binding upon the teeth of the chain-wheels; also, a chain-tightening device, consisting of an idle pulley or roll 25, mounted upon an adjustable bracket 26, is employed to take up slack in the chain and cause an effective transmission of motion.

Fitted upon the upper squared end of the driving-shaft is a rotary platform or table 27, bearing at or near its periphery upon the antifriction bearing-rolls 28, arranged at intervals thereunder on the framework, and provided upon its upper side with a series of keepers 29 for the reception of the inner reduced ends of the sweeps 30, to which are adapted to be attached the draft-animals. Said sweeps are held from deflection during operation by means of the tensile braces 31, attached, temporarily, to hooks 32, formed integral with the said keepers. The inner ends of the braces are hooked, as shown at 33, for engagement with said hooks 32 and are connected at their outer ends to the sweeps by means of interlocking eyes, as shown at 34. The table is provided upon its upper side with an extension or hub 35, in which is arranged a removable pin 36 for engagement with a transverse perforation 37 in the driving-shaft.

Suitable oil-passages 38 communicate with the several bearings of the mechanism and extend to within easy reach from the exterior of the apparatus, whereby the parts may be
 5 lubricated without displacing any of them.

Attached to the upper side of the upper cross-bar, in which the driving-shaft is mounted, is a stationary peripherally-grooved brake-wheel 39, and pivotally connected to the under
 10 side of the table, and lying upon opposite sides of said brake-wheel, are the brake-bars 40, fitting at their extremities in guides 41. Mounted in a vertical bearing 42 in the platform, and provided at its upper end with a
 15 hand-wheel 43, is a brake-shaft 44, provided at its lower end, below the plane of the platform, with a drum 44, to which are connected cables or chains 45, attached to the free ends
 20 of the brake-bars. By reeling said cables or chains through the rotation of the hand-wheel the free ends of the brake-bars may be drawn toward each other to cause the bars to bind against opposite sides of the brake-wheel, and thus regulate the speed of rotation
 25 of the driving-shaft. A ratchet-wheel 46 is attached to the brake-shaft, and arranged in operative relation therewith is a dog 47 for holding the same at the desired adjustment.

The operation of the above mechanism will
 30 be readily understood from the foregoing description and the applicability thereof to various kinds of machinery will be obvious; and it will be seen, furthermore, that various changes in the form, proportion, and minor
 35 details of construction may be resorted to

without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described the invention, we claim—

In a machine of the class described, the
 40 combination with a portable frame, of a vertical main shaft mounted in bearings in upper and lower transverse bars 5, a horizontal rotary platform or table secured to the upper
 45 end of the main shaft, a stationary brake-wheel secured to the upper transverse bar with its upper surface contiguous to the lower surface of the rotary platform or table and concentric with the main shaft, a keeper 41
 50 secured to the platform or table, brake-bars pivoted to the under side of the platform and operating at their free ends in said keeper, means carried by and operated from the platform or table for drawing the free ends of
 55 said brake-bars toward each other to engage the surface of the stationary brake-wheel, a counter-shaft connected by gearing with the main shaft, a second counter-shaft connected by multiplying-gear with the first-named
 60 counter-shaft, and a driven shaft geared to the second counter-shaft, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

SIMON E. STROBEL.
 WILLIAM C. CONE.

Witnesses:

GEO. W. LATTIN,
 H. R. FOLSOM.