

No. 875,854.

PATENTED JAN. 7, 1908.

C. H. SCOTT.

BRUSH DRIVE FOR GRAIN CLEANING MACHINES.

APPLICATION FILED SEPT. 27, 1904.

3 SHEETS—SHEET 1.

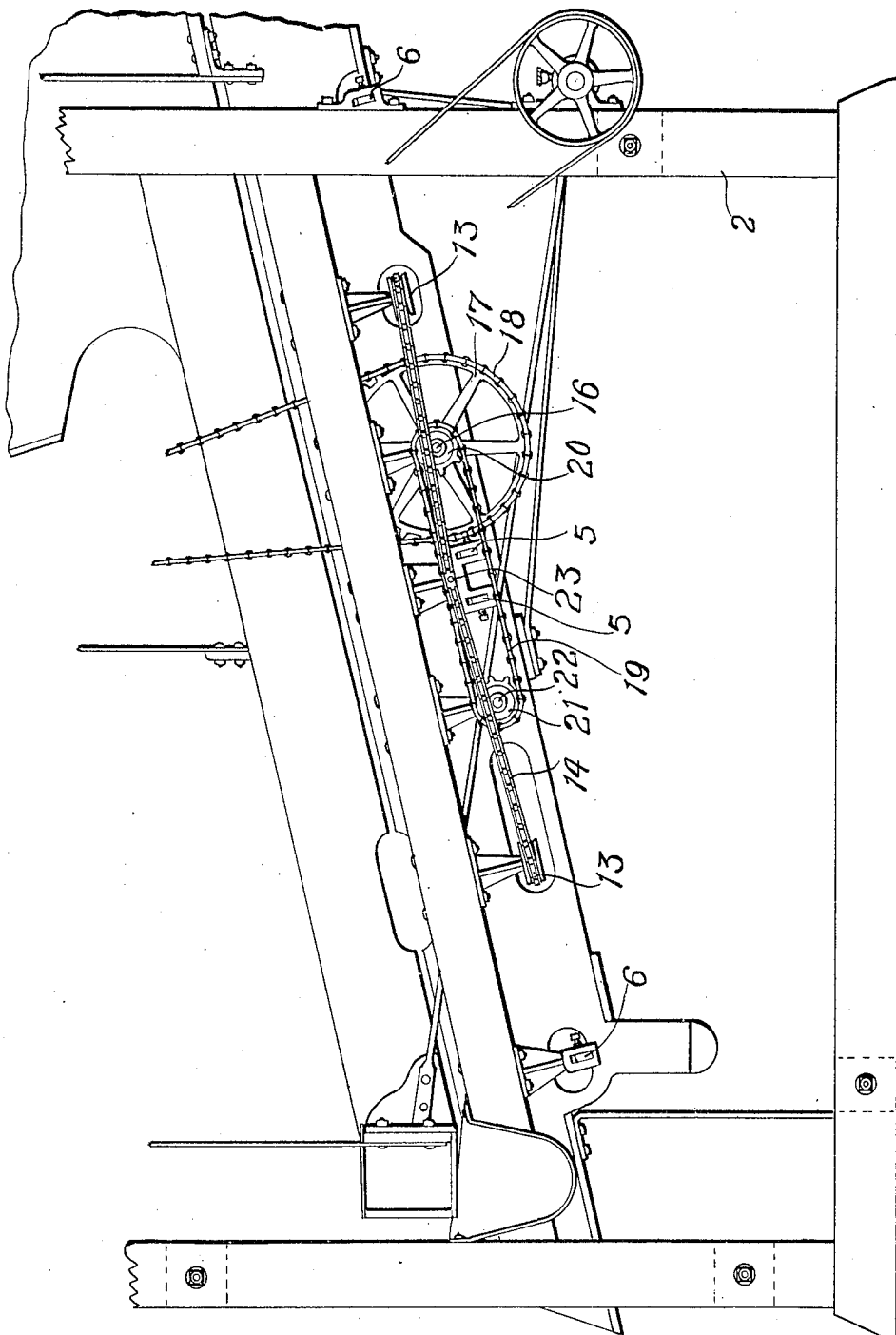


Fig. 1.

WITNESSES

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*C. Macnamara*

INVENTOR

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BY *Paul & Paul*  
HIS ATTORNEYS.

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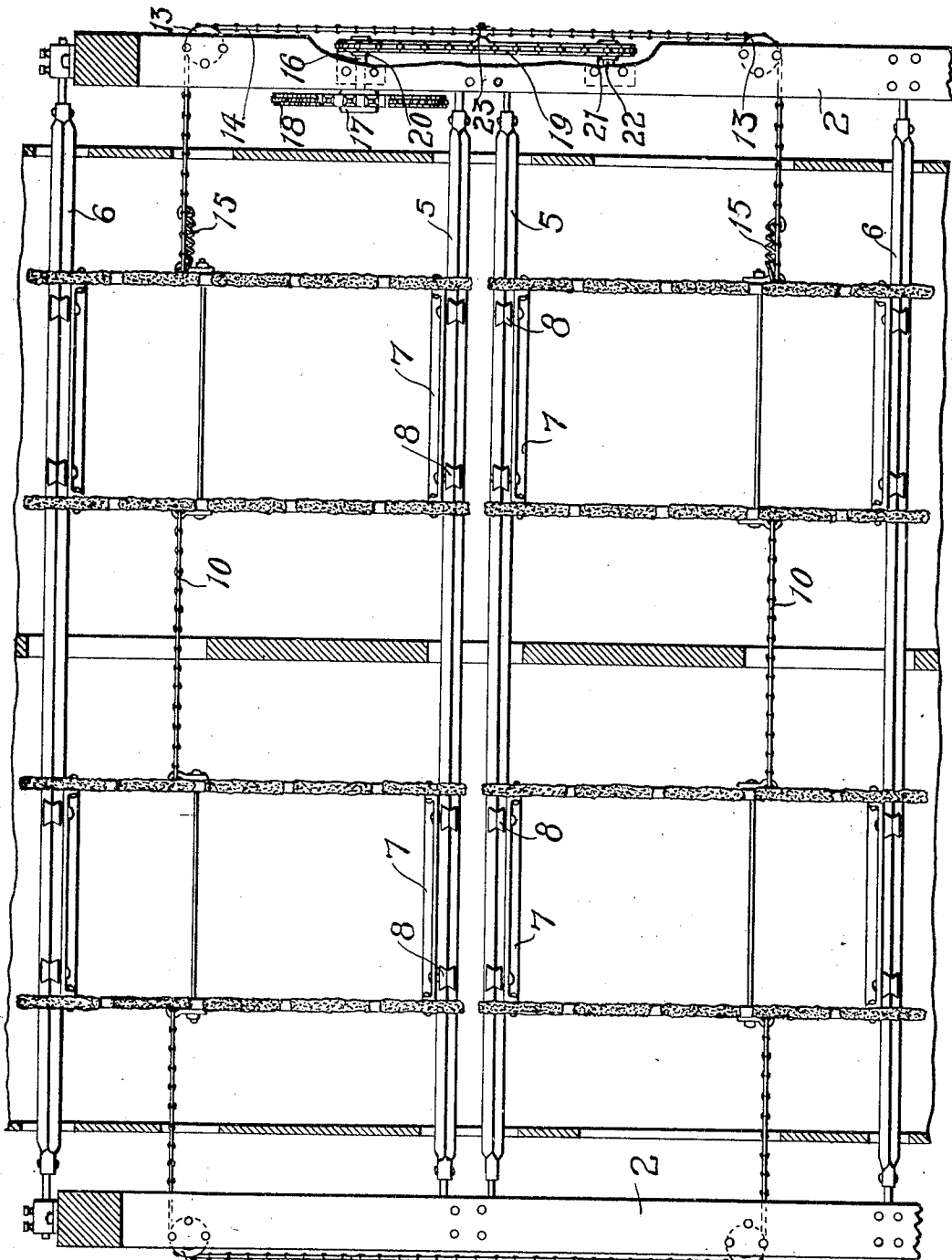
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3 SHEETS—SHEET 2.



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Fig 2.

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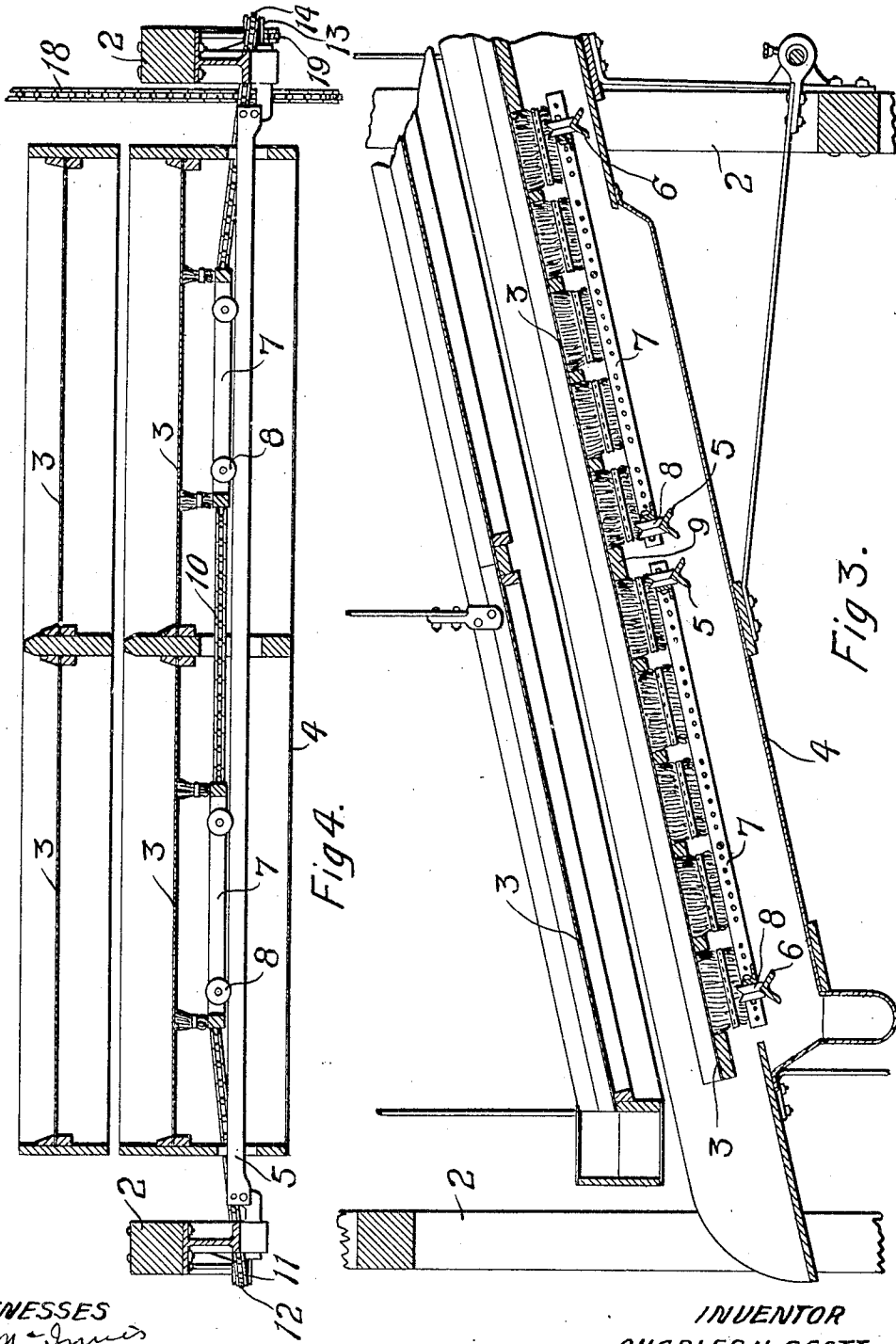
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3 SHEETS—SHEET 3.



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# UNITED STATES PATENT OFFICE.

CHARLES H. SCOTT, OF MINNEAPOLIS, MINNESOTA.

## BRUSH-DRIVE FOR GRAIN-CLEANING MACHINES.

No. 875,854.

Specification of Letters Patent.

Patented Jan. 7, 1908.

Application filed September 27, 1904. Serial No. 226,101.

*To all whom it may concern:*

Be it known that I, CHARLES H. SCOTT, of Minneapolis, Hennepin county, Minnesota, have invented certain new and useful Improvements in Brush-Drives for Grain-Cleaning Machines, of which the following is a specification.

My invention relates to grain cleaning machinery, and particularly to brushes for keeping the screens clear, and the object of the invention is to provide a brush drive by means of which a uniform reciprocating motion will be imparted to the brushes back and forth across the under surface of the screens. The brushes in general use for this purpose are not very durable and have a tendency to become clogged with the material passing through the screens, and are thereby rendered less effective for the purpose designed.

My invention permits the use of a brush wherein all danger of clogging is avoided and a high standard of efficiency maintained.

A further object is to provide a brush drive that will be simple and inexpensive to manufacture, and will require but little power to operate it.

The invention consists generally in various constructions and combinations, all as hereinafter described and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation of a grain cleaning machine with my invention applied thereto. Fig. 2 is a plan section looking at the top of the brushes with the screens removed. Fig. 3 is a longitudinal vertical section. Fig. 4 is a transverse vertical section.

In the drawing 2 represents the frame of the grain cleaning machine having the usual screens or sieves 3 and a plate 4 upon which the material passing through the screens falls and is conducted out of the machine. Below the screens I arrange a series of parallel rails 5 and 6 extending horizontally across the machine. These rails are arranged in pairs there being one at the upper and another at the lower side of the machine and two in the middle, as shown in Fig. 2. The rails are preferably of metal and V-shaped in cross section, to present inclined surfaces to meet the grain falling through the screens and prevent its becoming lodged on the rails.

As shown in Fig. 3, a pair of rails is located

under each screen, of which there may be several in each frame of different mesh according to the character of the grain that is being cleaned. Upon the rails I arrange brush frames or carriages 7 having wheels 8 with hollow faces adapted to rest and travel upon the rails. There may be any desired number of these brush frames according to the size of the machine, but in this case I have shown four, two upon one side of a dividing bar 9 which separates the upper row of screens from the lower, and two upon the other side, those upon the same bar 9 traveling upon the same pair of rails. The frames are located at a suitable distance apart, and those upon the same rails are connected by any suitable means as the chains 10. On one side of the machine idle rolls 11 are mounted, over which a flexible connection, as the chain 12, passes, and has its ends attached to the contiguous brush frames, so that when the chain is moved it will drag one set of frames in one direction and allow the other set to be moved in the opposite direction. On the other side of the machine I provide similar idle rolls 13 and a chain 14 passing over them having its ends connected to the contiguous brush frames and preferably provided with springs 15 designed to take up the slack in the flexible connections between the frames.

A shaft 16 is mounted in the frame of the machine and provided with a large sprocket wheel 17 driven from a chain belt 18, and a belt 19 connects a smaller sprocket 20 on the shaft 16 with a similar sprocket 21 on a shaft 22. This chain 19 operates in a direction substantially at right angles to the direction of movement of the brush frames and parallel with the belt or connection 14 between the idle wheels 13. A pin 23 connects the belt 14 with the belt 19, and when the latter is operated the belt 14 will be driven first in one direction and then in the other according to the position of the pin connection 23. The movement of the belt 14 back and forth will result in dragging one set of brush frames across the screen in one direction and the other set of frames in the other direction, and this movement is continued as long as the chain belt 19 is in operation. The brushes are thus kept reciprocating across the under surface of the screens keeping their meshes clear and insuring their operation at all times at a high degree of efficiency.

I claim as my invention:

1. In a grain cleaning machine, the combination, with a frame, of screens mounted therein, brush frames arranged in pairs beneath said screens, brushes carried by said frames, means connecting the frame of one pair with the other frame of the same pair, flexible means connecting the frame of one pair with the corresponding frame of the other pair on each side of the machine, a drive chain parallel with said flexible connection, and means connecting said drive chain and one of said flexible connections.

2. In a grain-cleaning machine the combination, with a frame, of a screen supported therein, brush frames arranged to reciprocate beneath said screen, guides whereon said frames are movable, a series of brushes mounted on said frames and adapted to sweep across the under surfaces of said screen, idle wheels mounted in said machine frame at each end of said guides, flexible means attached to said brush frames and

passing around said idle wheels, whereby when one brush frame is moved in one direction the other brush frame will be moved in the opposite direction, a drive belt arranged between the idle wheels on one side of the machine and operating in a plane substantially at right angles to the plane of said brush frames and said idle wheels, and said drive belt having a pivotal connection with one of said flexible connections intermediate to its ends, whereby the revolution of said drive belt will impart a back and forth movement to said flexible connections and the reciprocation of said frames beneath said sieves, substantially as described.

In witness whereof, I have hereunto set my hand this 14th day of September, 1904, at Minneapolis, Minnesota.

CHARLES H. SCOTT.

In presence of—

RICHARD PAUL,  
C. MACNAMARA.