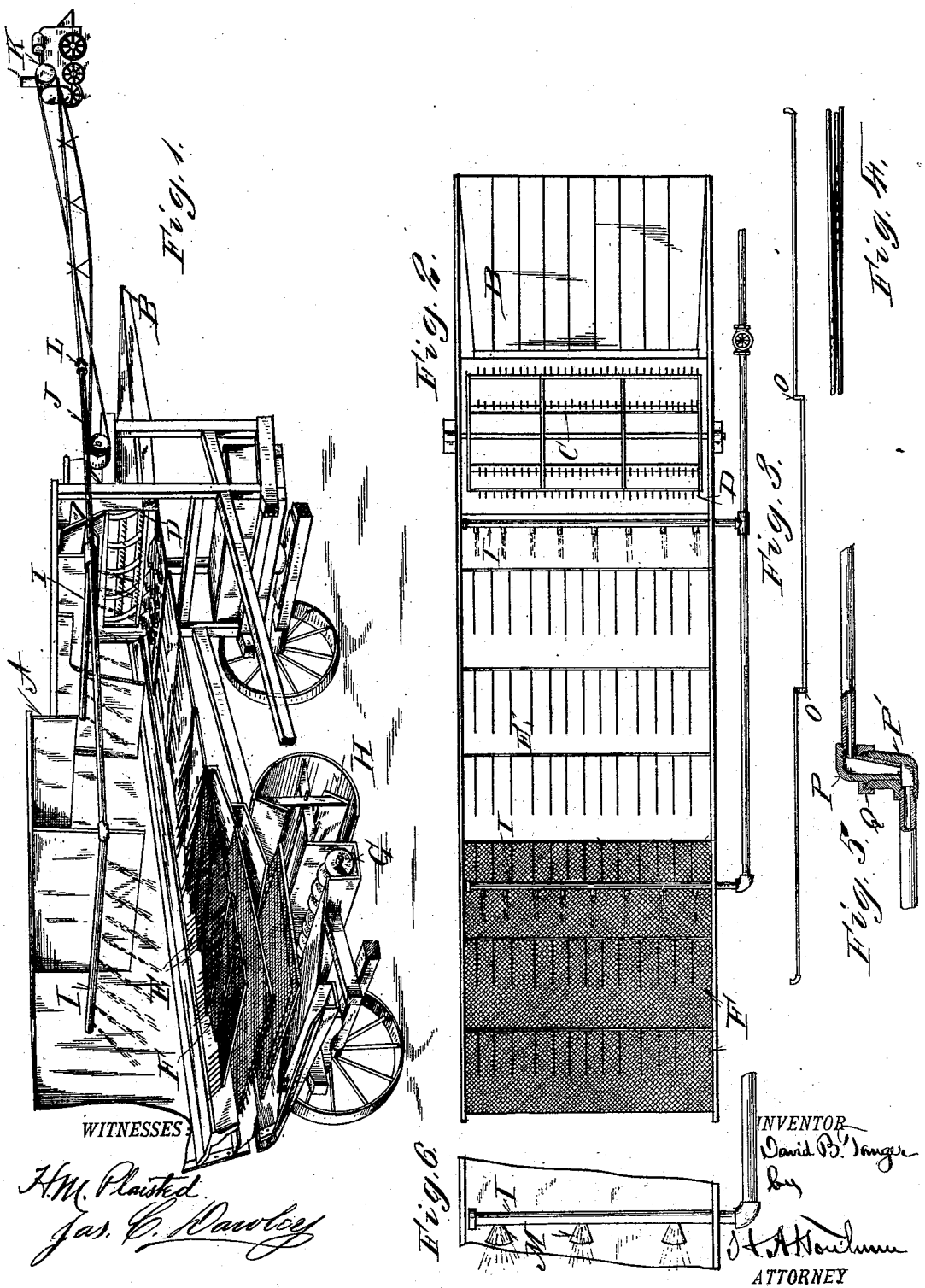
(No Model.)

D. B. TANGER.

THRASHING MACHINE.

No. 513,689. Patented Jan. 30, 1894.



THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

DAVID B. TANGER, OF BELLEFONTAINE, OHIO.

THRASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 513,689, dated January 30, 1894.

Application filed September 7, 1892. Serial No. 445,289. (No model.)

To all whom it may concern:

Be it known that I, DAVID B. TANGER, a citizen of the United States, residing at Bellefontaine, in the county of Logan and State of Ohio, have invented certain new and useful Improvements in Thrashing-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to certain new and useful improvements in thrashing machines.

The object of my improvements is to provide a method of, and means for allaying the dust caused by the operation of a thrashing machine upon the grain fed therein; and to various peculiarities of construction and operation hereinafter fully described and claimed.

As is well known, the grain fed to thrashing machines gives forth in the operation of thrashing a large quantity of dust and fine particles of straw which, floating in the air in every direction, cause the operation of the machine to be particularly annoying to anybody in that vicinity. The dust and fine particles of straw insert themselves into the clothing and lungs of the men operating the machine and tend to serious lung troubles as well as annoyance. I propose to do away with this troublesome and dangerous dust, by providing a jet or jets of steam or other moistening means which increase the specific gravity of the dust and other particles and effect the deposit of the same upon the straw or elsewhere, instead of blowing about in the vicinity of the machine. I have illustrated one method of doing this in the accompanying drawings, on which like reference letters indicate corresponding parts and wherein—

Figure 1, represents a perspective view of a thrashing machine with one side removed and my improvements applied thereto; Fig. 2, a plan view of the same; Fig. 3, a detail view of the jointed pipe connection; Fig. 4, a similar view to Fig. 3, showing the pipe folded; Fig. 5, an enlarged view in section, of the joint between two sections of the pipe, and Fig. 6, a fragmentary view showing the sprayers for water.

The letter A, designates the casing of a thrashing machine of any suitable style in ordinary use to which my improvements may be applied. The grain is fed into the machine from the table B, under the revolving spiked cylinder C, located above the cylinder concave D, from which the straw passes along over the vibrating or agitating fingers E, while the grain is separated through the screeners F, and falls into the conveyer G. The grain kernels naturally seek the lower level after separation from the straw which is superposed, as they travel onward from the cylinder. The amount of moistening fluid is regulated according to the quantity of dust, and the straw shields the kernels to a great extent, so as not to unduly wet the latter. The chaff and fine particles are blown out by the blower H. Within or near the casing is mounted my device in any convenient position, but preferably as shown in Figs. 1 and 2. It consists of pipes I, I, or other conductors, transversely or otherwise disposed within said casing, and provided with nozzles or other discharge openings through which the moistening means is discharged. Either steam or water may be used, the pipes I, I, being connected by a jointed pipe, hose, or other conductor, J, with a steam boiler K, or other source of supply and provided with a valve L, adjacent to the feeding table to regulate or shut off the supply of steam, or other fluids, to such perforated pipes I. The steam contacts with the dust and floating particles of straw, and effects their deposit upon the straw delivered from the thrasher, or so increases their gravity as to prevent their flying far after their delivery from the machine. The grain being below the straw, escapes contamination by the moistened dust and other particles. The jets from the perforated pipes I, which act as sprinklers, are directed outward in the direction of the straw as shown in Fig. 1.

It may be desired to use water instead of steam and Fig. 6, illustrates a sprinkler having spraying nozzles M, delivering an evenly comminuted spray of water upon and into the outgoing straw.

These machines being adapted to travel from place to place require a jointed pipe connection with the boiler or other source of supply, and I have shown such pipe connec-

tion in Figs. 3 to 5, consisting of sections jointed together at O, and alternately disposed as in Fig. 3, so as to allow of being compactly folded as shown in Fig. 4. The joint is shown in detail in Fig. 5, and consists of a tapered piece P, fitting into a corresponding socket P', the former having a shoulder engaged by a screw threaded collar Q, to maintain it in coupled position. The pipe connection may thus have any amount of play in one direction and the length of the joint renders it less liable to breakage than if the section were directly connected by a comparatively short joint.

I wish to be understood as laying claim broadly to this means for doing away with the annoyance of the light floating particles of dust and straw and effecting the deposit of the same. Furthermore I claim the means for accomplishing the above mentioned object irrespective of the location of the same in any particular part of the machine though the position illustrated is the preferred one. I do not therefore limit myself to the exact means herein shown and described.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with the chambered body of a thrashing machine having thrashing, separating, and feeding mechanism to act on the grain kernels and superposed straw passing through the machine, of spraying devices adapted to spray a moistening fluid upon the passing straw and floating particles within the chamber of the machine, substantially as and for the purpose described.

2. The combination with a thrashing machine having a casing forming a chamber for the grain acted on, of interiorly mounted spraying devices consisting of transversely mounted pipes provided with openings adapted to spray the moistening fluid delivered to the pipes, into the floating particles of dust and straw within the chamber and effect their deposit on the straw, and means to supply said moistening fluid to said pipes, whereby the straw leaves the machine, carrying with it the dust and particles deposited thereon.

3. The combination with a thrashing machine having a casing inclosing the thrashing and separating mechanism, of a spraying device consisting of longitudinal and transverse pipes, the latter provided with openings adapted to deliver jets of steam about within the said casing to deposit the dust and straw particles upon the straw as it passes outward, a steam boiler and connecting pipes between said boiler and spraying device, and a regulating valve for said pipe to control the quantity of steam, substantially as and for the purpose.

In testimony whereof I affix my signature in presence of two witnesses.

DAVID B. TANGER.

Witnesses:
DUNCAN DOW,
J. D. MCLAUGHLIN.