

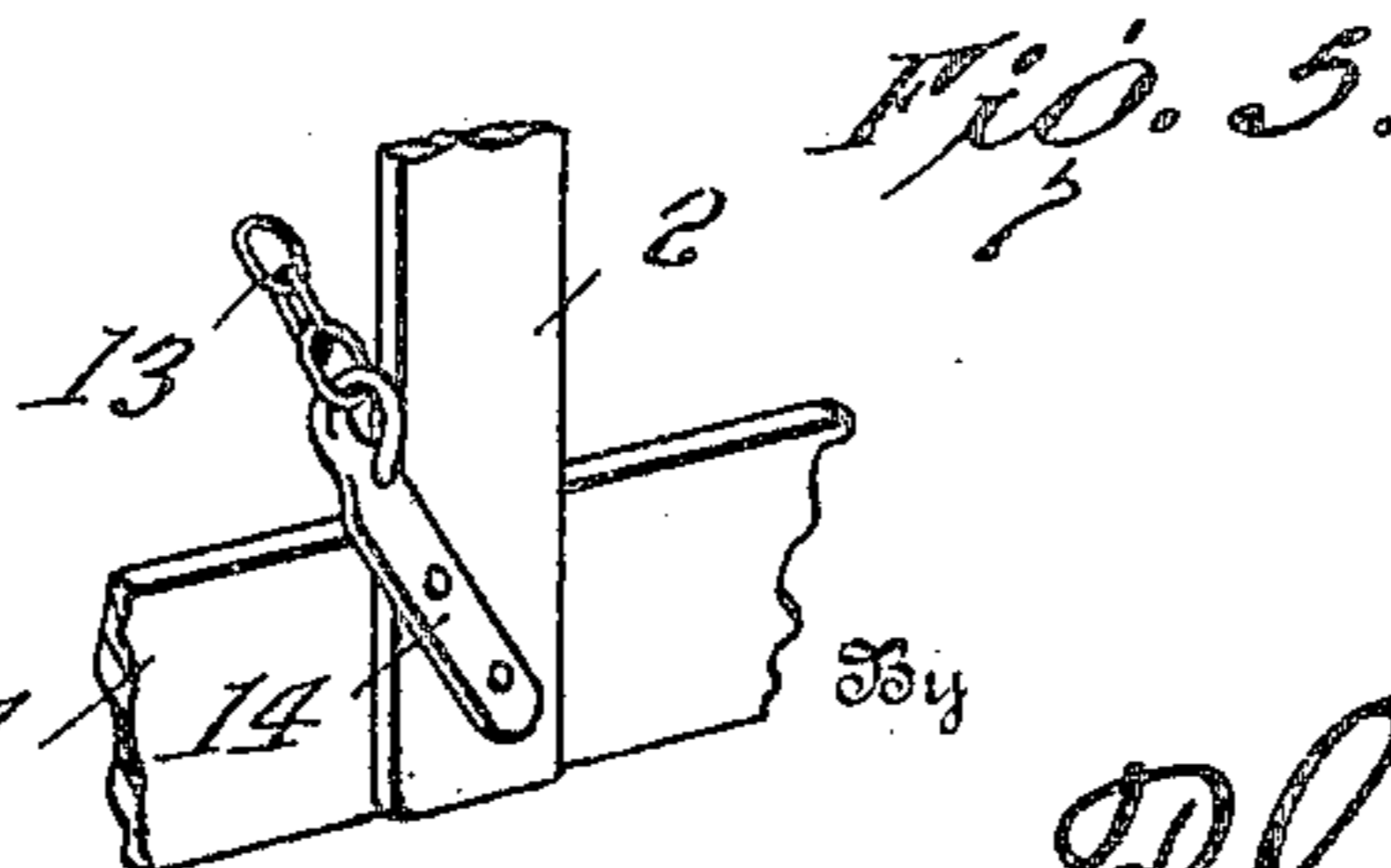
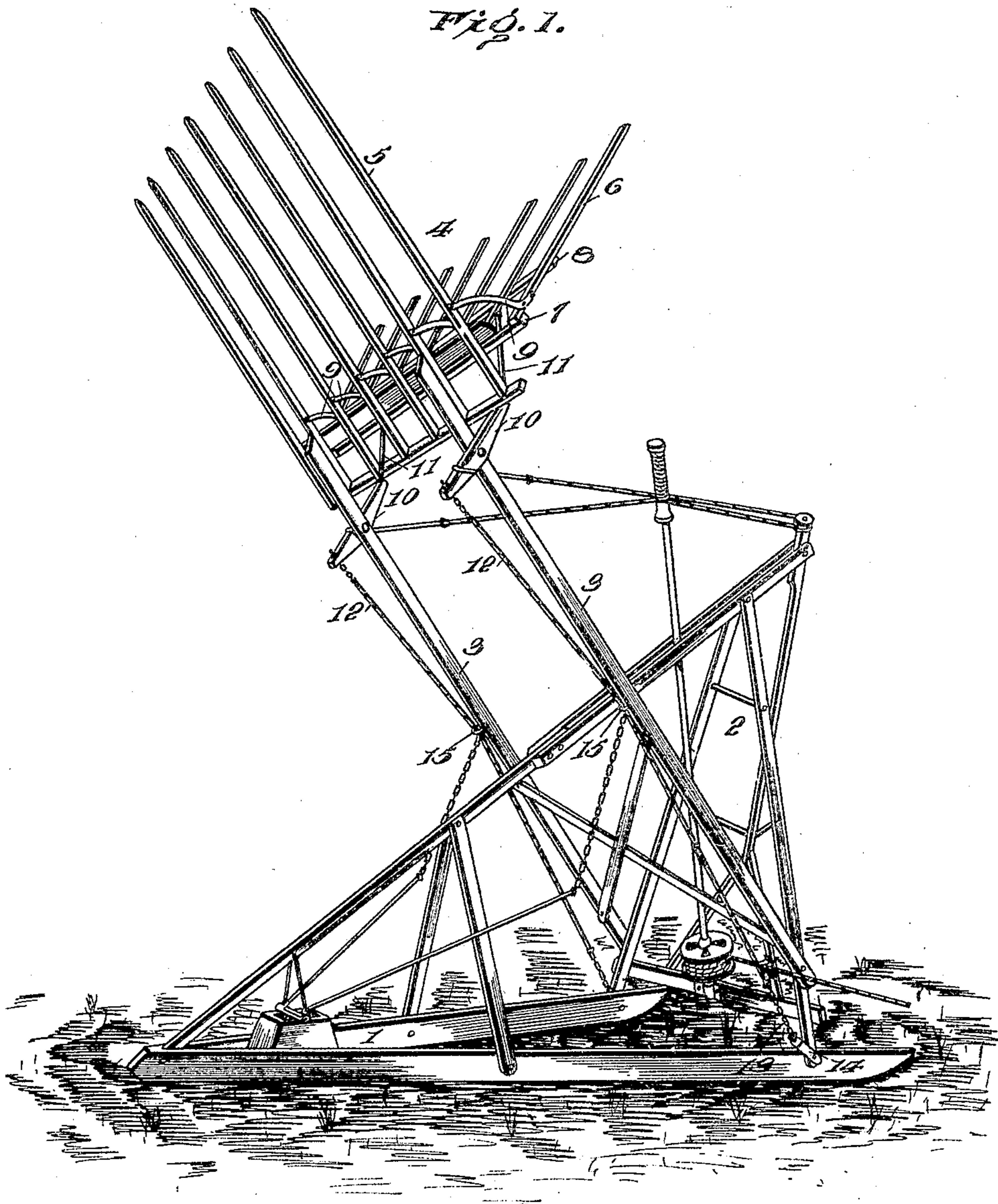
No. 817,882.

PATENTED APR. 17, 1906.

O. F. SMITH.
STACKER HEAD.

APPLICATION FILED DEC. 17, 1904.

2 SHEETS—SHEET 1.



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ORBIN F. SMITH, OF ALBIA, IOWA.

STACKER-HEAD.

No. 817,882.

Specification of Letters Patent.

Patented April 17, 1906.

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To all whom it may concern:

Be it known that I, ORBIN F. SMITH, a citizen of the United States, residing at Albia, in the county of Monroe and State of Iowa, have
5 invented certain new and useful Improvements in Stacker-Heads, of which the following is a specification.

Those who are familiar with the use of hay-stackers know that it often happens that high
10 winds carry the hay from the stacker-head too quickly, with the result that the hay fails to drop on the stack or so near the edge thereof as to make unnecessary hard work for the man on the stack, causing great difficulty in
15 building same shapely and waterproof.

The object of this invention, therefore, is to obviate the above disadvantages, and for this purpose the hay-fork, which is carried by the usual suitable lifting-frame, is peculiarly constructed, so that it will operate automatically to prevent the hay from being
20 blown therefrom under the conditions of service above mentioned; further, in addition to the above the structure of the fork or head is such that same may be readily adjusted so as to regulate the throw of the hay as the same is dropped therefrom to the stack, facilitating the building of the latter in a
25 manner which will be set forth more clearly as the description proceeds.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference
35 is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment thereof is shown in the accompanying drawings, in which—

Figure 1 is a perspective view of a stacker
45 embodying the invention. Fig. 2 is a side elevation, the stacker-head being shown nearly at the limit of its upward movement, the dotted lines illustrating the range of movement of the pitcher-teeth. Fig. 3 is a
50 view in elevation showing the arrangement of the parts of the stacker-head when same is upon the ground. Fig. 4 is a broken perspective view showing a portion of the stacker-head and bringing out clearly the mounting
55 of the teeth thereon. Fig. 5 is a detail broken

perspective view showing more clearly the form of the hook-bars.

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

The stacker which is illustrated in the drawings is, generally speaking, of a type which is now commonly in use. This stacker
65 comprises, essentially, the longitudinal runners 1, a suitable derrick 2, an elevating or lifting frame consisting principally of side bars or arms 3, and a head or fork 4. The derrick is connected with the lifting-frame in any suitable manner, and since the detail
70 structure of the stacker is not essential in the contemplation of the invention same is not minutely described.

The lifting-frame, which carries the fork 4, is adapted to be raised or lowered in the customary manner when stacking the hay. The
75 fork or head 4 is of special construction, as before premised, and consists of longitudinal or main teeth 5, which receive the hay thereon as it is delivered from the rake and the
80 back or pitcher teeth 6, through which the hay is delivered to the body of the stack. The main teeth 5 are rigidly mounted upon the lifting-frame of the stacker, whereas the pitcher-teeth 6, which extend at an angle to
85 the teeth 5, are adjustable relative to the latter. The teeth 6 are secured together at their lower ends by a transverse bar 7, and a second transverse bar 8 connects said teeth 6
90 between the ends thereof. A plurality of curved bars 9 are pivoted to the teeth 5; one bar being provided for each tooth and connected therewith at one end, the opposite end of said bar being suitably secured to the adjacent pitcher-tooth 6. The pitcher-teeth
95 6 are thus pivotally mounted and are movable toward and from the teeth 5 by means now to be described. Mounted upon each of the side bars 3 of the elevating-frame of the stacker and adjacent the fork 4 are disposed
100 rocker-arms 10, each of said arms being pivoted between its ends to the bar or arm 3, upon which it is mounted. A rod 11 connects one end of each rocker-arm 10 with the adjacent end portion of the transverse bar 8,
105 secured to the pitcher-teeth 6. A flexible connection, such as a rope or wire 12, is secured at one end to that end of each of the arms 10 opposite the connection 11, and this rope 12 is adapted for adjustable connection
110

with the lower portion of the stationary or rigid supporting-frame of the stacker. As shown, each rope 12 is provided at one end with a plurality of links 13, and a hook-bar 14 is secured adjacent the front ends of each of the runners 1, the hooks of said bars being adapted to engage the links 13 of the adjacent connection 12. In order to prevent the ropes or connections 12 from being entangled in adjacent parts, said connections preferably pass through loops or like members 15, secured to the bars 3 of the elevating-frame at a point about intermediate the ends of the latter.

Describing the operation of the invention under various conditions of service, the connections 12 may be so adjusted that the pitcher-teeth 6 will remain immovable or in an ascertained position relative to the teeth 5 when the elevating-frame of the fork is raised or lowered. In high winds, however, in order to prevent the hay from being blown from the fork or head away from the stack or toward one side thereof the connections 12 are so adjusted, by engagement with the hook-bars 14, that as the lifting-frame is elevated the rocker-arms 10 will be tilted so as to gradually cause the pitcher-teeth 6 to advance toward the main teeth 5, thereby guarding against a premature delivery of the stacker-load. It will be noted that the above operation is entirely automatic, the connections 12 once having been adjusted, and the advantages of this feature are of no small importance. When the stack is so far advanced that it is desirable to throw the load of hay well to the middle thereof, the connections 12 are adjusted so that the pitcher-teeth will advance to a position about at a right angle to the teeth 5 after the lifting-frame has been elevated, if necessary. For topping the

stack the teeth 6 may be set so that they will form a basket, which will retain the hay to be removed by the man at work on the stack as he may need it for distribution. The normal position of the rocker-arms 10 is one almost in alinement with the adjacent bars 3 of the elevating-frame, and this position is always assumed automatically when the lifting-frame is lowered to the ground. When the lifting-frame is upon the ground, the pitcher-teeth 6 are out of the way.

The construction of the fork or head is very simple, and the operation of the pitcher-teeth being entirely automatic decreases the amount of labor involved in the stacking operation, insuring the formation of a perfect stack.

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

In a stacker, the combination of an elevating-frame, a fork mounted thereon and comprising main teeth, pitcher-teeth pivoted to the main teeth at an angle thereto, a transverse bar connecting said pitcher-teeth, rocker-arms pivoted between their ends to the sides of the elevating-frame, rods connecting one end of each rocker-arm with the transverse bar connecting the pitcher-teeth, hook-bars attached to the body of the stacker, and connections having adjustable connection at one end with the hook-bars aforesaid and connected with the ends of the rocker-arms opposite those connected with the pitcher-teeth.

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

ORBIN F. SMITH. [L. S.]

Witnesses:

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