

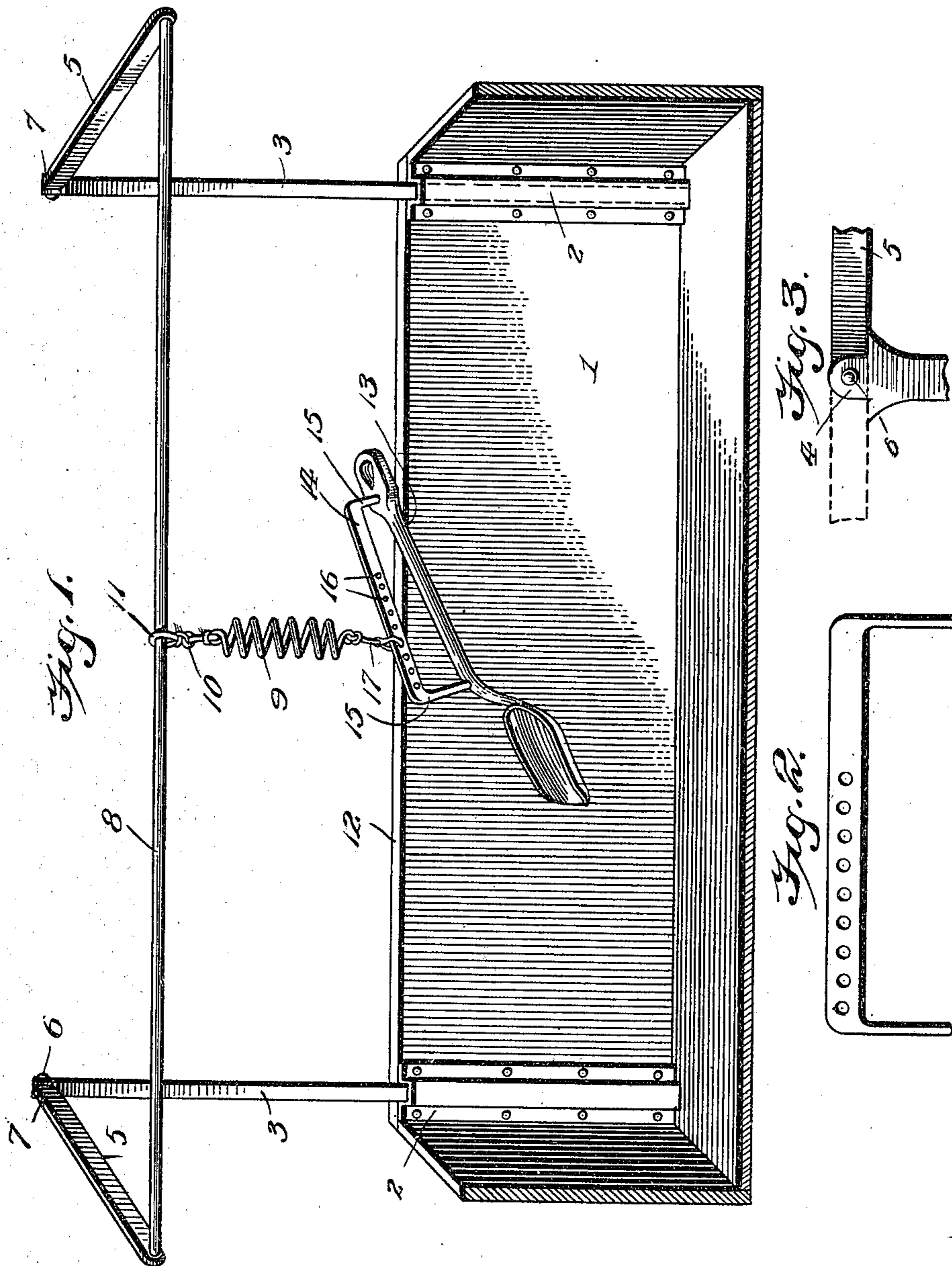
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Patented Sept. 16, 1902.

J. BAKER.
SHOVEL SUPPORT.

(Application filed Nov. 12, 1901.)

(No Model.)



Witnesses

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SHOVEL-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 709,192, dated September 16, 1902.

Application filed November 12, 1901. Serial No. 82,000. (No model.)

To all whom it may concern.

Be it known that I, JAMES BAKER, a citizen of the United States, residing at Carroll, in the county of Wayne and State of Nebraska, have invented new and useful Improvements in Shovel-Supports, of which the following is a specification.

This invention relates to shovel-supports, having for its object to provide means for supporting a shovel or other similar implement in such manner as to materially assist workmen in raising and delivering the material operated upon.

While the improvement will be described as applied to shovels, it will become apparent as the description proceeds that this invention is applicable as well to pitchforks and various other implements, and it is not, therefore, desired to limit the improvement to shovels.

The principal object of the invention is to yieldingly support or suspend a shovel in such manner as to relieve the workman from a portion of the weight and burden of lifting the shovel and contents, also to enable the workman in stooping to bear a portion of his weight upon the shovel or support therefor.

Another object of the invention is to provide means for changing a point of suspension of the shovel, so as to correspondingly change the leverage necessary to detach a portion of the material from the main mass thereof.

Still another object of the invention is to provide means for reversing the support, thereby enabling the shovel to be operated at different places with equal facility.

With the above and other objects in view the invention consists in the novel construction, combination, and arrangement of parts hereinafter fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a sectional perspective view showing a portion of a wagon-body, a reversible support detachably connected therewith, and a shovel yieldingly suspended from the support. Fig. 2 is an enlarged detail side elevation of the clevis. Fig. 3 is a detail view illustrating the hinged connection between one of the

standards and crane-arms, illustrating the reversibility of the support.

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

Referring to the drawings, 1 designates a wagon-body, to which the shovel-support is applied. For the purpose of carrying out this invention sockets 2 are fastened within and adjacent to the opposite corners of the wagon-body, said sockets being designed to have detachably fitted therein a pair of standards 3. By preference the standards 3 are rectangular in cross-section, and the sockets are correspondingly shaped, the object being to prevent the standards from rotating or turning. The standards have their upper ends slotted or provided with oppositely-located ears 4, between which are pivotally received crane-arms 5, the said crane-arms being connected to the upper extremities of the standards by means of pivots 6, forming hinge-joints between the standards and crane-arms and resting on shoulders 6'. The crane-arms are bent or deflected at the points 7, so as to give them the necessary divergence in order that they may receive between them a support 8 longer than the wagon-body and consisting by preference of a rod upon which a traveler in the form of a spring is mounted to slide. This spring (indicated at 9) is preferably in the form of a spiral or coil and has attached to its upper end a flexible connection 10, comprising a loop 11, which encircles the support 8 and is free to slide lengthwise thereof.

The shovel 12 is shown as provided with the usual handle 13, and in the preferred embodiment of this invention the handle of the shovel has fastened thereto a clevis 14, which extends longitudinally of the handle and practically the entire length thereof, said clevis comprising angular extremities 15, which connect with and support the shovel, while the central portion of the clevis is somewhat flattened and provided with a longitudinal series of openings 16 to receive a flexible connection 17, which is attached to the lower end of the spring 9 and inserted through any one of the

openings 16. Said openings provide for adjusting the point of suspension of the shovel with respect to the spring, and thereby enable the leverage of the shovel-handle to be
 5 increased or diminished, according to the strength of the workman and the weight of the material operated upon.

The operation of the invention is as follows: The apparatus being set up, as illustrated and
 10 described, with the shovel suspended on the yielding spring several feet above the floor of the wagon-box, the workman grasps the handle of the shovel in the usual manner and stooping to bring the shovel down to the floor
 15 to fill it bears a portion of his weight on the shovel, thereby stretching the spring with a tension equal to the weight or force he exerts. The shovel being filled, as the workman raises or straightens himself in the act of lifting and
 20 delivering the contents of the shovel the spring materially assists him by lifting on the shovel with a force equal to that by which it was originally stretched or drawn outward.

In order to shovel material from the ground
 25 into the wagon, the crane-arms are thrown over toward the outer side of the wagon-body, carrying with them the supporting-rod 8 and the spring and shovel hanging therefrom. The work is performed in the same manner as
 30 just hereinabove described.

In some instances the clevis may be dispensed with and the shovel-handle connected directly with the spring. When the clevis is used, it will not interfere in the least with the
 35 operator sliding one of his hands along the handle of the shovel in the customary way. These and other changes in the form, proportion, and minor details of construction may be resorted to without departing from the
 40 principle or sacrificing any of the advantages of the invention.

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

1. The combination with a shovel, of a support therefor, and an elastic connection between the shovel and support, the said connection being rotatable and also longitudinally slidable on the said support.

2. The combination with a shovel, of a support therefor, and a spring interposed between the shovel and support and connected at opposite ends therewith.

3. The combination with a shovel, of an overhead supporting-rod, and a spring connected at one end to the shovel and having its opposite end connected with the supporting-rod so as to be capable of a sliding movement thereon.

4. The combination with a shovel, and a clevis applied thereto, of an overhead supporting-rod, and a spring connection between the clevis and supporting-rod capable of a sliding movement on said rod.

5. The combination with a shovel, and a clevis applied thereto and provided with a series of openings, of an overhead supporting-rod, and a spring having a sliding connection with said rod, and an adjustable connection with the clevis.

6. The combination with a shovel, of a support therefor comprising a standard, a reversible crane-arm connected with said standard, a support carried by said crane-arm and a yielding connection between the shovel and said support.

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

JAMES BAKER.

Witnesses:

NETTIE BAKER,
 JAMES MCGUIRE.