

No. 692,406.

Patented Feb. 4, 1902.

W. J. WRIGHT.
WOVEN WIRE BAG.

(Application filed Apr. 1, 1901.)

(No Model.)

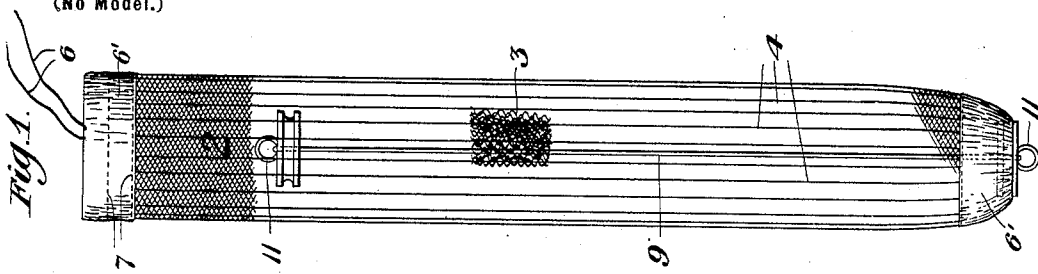


Fig. 2.

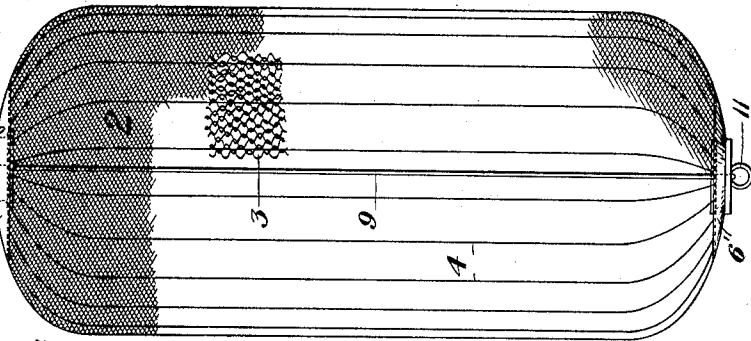


Fig. 3.

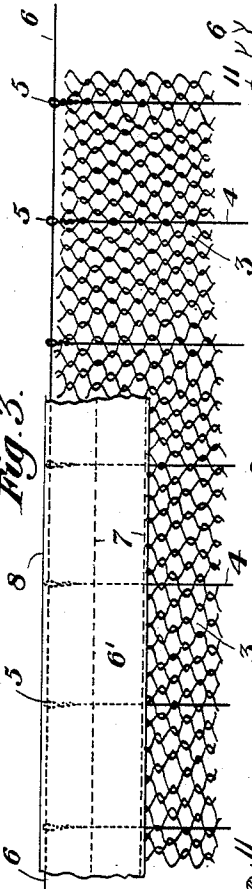


Fig. 4.

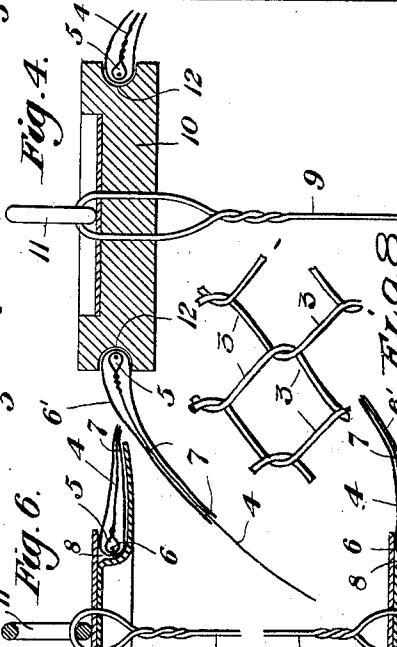


Fig. 5.

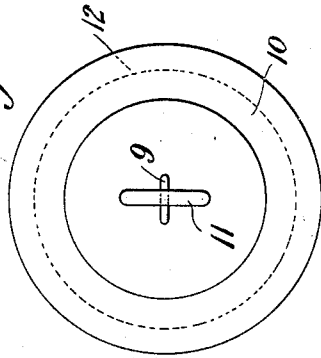


Fig. 6.

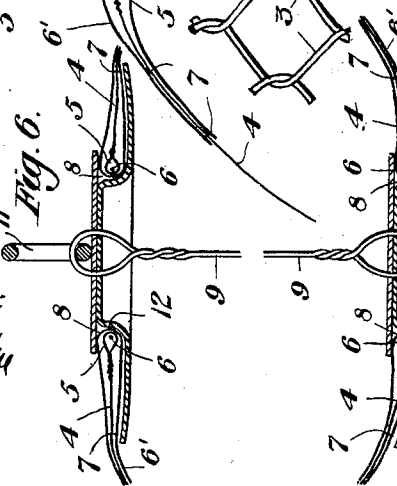


Fig. 7.

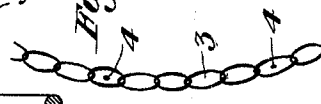


Fig. 8.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM J. WRIGHT, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO JOHN S. SCULLY, OF PITTSBURG, PENNSYLVANIA.

WOVEN-WIRE BAG.

SPECIFICATION forming part of Letters Patent No. 692,406, dated February 4, 1902.

Application filed April 1, 1901. Serial No. 53,802. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. WRIGHT, a citizen of the United States of America, and a resident of Pittsburg, county of Allegheny, State of Pennsylvania, have invented certain new and useful Improvements in Woven-Wire Bags, of which the following is a specification, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a view in side elevation of my improved woven-wire bag empty. Fig. 2 is a similar view showing the bag filled and closed at the top. Fig. 3 is a detail view of a portion of the upper part of the bag flat, illustrating the construction and the combination of the woven-wire fabric, the stay-wire, the reinforcing-top, and the tying-wire. Fig. 4 is a detail sectional view, on an enlarged scale, of the means for securing the bag at the top. Fig. 5 is a plan view of the disks employed, around which the top of the bag is placed. Fig. 6 is a detail view showing the top and bottom, the disks being composed of metal. Fig. 7 is a cross-sectional detail view illustrating the woven-wire fabric somewhat expanded under tension due to the pressure of the contents in the bag. Fig. 8 is an enlarged detail view showing the construction of the woven-wire fabric.

My invention consists in an improved bag for packing and transporting coal, grain, or other material or minerals; and it consists generally of a cylindrical or other form of bag composed of interwoven wire, preferably provided with supplemental stay-wires at intervals, reinforcing material at each end of the bag, a central supporting member, and means for connecting such member with the ends of the bag and for closing such ends around it, whereby the contents are secured against escape and the bag and its contents are supported.

My present invention relates to the class of wire bags and constitutes an improvement in the type of bags for which Letters Patent of the United States No. 637,673 were issued November 21, 1899, to John S. Scully; and the present invention is for the purpose of

providing a bag which shall be suitable for the purpose indicated and which shall be capable of practical construction and use, as is hereinafter described.

Referring to the drawings, the main body portion of the bag consists of a cylindrical shell 2, which in practice consists of woven or spun wire fabric, preferably made in the form illustrated in Fig. 3 of the drawings, wherein continuous spiral coils of wire 3, extending from one end of the bag to the other, are interwoven with their next adjacent coils on each side in such a manner as to provide a continuous woven-wire fabric of great strength and elasticity, whereby the bag when filled may be considerably distended or is capable of being collapsed into very small compass.

Throughout the length of the bag from end to end, preferably arranged at intervals, are longitudinal stay-wires 4, looped through the coils 3, such stay-wires terminating at each end in eyes 5, through which eyes is passed a tying-wire 6, by which the ends of the bag may be closely gathered together, so as to prevent escape of the contents. The tying-wires may also be laced through the upper and lower edges of the netting, which may, if desired, be also provided with terminating eyes, and, if desired, the stay-wires may be dispensed with and the body portion of the bag may consist of the woven-wire netting alone, and such construction may be preferable for the smaller sizes of bags.

Surrounding each edge of the bag at the bottom and top is a reinforcing-strip 6' of any suitable material, as canvas, incorporated with the woven wire, as by stitching 7, the reinforcing fabric being preferably placed on both the inner and outer sides, as shown, looped around the edge of the wire-netting and stay-wires, as at 8, so that when the ends are drawn together by such wire the extended portion of such material will be gathered in at the center around the grooves of the disks. A further advantage of the reinforcing fabric is that it covers and protects the ends of the woven wire and the stay-wires, gives a finished appearance to the bag, and also protects

the ends from wear or abrasion or accidental cutting of the tying-wires, while also protecting the hands of the operator.

9 is a central wire, rod, or chain, at each end of which is secured a disk 10, which may be of hard wood or metal, or both, or of any other suitable substance or material adapted for the purpose. The central member 9 is incorporated and connected with the disk in any suitable firm manner, as shown in Fig. 4, and with the member 9 and disk 10 is also connected a loop or ring 11 at each end, by which the bag may be lifted at either end and carried or handled. The disk is provided with a peripheral groove 12, around which the extremities of the bag are tightly drawn by the tying-wire, as shown in Figs. 2 and 4, the reinforcing fabric neatly filling the groove and tightly closing the bag at both ends in an efficient and reliable manner. If desired, the upper or lower edges of the disk may be extended considerably beyond the groove for the purpose of providing a more extensive or broader protection to the wires, and for this purpose disks composed of sheet metal, such as I have illustrated in Fig. 6, are well adapted, as in such form the inner or outer flanges, or both, at the top or bottom may be extended outwardly, as shown, and a further advantage of such increased size of disk is that the contents of the bag are more securely protected against the attacks of vermin. As thus constructed the bag is very light and serviceable, the strength depending upon the woven-wire netting and, if employed, the stay-wires also, while the main weight of the bag and its contents is supported by its central member 9 in the manner which I have described. It is very easily collapsed when empty and is capable of considerable distention when filled. The looseness of the coiled netting permits of great elasticity and movement, while by reason of the spaces for ventilation the contents, as in case of grain, are thoroughly ventilated and dried.

While the construction of the netting, as shown, is well adapted for the purpose in view, it is obvious that other suitable weaves or spins of wire may be applied with good results, and I do not desire to be limited to the exact construction or form shown and described, but to include all such forms as may be substituted therefor.

When the bag is filled and closed by the tying-wires, it may readily be lifted by a crane-hook or other means and deposited at any other location, or if it is desired to discharge the contents the crane-hook may be inserted through the eye at the other end of the bag, the tying-wires having been cut, when the contents may be discharged.

Various changes and modifications may be made in the design, proportion, or other details of the bag without departing from my invention, and all such are to be considered

as being included in the scope of the following claims.

What I claim, and desire to secure by Letters Patent, is—

1. A bag for transporting coal, &c., comprising a cylinder of interwoven or interspun spiral coils of wires, a central sustaining member provided with top and bottom disks, and means for securing the extremities of the bag around such disks.

2. A bag for transporting coal, &c., comprising a cylinder of interwoven or interspun spiral coils of wires provided with tying-wires at each end, a central sustaining member provided with attaching members fixedly secured thereto, and adapted to be engaged by the tying-wires.

3. A bag for transporting coal, &c., comprising a cylinder of interwoven or interspun spiral coils of wires, having tying-wires at each end and reinforcing material surrounding such ends and tying-wires and a central supporting member provided with attaching members fixedly secured thereto, and adapted to be engaged by the tying-wires, whereby the ends of the bag are tightly closed.

4. A bag for transporting coal, &c., comprising a cylinder of interwoven or interspun spiral coils of wires, provided with tying-wires at each end, a central sustaining member provided with attaching members fixedly secured thereto, and a terminal lifting device connected with the central sustaining member.

5. A bag for transporting coal, &c., comprising a cylinder of interwoven or interspun spiral coils of wires provided with longitudinal stay-wires, a central sustaining member provided with attaching-disks, and means for closing the bottom and top of the bag around such disks.

6. A bag for transporting coal, &c., comprising a cylinder of interwoven or interspun spiral coils of wires provided with longitudinal stay-wires, a central sustaining member provided with fixedly-attached grooved disks, and means for closing the bottom and top of the bag around such disks.

7. A bag for transporting coal, &c., comprising a cylinder of interwoven or interspun spiral coils of wires provided with longitudinal stay-wires, a central sustaining member provided with fixedly-attached grooved disks, having lateral projecting flanges for protecting and supporting the ends of the bag and means for closing the bottom and top of the bag around such disks.

8. A bag for transporting coal, &c., comprising a cylinder formed of interwoven or interspun spiral coils of wire, supplemental longitudinal stay-wires, means for reinforcing the bag at the top and bottom, a central sustaining member provided with fixedly-attached grooved disks, and means for closing the bottom and top of the bag around such disks.

9. A bag for transporting coal, &c., comprising a cylinder formed of interwoven or interspun spiral coils of wire, supplemental longitudinal stay-wires, means for reinforcing
5 the bag at the top and bottom, a central sustaining member provided with fixedly-attached grooved disks and means for closing the bottom and top of the bag around such

disks, and a lifting device connected with one or both ends of the central sustaining member. o
Signed at Pittsburg this 26th day of March, 1901.

WILLIAM J. WRIGHT.

Witnesses:

PETER J. EDWARDS,
JOHN S. SCULLY.