

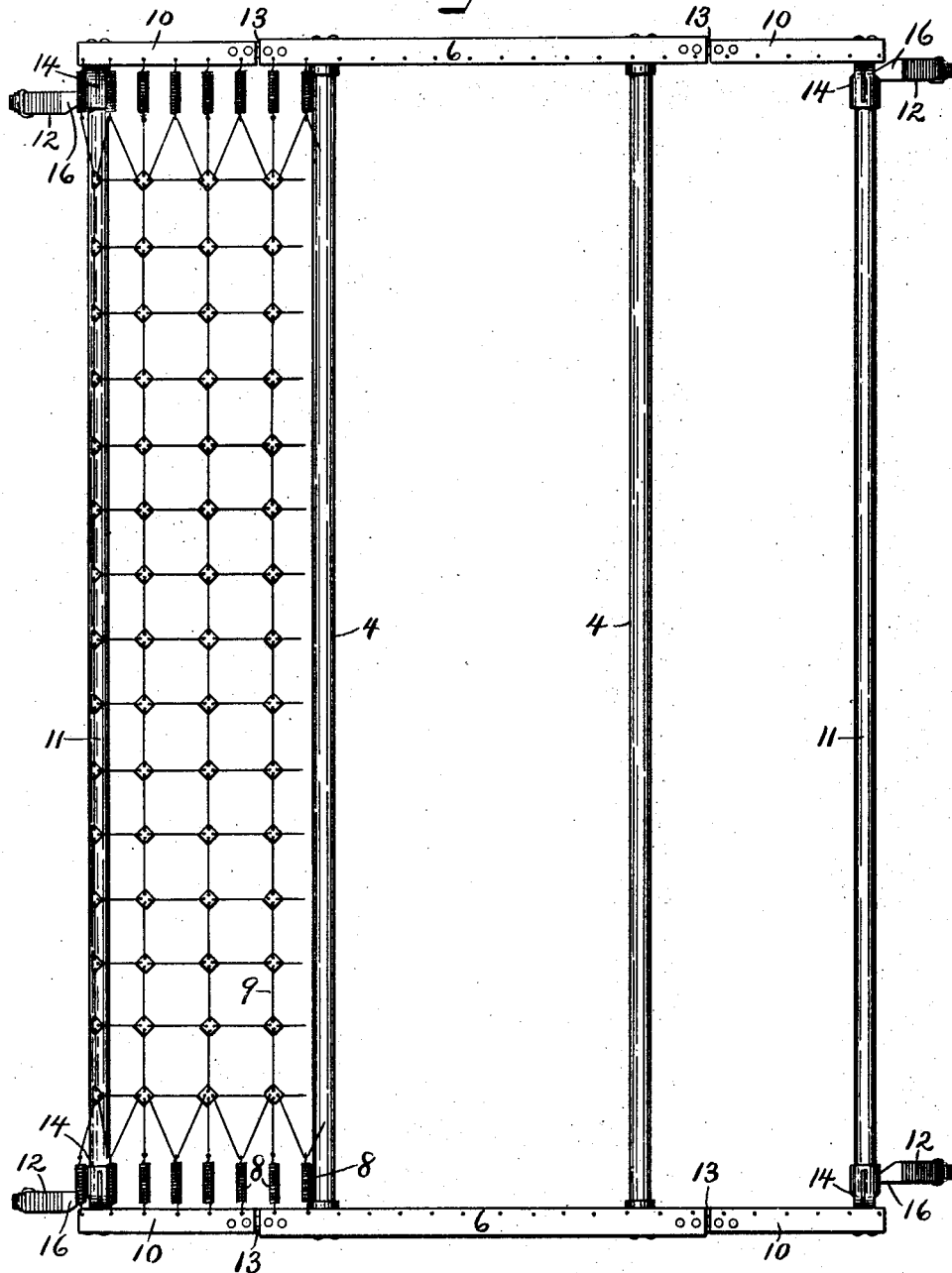
No. 896,506.

PATENTED AUG. 18, 1908.

H. B. ARNOLD.
DROP SIDE COUCH.
APPLICATION FILED MAR. 6, 1908.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses,

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Inventor.

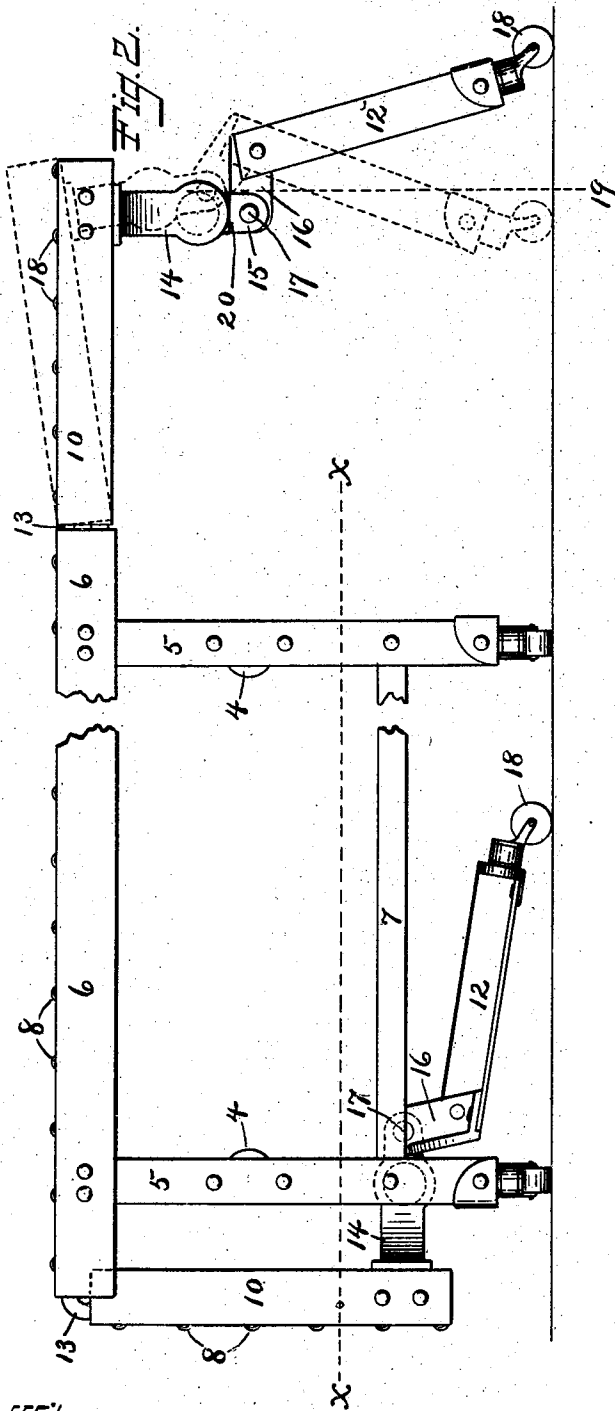
Harry B. Arnold.
 34 James Shepard
 Att.

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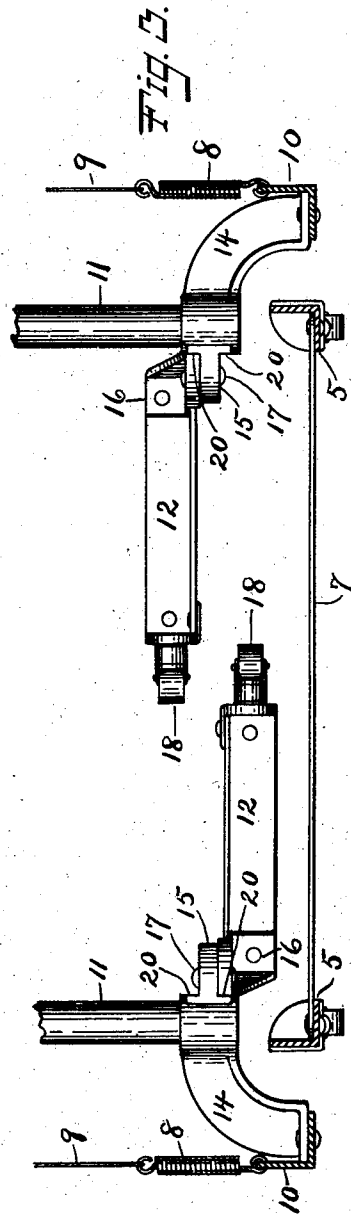
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2 SHEETS—SHEET 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

HARRY B. ARNOLD, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO NATIONAL SPRING BED COMPANY, OF NEW BRITAIN, CONNECTICUT, A CORPORATION.

DROP-SIDE COUCH.

No. 896,506.

Specification of Letters Patent.

Patented Aug. 18, 1908.

Application filed March 6, 1908. Serial No. 419,586.

To all whom it may concern:

Be it known that I, HARRY B. ARNOLD, a citizen of the United States, residing at New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Drop-Side Couches, of which the following is a specification.

My invention relates to improvements in drop side couches, and the objects of my improvement are simplicity and economy in construction, with efficiency and convenience in operation.

In the accompanying drawing:—Figure 1 is a plan view of my couch with both drop sides raised, part of the wire fabric and springs being omitted. Fig. 2 is an end view of the same with one of the drop sides lowered, the end frames being broken out for a short distance. Fig. 3 is a horizontal section on the line *x x* of Fig. 2, with both of the drop sides lowered.

The main frame consists of two end frames connected together by suitable longitudinal rails 4 and any ordinary stays, not shown. The end frames are formed of the main legs or uprights 5, top rails 6 and stays 7, as shown in Fig. 2. The top rails 6 of the end frames are preferably formed of ordinary angle iron perforated to receive the springs 8 and wire fabric 9 which are stretched thereon after the usual manner of mounting such springs and fabrics on bed-bottoms. To one or both sides of this main frame, I hinge the drop sides. The drop sides each consist mainly of end rails 10, a longitudinal bar 11 and swinging legs 12. The end rails 10 are also of angle iron and they are hung by their inner ends on the hinges 13 to the outer ends of the top rails 6, so that when raised as shown in Fig. 1 and at the right in Fig. 2, they form a continuation of the said top rail for the attachment of the side portions of the bed bottom fabric as shown at the left hand side of Fig. 1. The said end rails as shown are connected with the longitudinal bar 11 by means of curved brackets 14, which perform the double function of dropping the said bars away from the wire fabric and of making the drop sides at the ends of the said bars short enough to be turned down in between the fixed legs 5 at the opposite ends of the couch. These brackets 14 are provided with lugs 15 by which to pivot or hinge the legs 12. The main portion of each leg 12 is

of angle iron and is rigidly connected to a bracket like piece 16, that projects laterally from the upper end of the leg and forms the offset by which the legs are hinged to the lugs 15 by means of a suitable pin or rivet 17.

For convenience of operation the legs should be loosely pivoted so as to swing freely and this is best accomplished by an ordinary form of shouldered rivet or pin. The slant of the leg and the bracket like piece 16 standing at an angle to the main portion and forming an offset throws the greater weight of the leg on one side of its pivot pin 17 so that when one of the drop sides is raised a little beyond the horizontal and the offset and weighted legs swing inwardly, they will carry the caster wheel 18 at the lower end of the legs a little inside of the dead center, or the vertical plane passing through the pivot as indicated by the broken lines at the left hand side of Fig. 2. The vertical plane in which the pin is when thus raised, is indicated by the broken line 19, Fig. 2. When the leg stands in this position the weight of the drop side thrown upon it will push the leg inwardly under the main frame, as shown on the left hand side in Fig. 2, and as both legs are shown in Fig. 3. The hinges 13 which connect the end rails of the drop sides with the top rails of the end frames of the main part are purposely made so as to permit the end rails to be raised a little beyond a horizontal, as indicated by broken lines in Fig. 2, for the purpose of throwing the legs inwardly to let down the drop sides as before described. In order to raise the drop sides and secure them in their raised position, it is only necessary to raise them up to the position indicated by broken lines in Fig. 2, let the legs swing outwardly beyond their dead center by the force of gravity and the momentum acquired in raising the side, then drop the side to throw its weight on the leg as shown by the full lines at the right hand side of Fig. 2. These legs are hinged to the curved bracket by stop hinges, so that the leg cannot swing upwardly or outwardly beyond the position thus shown in the said Fig. 2. Stop shoulders 20 are formed on the brackets 14 by the sides of the lugs 15, for the upper face of the bracket like pieces 16 to engage and limit the movement of the said legs outwardly. The leg for one of the drop sides is placed on one side of the lug 15 and the leg for the other drop side at the same

end of the couch is placed on the opposite side of its lug 15, so that when the lugs are folded or turned inwardly the caster ends of each pair of legs may pass each other as shown in Fig. 3.

In order to save cutting off the lower corners of the vertical member of the angle irons at the connected ends of the top rails and end rails, I make the end rails of a little narrower angle iron so that the lower corner of the end rails may shut by the lower corner of the top rail as shown at the left hand side in Fig. 2.

By my improvement one or both sides of the bed bottom may be dropped down out of the way to make a narrower couch or raised up to make a wider couch, by merely throwing the sides down or up in the most simple manner. No hooks or other fastenings to be manipulated are necessary, whereby the drop side couch is very convenient to operate and is very rigid and strong when the drop sides are raised for use. The legs so to speak, are operated automatically by merely operating the sides. The reason for having the lower ends of the legs come inside of a vertical plane passing through the pivot of the legs when the drop sides are raised and the legs come to a poise, is that the move-

ment of the drop side when raised to throw the legs inwardly for letting down the side is very slight and but little if any momentum is acquired by the said movement. On the other hand, when the drop side is raised, the movement is considerable and one would naturally make this movement with sufficient rapidity to cause the legs to swing outwardly by the momentum acquired in raising them so that they will swing beyond the dead center and be in a position to hold up the drop side.

I claim as my invention:

In a drop side couch, the combination of a main frame with a drop side hinged thereto and having its outer edge free to be elevated into a higher plane than its hinged edge, and a pair of gravitating legs loosely pivoted to the said drop side near its outer edge for swinging freely when the said outer edge is raised and lowered, whereby the said legs may be automatically brought into their supporting and non-supporting positions upon raising and lowering the said drop side on its hinges.

HARRY B. ARNOLD.

Witnesses:

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