E. NICKERSON.

BED BOTTOM FABRIC.

APPLICATION FILED AUG. 15, 1910.

**980,550.**

**Patented Jan. 3, 1911.**

*Fig. 1.*

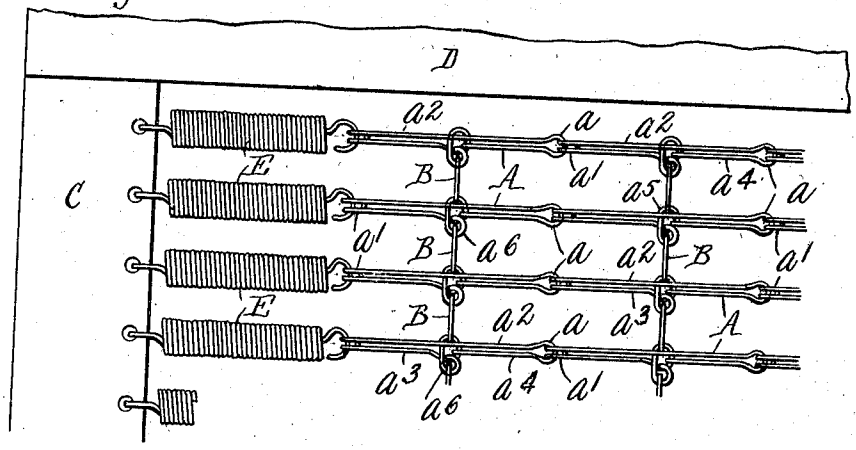



*Fig. 2.*

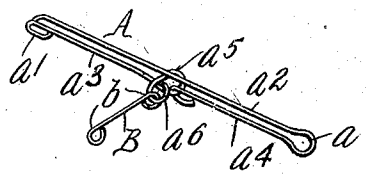



*Fig. 3.*

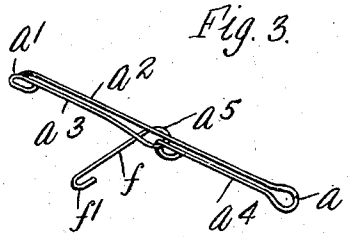



*Fig. 4.*

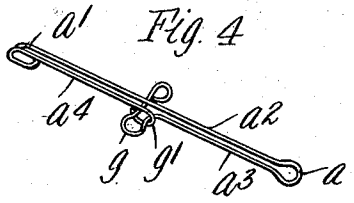
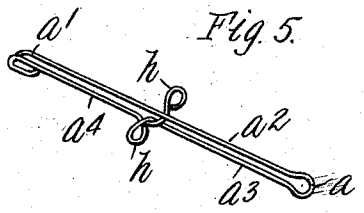



*Fig. 5.*




Witnesses.

C. H. Bund.

F. E. Prochnow

Inventor.

Edward Nickerson,

By Wilkelm Baker & Hurd,

Attorneys.

# UNITED STATES PATENT OFFICE.

EDWARD NICKERSON, OF BUFFALO, NEW YORK, ASSIGNOR TO HARD MANUFACTURING COMPANY, OF BUFFALO, NEW YORK.

## BED-BOTTOM FABRIC.

980,550. Specification of Letters Patent. Patented Jan. 3, 1911.

Application filed August 15, 1910. Serial No. 577,205.

*To all whom it may concern:*

Be it known that I, EDWARD NICKERSON, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Bed-Bottom Fabrics, of which the following is a specification.

This invention relates to improvements in bed-bottom fabrics of that class which are composed of a plurality of wire links which are connected or hinged together in such a manner that the fabric is flexible and can be folded both transversely and longitudinally thereof.

The object of this invention is to provide a bed-bottom fabric of this kind of simple and economical construction in which the links are connected together end to end in longitudinal rows and the links in each row are connected at points intermediate of their ends with the corresponding links in the adjacent rows in such a manner as to form continuous parallel strands which extend from end to end of the fabric both longitudinally and transversely thereof.

A further object of this invention is to provide a bed bottom having links which are composed of parallel bars or strands of wire arranged side by side longitudinally of the link, and are connected together intermediate of their ends, transversely of the fabric, in such a manner that any lateral or side strains upon the links will not tend to spread them apart, and the end and side strains to which the links are subjected will be distributed throughout the link instead of falling upon the ends thereof.

In the accompanying drawings: Figure 1 is a fragmentary plan view of a bed bottom provided with a fabric embodying the invention. Fig. 2 is a perspective view, on an enlarged scale, of one of the longitudinal and one of the transverse links of the fabric shown in Fig. 1. Figs. 3, 4 and 5 are perspective views of links of modified construction.

Like reference characters refer to like parts in the several figures.

The bed-bottom fabric consists of parallel rows of wire links which are arranged end to end lengthwise of the bottom. The links have hinged end connections with the adjoining links in the rows, and the corresponding links in the different rows are likewise suitably connected together transversely of the fabric. Each link is suitably formed by bending a single piece of wire. It is provided with a hook at one end and a loop at the opposite end which hook and loop are adapted to engage similar coöperating parts on the adjoining links and are connected together by double parallel bars or strands of wire which are arranged side by side and are provided intermediate of the ends of the link with suitable means whereby the link can be connected transversely of the fabric to the corresponding links in the rows on the opposite sides thereof either by separate transverse connecting links, as shown in Fig. 1, or by a laterally extending arm formed integrally with the link, as shown in Fig. 3.

In the construction shown in Figs. 1 and 2, A A represent the longitudinal links of the fabric and B B the transverse links. Each longitudinal link is provided at one end with a loop $a$ and at its opposite end with a hook portion $a'$ which are connected together on one side of the link by an integral continuous bar or strand $a^2$ and on the other side of the link by bars or strands $a^3$ and $a^4$ which are continuations of the wire forming the hook and loop ends of the link and are connected together at a point approximately midway between the ends of the link. The bar $a^3$ is bent at its end to form a loop $a^5$ which preferably projects laterally beyond the outer side of the continuous bar $a^2$ and has its end brought back across the bar $a^3$ terminating in an eye $a^6$ which projects laterally from the side of the link opposite to the loop $a^5$ and is adapted to be engaged by one of the hooked ends $b$ of the transverse link B, the other end of this transverse link engaging in the loop $a^5$ of the corresponding longitudinal link in the row next adjacent on that side. It is of no consequence which of the bars $a^3$ and $a^4$ is bent to form the loop $a^5$ and the eye $a^6$ and either may be used for that purpose, and any suitable form of transverse link may be used for connecting the corresponding loops and eyes of the different links. The bar $a^4$ is provided with a hooked end or eye which engages in the loop $a^5$ for connecting the bars $a^3$ and $a^4$ together.

Any suitable frame may be employed to which the fabric can be secured in any de-

sirable manner. The frame shown is of usual angle-iron construction, having end rails C and side rails D. The fabric is secured to the end rails by springs E which connect the end links of each row with the rails. The fabric may also be connected with the side rails if desired, although this connection is generally not necessary.

The link shown in Fig. 3 is similar to that shown in Figs. 1 and 2 with the exception that the bar $a^3$, instead of being bent to form the eye $a^6$ adjacent to the side of the link, is extended laterally of the link to form the transverse arm $f$ having a hooked end $f'$ which is adapted to engage the loop $a^5$ in the corresponding link in the next row. The arms $f$ of the different longitudinal links thus serve to connect these links together transversely of the fabric and render unnecessary the employment of separate transverse connecting links such as the links B in Fig. 1.

In Fig. 4 the construction is similar to that shown in Figs. 1 and 2 except that the bar $a^3$ is bent to form a laterally extending loop $g$ having a somewhat contracted neck portion, and the bar $a^4$ is provided with a hooked end $g'$ which embraces the neck portion of the loop $g$ and connects the two bars on that side of the link together.

In the modified construction shown in Fig. 5 the bars $a^3$ and $a^4$ are bent or twisted around each other so that they interlock with their ends extending laterally on opposite sides of the link and terminating in eyes $h$ on each side thereof for engagement with the transverse links B.

If it is desired to do away with the separate transverse connecting links B, the links shown in Figs. 4 and 5 may be provided with laterally extending hooked arms, such as that shown in Fig. 3, for connecting them together transversely of the fabric. This can be easily done by extending the end of one of the bars forming the link laterally from one side of the link at the joint where these bars are connected together and providing this extended arm with a hooked end for engagement with the loop or eye of the adjacent link.

In all these constructions it will be noticed that the eye and loop on the opposite sides of each longitudinal link are connected together so that they are directly opposed to each other. Any lateral strain on the link in either direction will thus be directly resisted by the opposite transverse member and there will be no tendency to draw apart the longitudinal bars of the link, or weaken it in any way.

The arrangement of the transverse connecting portions of the longitudinal links intermediate of the ends thereof enables the links to be secured together in a transverse direction by side connections which are separate from and independent of the end connections of the links. The side and end connections thus do not come into contact with each other and interfere with the free movement of the links relative to each other, nor is there any danger of either connection becoming distorted or bent out of operative position by any strains which may be received by the other connection. This greatly strengthens the construction as it prevents both the longitudinal and transverse strains from being received by the same portion of the link but distributes them throughout the link and its connections.

I claim as my invention:

1. A bed-bottom fabric composed of connected links, each consisting of a single wire bent upon itself to provide two substantially parallel longitudinal bars and having its ends connected by engaging portions thereof and terminating intermediate of the ends of the link and forming portions for the pivotal connection of the link with adjoining links on opposite sides thereof, said link having at its opposite ends portions for connection with coöperating portions at the ends of adjoining links, substantially as set forth.

2. A bed-bottom fabric composed of links connected longitudinally and transversely of the fabric, each consisting of a single wire bent upon itself to provide two substantially parallel longitudinal bars, and having its ends connected intermediate of the ends of the link and one of said ends being bent to form connecting portions on opposite sides of the link for connection with corresponding portions on adjoining links transversely of the fabric, said link having at its opposite ends portions for connection with coöperating portions at the ends of adjoining links longitudinally of the fabric, substantially as set forth.

3. A bed-bottom fabric composed of longitudinal links and transverse connecting links, each longitudinal link consisting of a single wire bent upon itself to provide two substantially parallel longitudinal bars and having its ends connected intermediate of the ends of the link and bent to form loop and eye portions extending laterally from the connection at opposite sides of the link and adapted to be engaged by said transverse links, said link having at one end a loop and at the opposite end a hook for connection with coöperating loops and hooks at the ends of adjoining links, substantially as set forth.

4. A bed-bottom fabric composed of links connected longitudinally and transversely of the fabric, each longitudinal link consisting of a single wire bent upon itself to provide two substantially parallel longitudinal bars and having its ends connected and terminating intermediate of the ends of the link, one

end of the wire being bent to form a laterally projecting loop on one side of said link and an eye on the opposite side thereof for connection with corresponding portions of adjoining links, and the other end of the wire being connected with said loop, said link having at its opposite ends portions for connection with coöperating portions at the ends of adjoining links, substantially as set forth.

Witness my hand, this eighth day of August, 1910.

EDWARD NICKERSON

Witnesses:
JAS. H. DYITT,
WM. F. WILLIAMS.