

## **Specification of Thomas Adams : trusses.**

### **Contributors**

Adams, Thomas.

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Wellcome Collection  
183 Euston Road  
London NW1 2BE UK  
T +44 (0)20 7611 8722  
E [library@wellcomecollection.org](mailto:library@wellcomecollection.org)  
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A.D. 1828 . . . . . N° 5648.

SPECIFICATION

OF

THOMAS ADAMS.

—  
TRUSSES.  
—

LONDON:

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1857.







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A.D. 1828 . . . . . N° 5648.

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**Trusses.**

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**ADAMS' SPECIFICATION.**

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, THOMAS ADAMS, of Oldbury, in the County of Salop, Manufacturer, send greeting.

WHEREAS His most Excellent Majesty King George the Fourth, by His Letters Patent under the Great Seal of Great Britain, bearing date at  
5 Westminster, the Sixth day of May, in the ninth year of His reign, did give and grant unto me, the said Thomas Adams, my exors, admors, and assigns, His especial licence, full power, sole privilege and authority, that I, the said Thomas Adams, my exors, admors, and assigns, during the term of years therein mentioned, should and lawfully might make, use, exercise, and vend,  
10 within England, Wales, and the Town of Berwick-upon-Tweed, "MY INVENTED IMPROVEMENTS ON INSTRUMENTS, TRUSSES, OR APPARATUS FOR THE RELIEF OF HERNIA OR RUPTURE;" in which said Letters Patent there is contained a proviso obliging me, the said Thomas Adams, by an instrument in writing under my hand and seal, to cause a particular description of the nature of my said  
15 Invention, and in what manner the same is to be performed, to be inrolled in His Majesty's High Court of Chancery within six calendar months next and immediately after the date of the said recited Letters Patent, as in and by the same (relation being thereunto had) may more fully and at large appear.

NOW KNOW YE, that in compliance with the said proviso, I, the said  
20 Thomas Adams, do hereby declare that the improvements which I have invented are:—



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*Adams' Improvements in Trusses, &c.*

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First, an additional spring, moveable at pleasure, upon or under the usual and ordinary spring of common steel trusses for the purpose of regulating and adjusting the pressure of the truss; and,

Secondly, the introduction of a graduated scale by which the amount of the increase or decrease of pressure that is produced is nearly shewn and estimated, 5 on which account I propose calling the apparatus a Patent Adjustable and Graduated Truss; and I do hereby, and by the plans or figures contained in the Drawing hereunto annexed, and which are to be taken as part of this my Specification, describe and ascertain the nature of my said improvements, and how the same are to be performed and carried into effect in the 10 following manner (that is to say):—

The additional spring may be of the same or of a little greater or less strength or width than the common or usual spring (which I will hereafter call the main spring) as may be found necessary to regulate the pressure of the latter, and may be made of the same or of any other suitable material, but will 15 require to be much less round or curved than the main spring, and in general may be nearly straight, the length of the additional spring to be about one third of the length of the main spring, and the former will generally require one of its ends to be tapered a little narrower or otherwise made a little weaker than the other end, for the purpose of keeping the truss, when acted 20 upon by the additional spring, in the proper form or shape; and the tapered or weakened end may be applied to that end of the main spring which will best adapt the truss to the particular case required. The additional spring is made to slide or move either upon or under the main spring by the latter having a slit or slits made therein, and the additional spring having a rivet or 25 rivets, or other sufficient fastening or fastenings affixed to it to connect it with the main spring, so that it can slide or move in or along such slit or slits; or the additional spring may be made to clip the edges of the main spring or be otherwise connected with it so as to slide or move along it without the latter having any slit therein. A leather strap or other appendage may be attached 30 to the additional spring, by means of which it may be moved or drawn along the main spring at pleasure under the covering of the truss, and the pressure of the truss be thereby instantaneously increased or diminished as required; or the said additional spring may be moved by a stud or handle passing through a slit in the said covering, or in any other convenient way; but the additional 35 spring will be found to move or slide with greater ease and convenience upon or along the outside of the main spring, and the leather strap may be affixed to the inner side of the additional spring by the rivets *b, b*, passing through it so that the strap will be situate between the main spring and the additional



*Adams' Improvements in Trusses, &c.*

spring, as represented in Figure 1. But I do not confine myself to this mode of construction, because the said additional spring may also be applied and connected to the inside of the main spring. The strap attached to the additional spring may slide or move within the covering of the truss by the ends of  
 5 the said strap coming through holes or other apertures in such covering; and upon one of the projecting ends of such strap I introduce my second improvement, which is a graduated scale, with figures upon it for the purpose of thereby showing the increase or decrease of pressure that takes place in pounds, ounces, or other denominations of weight; and I obtain the divisions  
 10 to be marked upon the strap, as shown at Z, Figure 1, by opening the truss to the extent which it would have in wear, and then suspending the different weights from the centre of the pad while the aforesaid additional spring is moved into its various positions. If a stud should be preferred to a strap for moving the said additional spring, then the said gradation or scale of force  
 15 may be made on the side of the slit or opening in the covering through which the said stud or handle slides.

Figure 2 shews the spring of a common single steel truss curved or rounded in or near to the usual and ordinary manner. *a, a, a, a,* are slits hereinbefore mentioned to be made for the screws or rivets of my said additional  
 20 spring to slide therein.

Figure 3 is the additional spring, tapering a little to one of its ends, and *b, b,* are rivets or screws for the purpose of connecting Figure 2 to Figure 3 by passing through the slits *a, a, a, a,* in Figure 2, and into the holes *c, c,* in Figure 3.

25 Figure 4 represents the edge of Figure 3, and thereby shews the degree of rounding or curving generally necessary for the latter before its connexion with or application to Figure 2; but the additional spring may be more or less curved or straight, as may be found sufficient to controul or regulate the pressure of the main spring, and best adapt the truss to the shape and purpose  
 30 for which it may be required; the additional spring may also be made in one or more part or parts, but a single additional spring will generally be sufficient to regulate the pressure of a single truss. When the additional spring is required to be connected with a double spring truss or an umbilical spring truss or two single spring trusses forming a double spring truss, then two of the additional  
 35 springs will generally be necessary, one being placed upon the right and the other upon the left side of the main spring on such truss, there being in each of these cases two parts of the main spring to be acted upon by the additional spring.

It will be observed in the above description, and by reference to Figure 4



*Adams' Improvements in Trusses, &c.*

of the Drawing, that as my aforesaid additional spring is nearly straight when in its natural state or not acted upon, its tendency will be to relieve or diminish the force or pressure of the main spring in any part to which it may be applied, and it will most effectually and powerfully do so when it is drawn over that part of the main spring that is the most sharply bent or curved, 5 consequently main springs of more than usual power may be employed; and upon this principle of adjustment by a nearly straight additional spring I rest the novelty of my Invention, because I am aware that additional back springs have been before applied to increase the pressure of the main spring, though without the graduation and nicety of adjustment which I have introduced and 10 claim as part of my Invention, even if used with such strengthening springs. And I do hereby declare it to be the additional spring herein-before described by me, and the manner of applying the same to the common spring of such truss or trusses as thereby to diminish the power of the spring of the truss at pleasure, and likewise the introduction of the graduated scale by which the 15 increase or decrease of pressure is rendered evident, and which two points alone constitute my Invention and improvements.

In witness whereof, I, the said Thomas Adams, have hereunto set my hand and seal, the Twenty-fourth day of October, in the year of our Lord One thousand eight hundred and twenty-eight. 20

THOMAS (L.S.) ADAMS.

Signed and sealed, by the within-named  
Thomas Adams, in the presence of

THO<sup>s</sup> TYNDALL.

AND BE IT REMEMBERED, that on the Twenty-fourth day of October, 25 in the year of our Lord 1828, the aforesaid Thomas Adams came before our said Lord the King in His Chancery, and acknowledged the Specification aforesaid, and all and every thing therein contained and specified, in form above written. And also the Specification aforesaid was stamped according to the tenor of the Statute made for that purpose. 30

TYNDALL, Extra.

Inrolled the Twenty-ninth day of October, in the year of our Lord One thousand eight hundred and twenty-eight.

LONDON:

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Printers to the Queen's most Excellent Majesty. 1857.



If a stud be preferred to a strap for moving the additional spring then one like n will answer the purpose by being placed in the back the additional spring

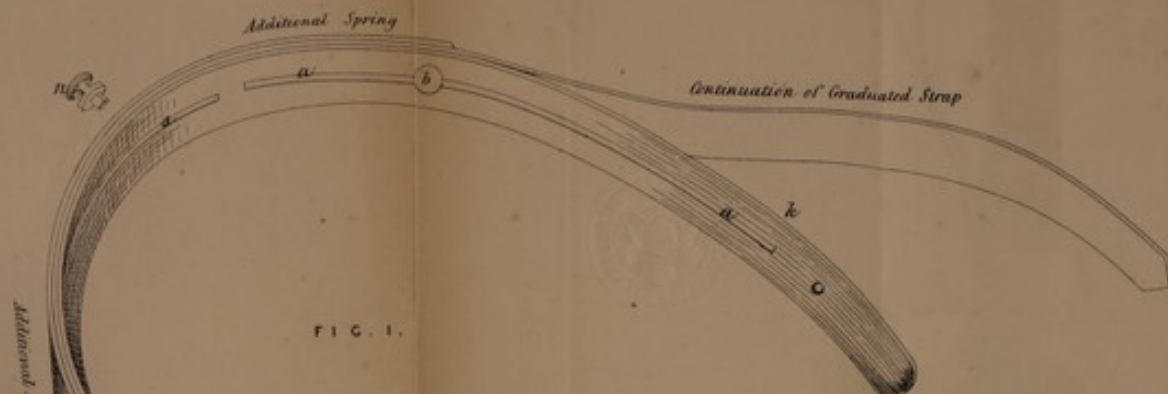


FIG. 1.

It will be observed that the letters of references are the same in Fig. 1 as in Fig. 2.

The full power of this Truss would be five pounds if the additional Spring was drawn quite back to k but as it is drawn forward till that part of the Graduated Strap marked 2. lbs. is opposite the mark m. the pressure of the Truss is diminished to two pounds and if drawn further till 1 lb. in the strap be opposite the mark m. the pad would only press with a force of one pound.

FIG. 4.

FIG. 3.

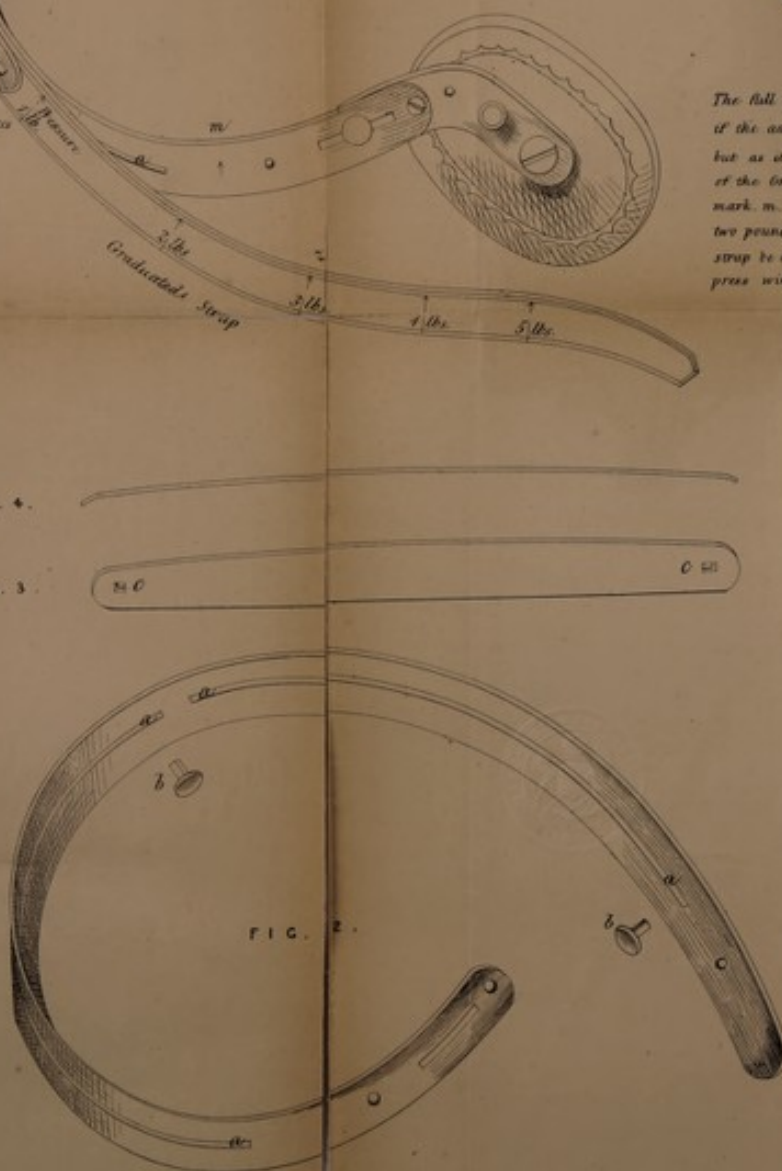


FIG. 2.

The enroled drawing is colored.

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