

No. 638,987.

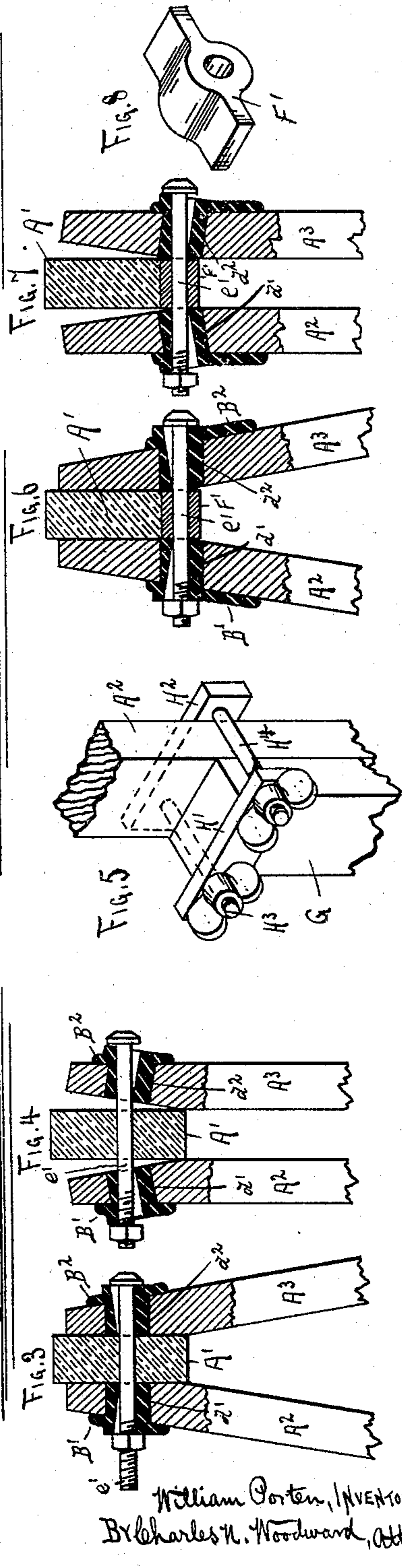
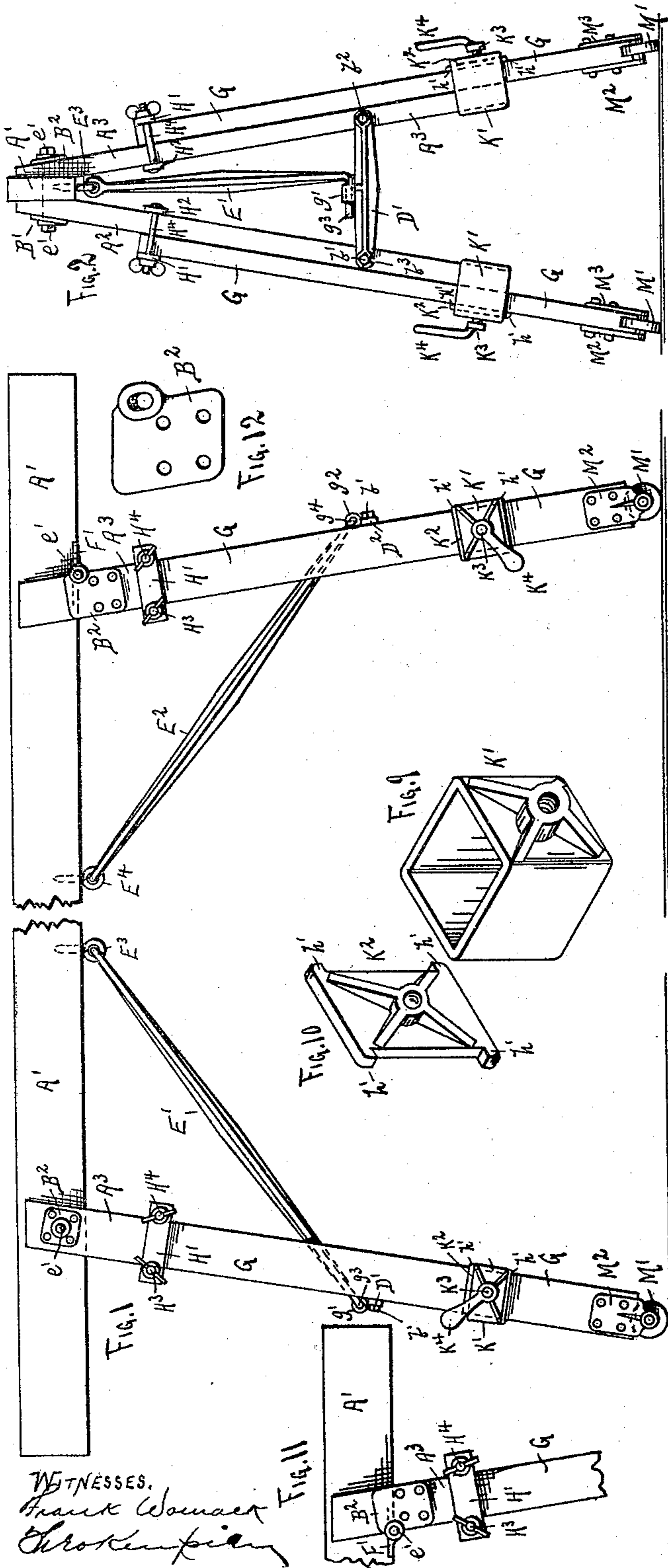
Patented Dec. 12, 1899.

W. PORTEN.

ADJUSTABLE FOLDING HORSE FOR PAINTERS, PLASTERERS, OR OTHERS.

(Application filed Dec. 2, 1898.)

(No Model.)



WITNESSES.
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ADJUSTABLE FOLDING HORSE FOR PAINTERS, PLASTERERS, OR OTHERS.

SPECIFICATION forming part of Letters Patent No. 638,987, dated December 12, 1899.

Application filed December 2, 1898. Serial No. 698,102. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM PORTEN, of St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Adjustable Folding Horses for Painters, Plasterers, or Others, of which the following is a specification.

This invention relates to the "horses" or staging-supports used by painters and decorators, plasterers, and other workmen; and it consists in the construction, combination, and arrangement of parts, as hereinafter shown and described, and specifically pointed out in the claims.

In the drawings, Figure 1 is a side elevation foreshortened, and Fig. 2 is an end elevation, of the horse set up as in use. Fig. 3 is an enlarged sectional detail illustrating one form of the construction of the joint whereby the upper sections of the legs are connected to the body portion of the horse, showing the legs closed as in use. Fig. 4 is a view similar to Fig. 3, showing the legs folded together as they will appear when the horse is "knocked down" or folded for transportation. Fig. 5 is a perspective view of a portion of the two parts of the legs and the upper clamp, illustrating its construction. Figs. 6 and 7 are views similar to Figs. 3 and 4, illustrating a modification in the construction of the joint between the legs and the body of the horse. Fig. 8 is a perspective view, detached, of the hinge-plate which is attached to the body of the horse in the modification shown in Figs. 6 and 7 and at the right in Fig. 1. Fig. 9 is a detached perspective view, enlarged, of the clamp-ferrule of the lower clamp; and Fig. 10 is a detached perspective view, enlarged, of the follower-plate of the same. Fig. 11 is a detached detail illustrating another modification in the construction of the leg-joint. Fig. 12 is an enlarged view, detached, of one of the hinge-plates, illustrating its construction more fully.

A' represents the body of the horse, which may be of any required size or length, but which will generally be of a two-by-six joist and about twelve feet long. At each end legs are pivotally united by flexible joints, so as to be capable of being folded up alongside the body portion A' when the horse is to be transported. This flexible joint is formed by two plates B'

B², secured to the upper ends of the leg-sections A² A³ on the outside and with hubs d' d², projecting through the leg-sections, as shown. A bolt e' passes through both plates B' B² and their hubs d' d² and the body A' of the horse, as shown, so that all the parts may be firmly bound together, as shown in Fig. 3.

The inner upper portions of the legs A² A³ are "scarfed," as shown in Figs. 2, 3, 4, 6, and 7, so that the lower ends of the legs will spread in the usual manner to secure greater stability.

The holes through the plates B' B² and their hubs d' d² for the bolt e' are elongated perpendicularly at the outer ends, so that when the bolt e' is loosened the legs will readily move inward at the bottom to enable the legs to be folded up closely alongside the body portion A'.

Attached across each opposite pair of the legs A² A³ by bolts b' b² at each end is a cross-bar D' D², each cross-bar having an open slot b³ fitting over the bolts b', so that the bars may be disconnected at one end when not in use.

Formed upon each of the bars D' D², preferably at the center, is a socket g' g², adapted to receive the right-angled lower ends g³ g⁴ of braces E' E², the upper ends of the braces being pivotally connected to the under side of the body portion A' by eyebolts E³ E⁴, as shown. By this means the legs will be firmly braced and the horse held rigidly in position.

At the right of Fig. 1 the joints by which the legs are connected to the body of the horse are constructed slightly different from that shown in the other views, the plates B' B², with their hubs d' d², being set at a lower point, so that the center line of the bolt e' will come opposite the lower line of the body portion A' and secured to the body portion by a plate F', (shown detached in Fig. 8,) which carries the bolt and is secured to the body A', as shown. By this arrangement the outer lines of the legs A² A³ when folded up will come even with the lower edge of the body A', while in the construction shown at the left of Fig. 1 and in Figs. 2, 3, and 4 the legs when folded up will come about midway of the sides of the body A'. In Fig. 11 the plates B' B² are shown reversed in position, so that when folded up the inner lines of the legs will come about even with the lower line of the body A' or en-

tirely below it, which may be a desirable construction under some circumstances. The mode of operation and the general construction and the results produced, however, are the same in all the modifications shown. By this simple arrangement the legs may be distended and the horse quickly and readily "set up" for use or knocked down for convenience of transportation, either from place to place or room to room in a building or for shipment from place to place.

I have shown each leg provided with an adjustable extension member G, so that the body portion A' may be elevated or depressed when required to adjust the horse to the work. These extension-legs are each clamped by their upper ends to the legs A² A³ by clamp-plates H' H² by bolts H³ H⁴, as shown in Figs. 1, 2, 5, and 11, which when loosened permit the legs to be adjusted perpendicularly. The lower ends of the legs A² A³ are provided with ferrules K' large enough to also receive the adjustable extension-sections G, as shown, and with a follower-plate K², against which a set-screw K³ is adapted to be set, the whole forming a clamp by which the leg-sections may be firmly clamped together and by co-acting with the clamps H' H² H³ H⁴ firmly support the legs and at the same time enable them to be readily and quickly adjusted to change the height of the horse. The presence of the clamps does not interfere with the folding up of the legs, as before stated. The lower ends of the extension-sections G are provided with wheel-rollers M' to enable the horse to be more easily removed when required. These wheel-rollers M' are shown supported between plates M² M³, bolted to the sides of the leg-sections G, whereby they are firmly supported.

Each of the set-screws K³ is shown provided with a handle K⁴, by which they will be more easily actuated and without the necessity for the use of a wrench or other implement.

The follower-plates K² are formed with projecting ends h' to rest over the edges of the ferrules K', by which means the follower-plates are supported, while at the same time being left free to slide in the ferrules.

The right-angled ends g³ g⁴ of the braces E' E² may project through the sockets g' g² far enough to receive "collets" or keys, if required, to prevent the possibility of the braces becoming disengaged from the cross-bars D' D².

The adjustable feature of these horses will be found very convenient for painters and decorators, or plasterers, or other workmen where it is necessary to adapt the horse or staging to the height of ceilings, and the knockdown feature will be found very convenient to enable the horses to be passed into rooms through small openings, or up or down narrow stairways, or through contracted passage-ways.

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

1. In an adjustable folding "horse," a head-timber, diverging legs embracing said head-timber at their upper ends, cross-bars removably connecting each opposite pair of said diverging legs, plates connected to said legs and with elongated holes therethrough, and bolts passing through each opposite pair of said plates and legs and the said head-timber, whereby said legs are adapted to be firmly connected to said head-timber, or folded together with said head-timber, substantially as and for the purpose set forth.

2. In an adjustable folding "horse," a head-timber, diverging legs embracing said head-timber at their upper ends, cross-bars removably connecting each opposite pair of said diverging legs, plates connected to said legs and with elongated holes therethrough, a plate attached to the under side of said head-timber, a bolt supported in said head-timber plate and passing through said legs and leg-plates in substantial alinement with the lower surface of said head-timber, substantially as and for the purpose set forth.

In testimony whereof I have set my hand in the presence of two subscribing witnesses.

WILLIAM PORTEN.

In presence of—

Mrs. H. E. BRANDT,
ROBERT O. PORTEN.