No. 724,638 PATENTED APR. 7, 1903.

J. A. WHEELER & F. W. HARGRAVE.

ARCHITECTURAL PARTITION.

APPLICATION FILED APR. 14, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

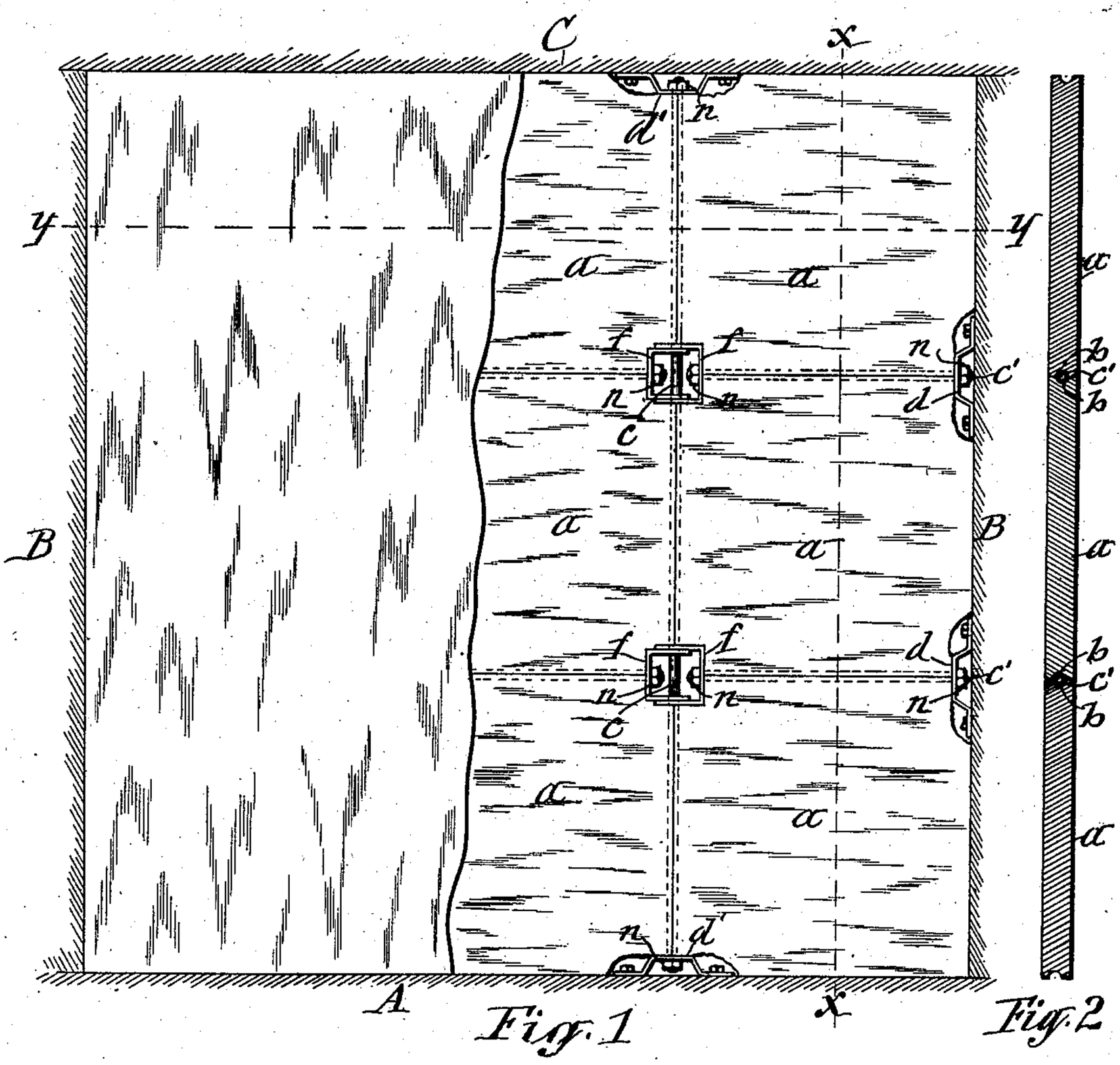

Fig. 1

Fig. 2

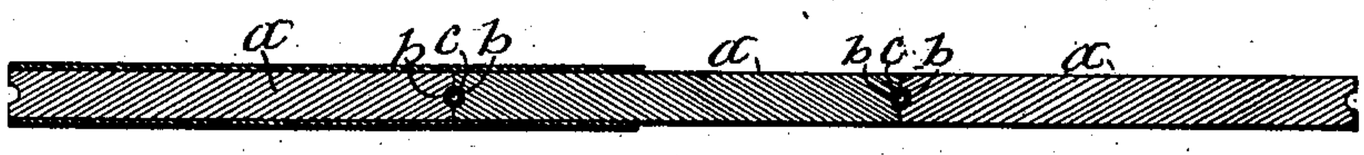

Fig. 3

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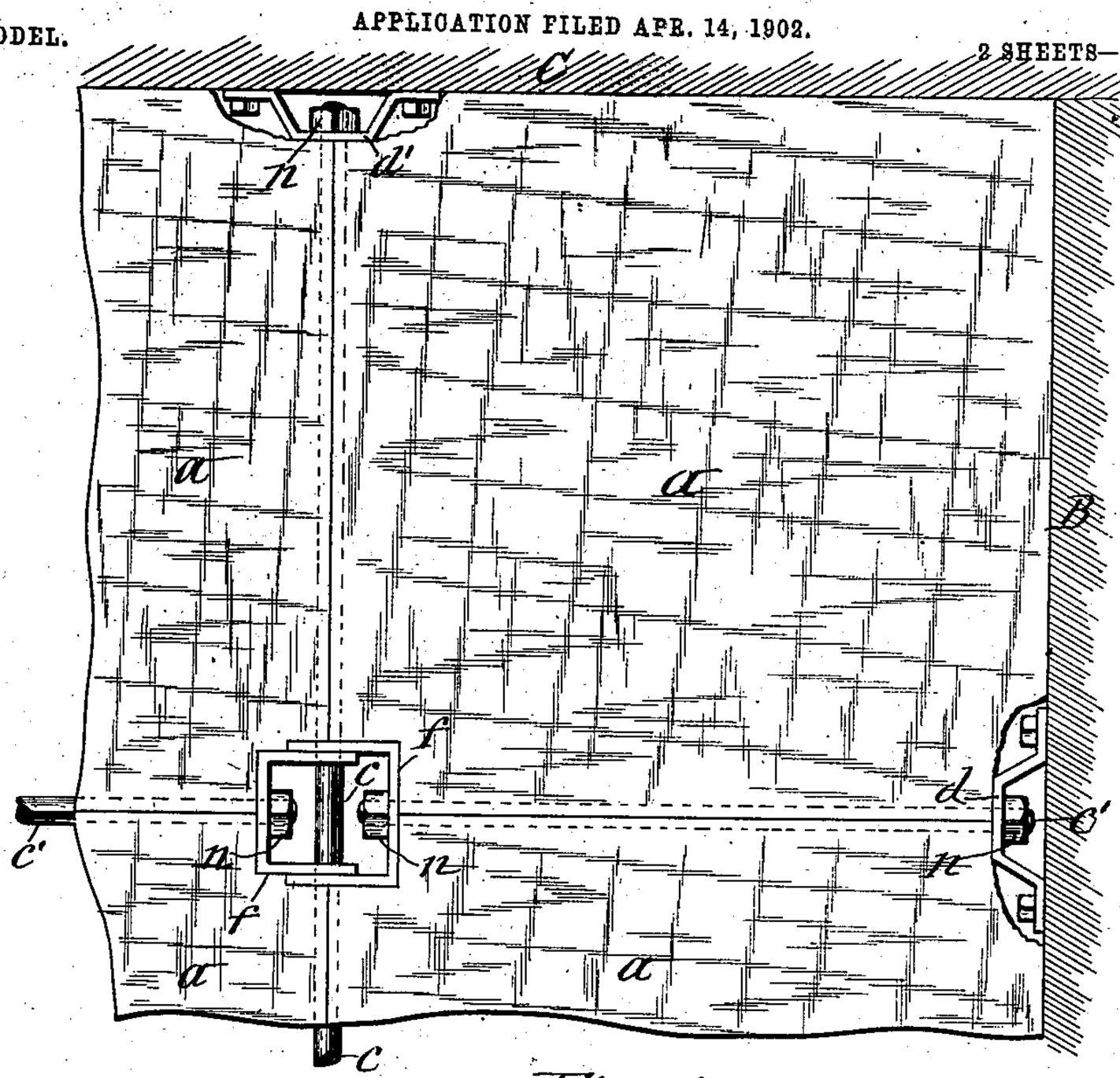

Fig. 4

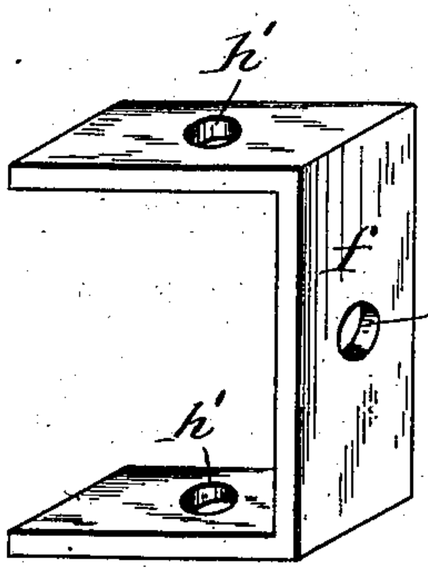

Fig. 5

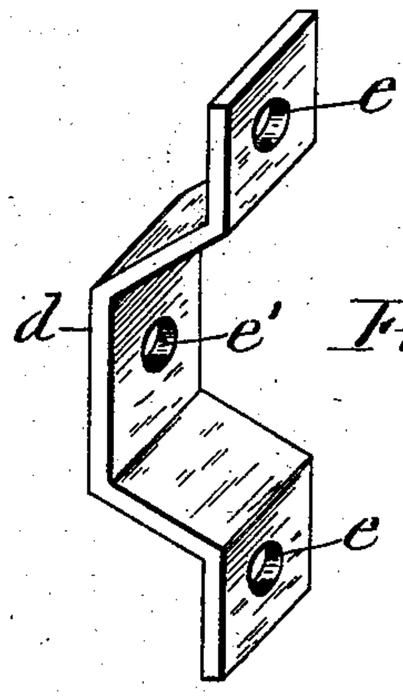

Fig. 6

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UNITED STATES PATENT OFFICE.

JAMES A. WHEELER AND FREDRICK W. HARGRAVE, OF NEW YORK, N. Y., ASSIGNORS TO ALIGNUM COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

ARCHITECTURAL PARTITION.

SPECIFICATION forming part of Letters Patent No. 724,638, dated April 7, 1903.

Application filed April 14, 1902. Serial No. 102,839. (No model.)

To all whom it may concern:

Be it known that we, JAMES A. WHEELER and FREDRICK W. HARGRAVE, citizens of the United States, and residents of New York, in the county of New York, in the State of New York, have invented new and useful Improvements in Architectural Partitions, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention consists of a novel and inexpensive construction of an architectural partition which is easily and quickly erected and has its thickness reduced to a minimum, and thus economizes floor-space at opposite sides of the partition, and at the same time possesses the requisite stability, as hereinafter described.

In the annexed drawings, Figure 1 is a face view of a portion of a partition embodying our invention, said view showing a portion minus the finishing-plaster to expose the construction of the partition. Figs. 2 and 3 are transverse sections, respectively, on lines X X and Y Y in Fig. 1. Fig. 4 is an enlarged face view of a corner-section of the partition, showing more clearly the devices for sustaining the partition in position; and Figs. 5 and 6 are respectively detached perspective views of the yoke and strap to which the stays and ties of the partition are attached.

Similar letters of reference indicate corresponding parts.

a a represent square or rectangular slabs, which we preferably construct of suitable water and fire proof cement and formed in a plastic condition in molds of the required shape and subsequently treated to solidify and harden said slabs. The edges of these slabs are provided with grooves *b b*, extending the entire length of said edges, for the reception of metallic stays *c* and ties *c'*, extending lengthwise through the aforesaid grooves and fastened at their outer ends to the floor A, wall B, and ceiling C, constituting the main supports of the partition. We preferably employ for this purpose metallic straps *d d'*, formed with a central offset and perforated in said offset and in the end portions, as shown in Fig. 6 of the drawings. The end perforations *e e* are made for the reception of the bolts or screws by means of which the strap *d* is fastened to the aforesaid main support.

The central perforation *e'* of the strap *d* is provided for the reception of the outer end of the tie *c'*, which is screw-threaded and provided with a nut *n*, and the central perforation of the strap *d'* receives through it the outer end of the stay *c*, which is also screw-threaded and provided with a nut *n* on each end.

The stay *c* extends through the grooves *b* of the successive slabs *a a*, the edges of which are in line with each other, the ends of said stay being fastened to the straps *d'*, as aforesaid.

The inner inner ends of the ties *c' c'* are secured to the stay *c* by means of right-angled yokes *f f*, which are perforated at their center, as shown at *h*, and in their end portions, as at *h' h'*. (Shown in Fig. 5 of the drawings.) These yokes are countersunk in the inner corners of the slabs. The end portions of the yokes overlap each other, so that the perforations *h' h'* therein are caused to register and allow the stay *c* to pass through them. The two yokes are thus tied together, as more clearly shown in Fig. 4 of the drawings. The inner end of each tie *c'* passes through the central perforation *h* of one of the yokes and is screw-threaded and provided with a nut *n*, by which the tie is fastened to the yoke.

To combine maximum strength with minimum dimensions, we form the stays *c* and ties *c'* of steel or iron tubes; but we do not limit ourselves in that respect, inasmuch as in small partitions metal rods may serve the purpose.

In erecting the partition we proceed as follows: We first fasten the straps *d* and *d'*, respectively, to the wall B and to the floor A and ceiling C. We then place the bottom slab *a* of the first tier in its requisite upright position upon the floor and against the wall B and sustain it in its erect position by means of suitable supports placed temporarily

against opposite sides of said slab. We then place in the top groove of said slab one of the ties c' and secure said tie to the strap d by means of the nut n. In this manner we place the slabs of the entire tier successively one upon the other, with the ties c' between them and secured to the straps d d, as aforesaid. We then place the first stay c in position to secure it to the straps d' d', said stay having sufficient end play in the straps to allow the ends of the stay to be inserted through the central perforations of the straps and the nuts n to be secured to the protruding ends of the stay. The yokes f f are previously slipped onto the stay and placed in position to receive the inner ends of the ties c' c' through the perforations h of one of the yokes of each pair. Then by tightening the nuts n on the inner ends of said ties all the ties of the first tier of slabs are securely retained in position to sustain said tier. Each succeeding tier of slabs is erected in the same manner, the intervening ties being each secured to one of the yokes f of each pair. In erecting the last tier of slabs to complete the partition the said tier, with the intervening ties c' c', are disposed at a slight angle to the preceding tier of slabs and abutting against the vertical edge thereof. One of the yokes f of each pair is turned on the stay-rod c to a position to allow the inner ends of the ties c' c' of the last tier of slabs to be inserted into the perforations h of the yokes, and then the nuts n are applied to said ends of the ties. Then the bands d and nuts n are applied to the opposite ends of the ties and the entire tier of slabs forced back into alinement with the previously-erected tiers, and after this has been accomplished the bands d d on the outer ends of the ties are fastened to the wall or studding and the nuts on the ends of the ties are to be tightened. In this manner the entire partition is firmly secured in its requisite position.

What we claim as our invention is—

1. An architectural partition composed of slabs of uniform widths and disposed edge to edge and provided in their abutting edges with grooves extending lengthwise of said edges, stays disposed in the grooves extending in one direction, yokes countersunk in the corners of the slabs at the junctions thereof, ties disposed with grooves extending laterally from the other grooves and fastened to said yokes and anchoring devices fastening said stays and ties to the main supports of the partition.

2. An architectural partition composed of quadrilateral slabs disposed edge to edge, and with said edges in range with each other and provided with longitudinal grooves in said edges, yokes countersunk in the corners of the slabs at the junction thereof, stays passing through the grooves extending in one direction and through the yokes, ties disposed in the other grooves and fastened at one end to the yokes, and anchoring devices fastening said stays and ties to the main supports of the partition as set forth.

3. An architectural partition composed of right-angled quadrilateral slabs disposed in rows and with their edges in line with each other and provided with longitudinal grooves in said edges, metal stay rods or pipes extending through the vertical grooves of the successive slabs, yokes countersunk in the corners of the slabs, and tied to the aforesaid rods or pipes, tie rods or pipes attached at one end to the yokes and extending through the horizontal grooves of the slabs, and anchoring devices fastening said rods or pipes to the main supports of the partition as set forth.

4. An architectural partition formed of right-angled quadrilateral slabs disposed in rows and with their edges in line with each other and provided with longitudinal grooves in said edges, tubular metallic stays extending through the vertical grooves of the successive slabs and screw-threaded on their ends, right-angled yokes countersunk in the corners of the slabs and having their central portion and end portions perforated and receiving through said end portions the aforesaid stays, tubular metallic ties extending through the horizontal grooves and screw-threaded on opposite ends and one end passing through the central portions of the yokes, a nut on said end of the tie, straps fastened to the main supports of the partition and receiving through them the outer ends of the aforesaid stays and ties, and nuts on said ends as set forth and shown.

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