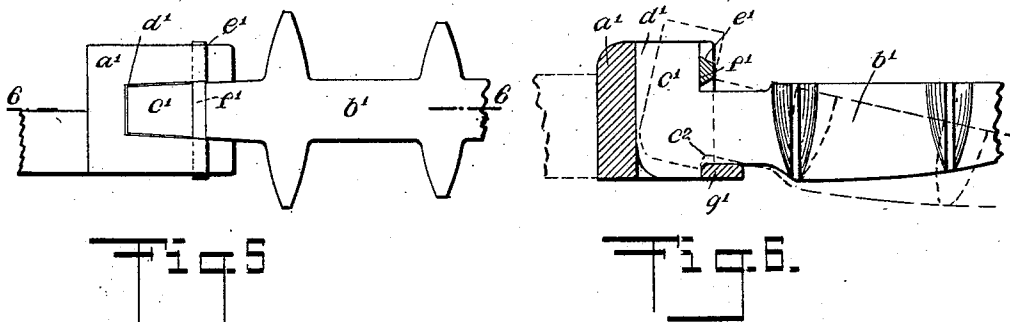
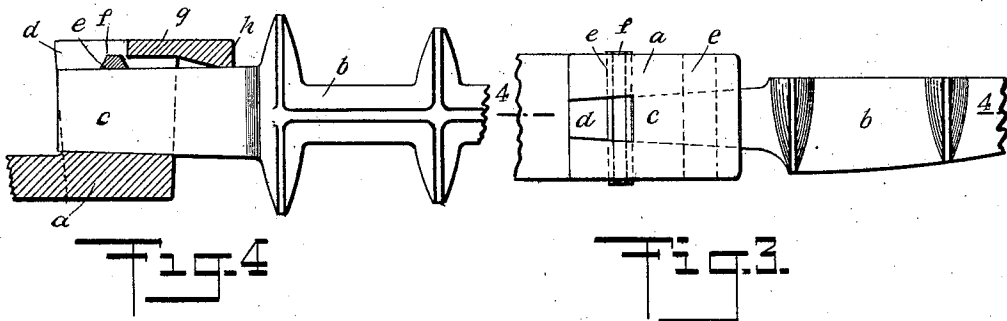
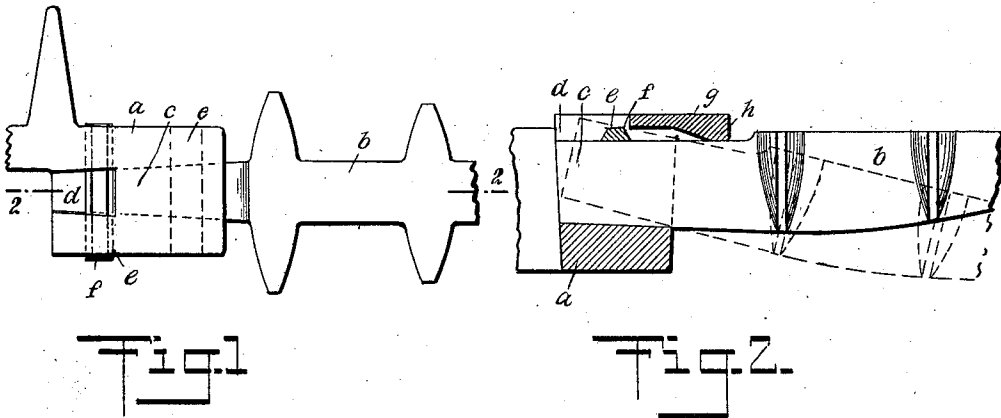


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JOINT FOR ARBORS.
APPLICATION FILED NOV. 3, 1910.

1,000,238.

Patented Aug. 8, 1911.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

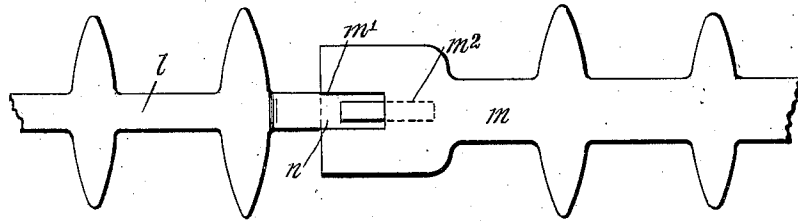


Fig. 7.

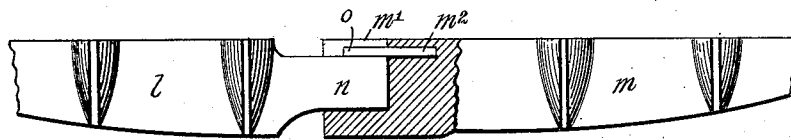


Fig. 8.

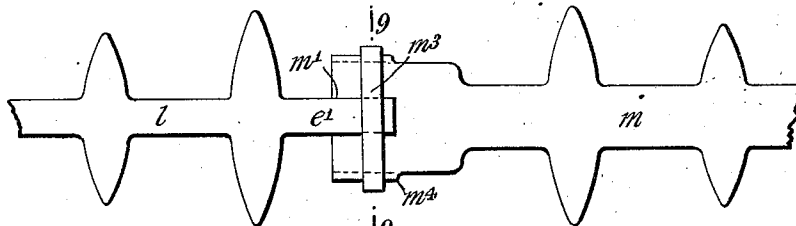


Fig. 9.

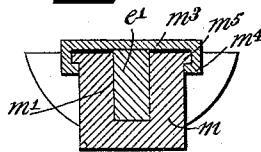


Fig. 10.

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HERBERT SYLVESTER DAVIS AND JOHN CHANCERY HAYDEN, OF PORT HOPE, ONTARIO, CANADA.

JOINT FOR ARBORS.

1,000,238.

Specification of Letters Patent.

Patented Aug. 8, 1911.

Application filed November 3, 1910. Serial No. 590,455.

To all whom it may concern:

Be it known that we, HERBERT S. DAVIS and JOHN C. HAYDEN, subjects of the King of Great Britain, and residents of Port Hope, in the Province of Ontario and Dominion of Canada, have invented a new and Improved Joint for Arbors, of which the following is a full, clear, and exact description.

Our invention relates to joints for arbor sections used in casting, and it has for its object to provide joints which will permit the sections to be readily separated by striking one of the ends of the arbor and breaking the wedge member holding the sections together.

Another object of the invention is to so construct the sections that they will be held together by a wedge member of combustible or fusible material, the rigidity of which is lost by the heat and by contact with the metal, thereby permitting the sections to fall apart as the casting is removed from the same.

Still other objects of the invention will appear in the following complete description.

In this specification we will describe the preferred form of our invention, it being understood that the scope of the invention is defined in the appended claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a plan view of the sections with the wedge member disposed at the top of one of the sections; Fig. 2 is a sectional view on the line 2—2 of Fig. 1; Fig. 3 is a side view showing a modified form of the invention, with the wedge member disposed at the side of one of the sections; Fig. 4 is a sectional view on the line 4—4 of Fig. 3; Fig. 5 is a side view of another modified form of the invention; Fig. 6 is a sectional view on the line 6—6 of Fig. 5; and Figs. 7, 8, 9 and 10 are views showing two additional modified forms of the invention.

By referring to the drawings it will be seen that there are two sections *a* and *b*, the section *b* having a projecting member *c*, and the section *a* having a recess *d* which extends through its end and also through its upper surface. At the top of the section *a*

there are grooves *e*, one disposed at each side of the recess *d*, said grooves being in alinement one with the other, and the side walls of the groove diverging downwardly, a wedge member *f* being provided which fits the said grooves *e*. It is our intention to make this wedge member *f* of combustible or fusible material, so that its rigidity will be lost by the great heat before or at the time when the casting is removed from the sand. The section *a* has an extension *g*, said extension *g* having a depending flange *h* which is adapted to engage a surface of the projecting member *c* of the section *b*.

The construction shown in Figs. 3 and 4 of the drawings resembles the constructions shown in Figs. 1 and 2, except that the recess *d*² extends through the end of the section *a*², and through a side thereof, instead of through the end and through the upper surface, as in Figs. 1 and 2. The grooves *e*² are disposed at the side of the construction shown in Figs. 3 and 4, and the extension member *g*² is also disposed at the side. The other members *b*², *c*², *f*² and *h*², in Figs. 3 and 4, correspond in all respects with the similar parts shown in Figs. 1 and 2 of the drawings.

In the construction shown in Figs. 5 and 6 of the drawings, the section *a*³ has a recess *d*³ which extends through its upper and lower surfaces and also through its end, the end of the section *a*³ being bifurcated, there being a projecting member *g*³ which connects the end of the section *a*³, which is separated by the recess *d*³, there being grooves *e*³ in the extreme end of the section *a*³, one groove being disposed at each side of the recess *d*³, the grooves *e*³ being in alinement one with the other and the side walls of the grooves *e*³ diverging inwardly. The section *b*³ has a projecting member *c*³ which is disposed substantially at right angles thereto, there being a shoulder *c*³ which is disposed opposite to the projecting member *c*³, the shoulder *c*³ being adapted to engage the extension *g*³, a wedge member *f*³ being provided, which fits the grooves *e*³, the wedge member *f*³ engaging the projecting member *c*³ and holding it in place in the recess *d*³ with the shoulder *c*³ disposed against the inner side of the extension *g*³.

In these different constructions, when the members are disposed as has been described and the wedge members *f* and *f*² are in posi-

tion, the two sections will be held rigidly in place by solid contact at the point of greatest strain, with the assistance of the wedge member which may be made of wood, iron or other breakable, combustible or fusible material. The solid arbors which are now being used must be broken to remove them from the casting, while other styles of joints must be hammered apart, which is a slow, tedious and expensive method. When our joint is used, a slight shock at one end of the arbor will break the wedge and the sections may be readily separated, while when the wedge member is made of combustible or fusible material, the sections will fall apart while the casting is being removed from the sand.

In the modified form shown in Figs. 7 and 8 of the drawings, the sections *l* and *m* resemble the sections *b* and *a* shown in Figs. 1 and 2 of the drawings. The section *m* has a recess *m'* and the section *l* has a projection *n*, which is disposed in this recess *m'*. The recess *m'* extends through the end of the section *m* and also through the top of the section. There is a channel, or guideway, *m*² in the section *m*, spaced from the top of the section and extending to the recess *m'*, this channel, or guideway, *m*² being provided to receive the end of the wedge member *o*, this wedge member *o* being adapted to contact with the projection *n* to hold the said projection *n* against the section *m* at the bottom of the recess *m'*. This wedge member *o* may be made of wood, iron or other breakable, combustible or fusible material, the same as in the case of the wedge members *f* and *f'* shown in Figs. 1, 2, 3, 4, 5 and 6 of the drawings.

The construction shown in Figs. 9 and 10 of the drawings resembles the construction shown in Figs. 7 and 8, but instead of using the wedge member *o*, which is disposed in the channel, or guideway, *m*², a clamp member *m*³ is provided, which is disposed across the recess *m'* and which has side flanges *m*⁴ which are disposed around lateral projections *m*⁵, these clamp members *m*³ being made of wood, iron or other breakable, combustible or fusible material, to press against the top of the projecting portion *l'* of the section *l*.

Having thus described our invention, we claim as new and desire to secure by Letters Patent:

1. In a joint for arbors, a section having a projecting member, a second section having a recess to receive the projecting member, an extension on the second section which is adapted to rest against the projecting member on the first-mentioned section when it is disposed in the recess, there being a groove in the second section, the plane of which extends across the recess, and a wedge member disposed in the groove and across

the recess, adapted to engage the projecting member.

2. In a joint for arbors, a section having a projecting member, a second section having a recess to receive the projecting member, an extension on the second section which is adapted to rest against the projecting member on the first-mentioned section when it is disposed in the recess, there being a groove in the second section, the plane of which extends across the recess, and a wedge member of combustible material disposed in the groove and across the recess, adapted to engage the projecting member.

3. In a joint for arbors, a section having a projecting member, a second section having a recess to receive the projecting member, an extension on the second section which is adapted to rest against the projecting member on the first-mentioned section when it is disposed in the recess, there being a groove in the second section, the plane of which extends across the recess, and a wedge member of material which will lose its rigidity at a high temperature, disposed in the groove and across the recess and adapted to engage the projecting member.

4. In a joint for arbors, a section having a projecting member, a second section having a recess adapted to receive the projecting member, there being a member of the second section at a distance from the plane at one side of the recess, which is adapted to engage a surface of the projecting member, there being a groove in the second section at a distance from the said plane of the recess, the plane of the groove being disposed across the recess, and a wedge member disposed in the groove and across the recess.

5. In a joint for arbors, a section having a projecting member, a second section having a recess adapted to receive the projecting member, there being a member of the second section at a distance from the plane at one side of the recess, which is adapted to engage a surface of the projecting member, there being a groove in the second section at a distance from the said plane of the recess, the plane of the groove being disposed across the recess, and a wedge member constructed of material which loses its rigidity at a high temperature, disposed in the groove and across the recess.

6. In a joint for arbors, a section having a projecting member, a second section having a recess adapted to receive the projecting member, an extension on the second section near one of its edges, which is adapted to engage a surface of the projecting member, there being a groove in the second section, the plane of which extends across the recess, and a wedge member disposed in the groove and across the recess.

7. In a joint for arbors, a section having a projecting member bent at an angle to the

section, there being a shoulder on the section opposite the projecting member, a second section having a recess adapted to receive the projecting member, and a member on the second section adapted to engage the shoulder, there being a groove in the second section, the plane of which is disposed across the recess, and a wedge member disposed in the groove and across the recess, adapted to engage the projecting member.

8. In a joint for arbors, a section having a projecting member bent at an angle to the section, there being a shoulder on the section opposite the projecting member, a second section having a recess adapted to receive the projecting member and a member on the second section adapted to engage the shoulder, there being a groove in the second section, the plane of which is disposed across the recess, and a wedge member constructed of material which loses its rigidity at a high temperature, disposed in the groove and across the recess, adapted to engage the projecting member.

9. In a joint for arbors, a section having a projecting member, a second section having a recess adapted to receive the projecting member, there being a groove in the second section, and a wedge member of material which will lose its rigidity at a high temperature, disposed in the groove engaging the projecting member.

10. In a joint for arbors, a section having a projecting member, a second section having a recess, adapted to receive the projecting member, there being a groove in the second section leading to the recess, and a

wedge member of material which will lose its rigidity at a high temperature, disposed in the groove and across the recess, for engaging the projecting member.

11. In a joint for arbors, a section having a projecting member, a second section having a recess adapted to receive the projecting member, and a member of a material which will lose its rigidity at a high temperature, secured to the second section, and disposed against the projecting member for holding the projecting member in the recess.

12. In a joint for arbors, a section having a projecting member, a second section having a recess, extending through one of its walls, the projecting member being normally disposed in the recess, and a member of material which will lose its rigidity at a high temperature, secured to the second section, disposed across the recess and in contact with the projecting member.

13. In a joint for arbors, a section having a projecting member, a second section having a recess and two flanges, the projecting member being normally disposed in the recess, and a member of material which will lose its rigidity at a high temperature, disposed in engagement with the projecting member and secured to the flanges.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

HERBERT SYLVESTER DAVIS.

JOHN CHANCERY HAYDEN.

Witnesses:

FREDERICK T. JACKSON,
THOS. J. JACKSON.